



UNIVERSIDADE CATÓLICA PORTUGUESA

OLHAR A CULTURA ORGANIZACIONAL E A LIDERANÇA NA ESCOLA
PÚBLICA SOB O ETHOS DA INOVAÇÃO

Tese apresentada à Universidade Católica Portuguesa
para obtenção do grau de Doutor em Ciências da Educação

por

(LÍDIA DE JESUS PECEGUEIRO SERRA)

FACULDADE DE EDUCAÇÃO E PSICOLOGIA

(setembro de 2023)



UNIVERSIDADE CATÓLICA PORTUGUESA

OLHAR A CULTURA ORGANIZACIONAL E A LIDERANÇA NA ESCOLA
PÚBLICA SOB O ETHOS DA INOVAÇÃO

Tese apresentada à Universidade Católica Portuguesa
para obtenção do grau de Doutor em Ciências da Educação

Por LÍDIA DE JESUS PECEGEUIRO SERRA

Sob orientação de:

Professor Doutor José Joaquim Ferreira Matias Alves

Professora Doutora Diana Rafaela Lopes Soares

FACULDADE DE EDUCAÇÃO E PSICOLOGIA

(setembro de 2023)

Para a minha querida mãe,
*pelo carinho e incentivo nos momentos
mais difíceis deste trabalho.*

Para a Érica e Carla,
pela lealdade, pela amizade... por tudo!

Para todos os meus companheiros de vida
e em especial para a Tulipa, por não ter estado lá...
pelas muitas alegrias e pela companhia.

Agradecimentos

Se o desafio e a vontade de compreender as inquietudes que convocaram este estudo prevaleceram sobre os obstáculos e as dificuldades interpostas pela complexidade dos fenómenos estudados, devo-o ao apoio incondicional dos meus orientadores, Prof. Dr. José Matias Alves e Prof. Dra. Diana Sores, aos quais ofereço o primeiro mote de agradecimentos. Caro Professor, a si devo todas as palavras de inspiração e iluminação por conta de todo um saber generosamente partilhado e da clarividência de proposições tão determinantes no processo de ideação. Cara Professora, de si recordo o pragmatismo analítico tão necessário à concretização deste projeto. Obrigada a ambos pelo incentivo nos momentos difíceis, pela confiança, pelas canseiras da revisão e pelas acuradas e construtivas críticas.

À Prof. Dra. Raquel Matos, diretora da Faculdade de Educação e Psicologia da Universidade Católica Portuguesa, e à Prof. Dra. Ilídia Cabral, coordenadora deste Curso de Doutoramento em Ciências da Educação, e à sua equipa de Professores agradeço o suporte e os muitos ensinamentos concedidos. À Prof. Dra. Diana Mesquita, em especial, agradeço as pequenas sugestões e tão importantes contributos, as palavras de ânimo, o humor, a disponibilidade e a imensa simpatia.

Ao CEDH agradeço o apoio e facilidades concedidas no desenrolar deste projeto de investigação.

Agradeço a todos os Diretores de Agrupamentos de Escolas e professores pela disponibilidade para colaborarem nesta investigação. Sem o seu contributo, muito teria ficado por compreender e, por isso, a eles lhes dedico e devolvo, por direito, os resultados e conclusões deste estudo.

Aos meus colegas de Doutoramento agradeço o companheirismo, os incentivos e as partilhas. Um agradecimento especial para a Alexandra Carneiro, pela amizade que me destinou, pelo conforto e pelos valiosos conselhos, desmistificações e palavras acertadas que permitiram aligeirar *'ventos e marés'*.

Aos meus colegas e amigos Maria João Nogueira, Paulo Ventura e Rita Martins e às minhas filhas Olívia e Érica agradeço a ajuda preciosa que me concederam em momentos cruciais deste projeto. Obrigada pelas reflexões, as críticas, as sugestões, as cogitações e instigações que tanta riqueza trouxeram ao trabalho.

À minha família agradeço o alento e a inesgotável compreensão e tolerância face às ausências, apartamentos e distâncias geradas. Obrigada pelos incentivos, a confiança, o carinho e a força da resignação preciosos na debelação das dificuldades sentidas. O conforto que me deferiram permitiu tornar menos árduo o esforço imposto por uma tão longa caminhada.

Resumo

Inovação é a palavra de ordem da sociedade globalizada do século XXI, onde múltiplas agendas geopolíticas proliferam sob a premissa da procura de soluções para os desafios sociais, ambientais e económicos mais prementes. Desde que na década de 90 do século XX se concedeu à inovação o caráter de força estratégica para o progresso, o desenvolvimento humano e para a melhoria da qualidade de vida, cedo foram transpostos desafios para a educação, interpelando a escola a encetar uma transformação no sentido de se tornar mais inclusiva. Contudo, as agendas para a educação focadas na transformação dos processos de escolarização vêm esbarrando na complexidade do próprio sistema e no seu *modus operandi* marcado pelo presentismo, conservadorismo e individualismo. É nesta conjuntura de necessidade de transformação profunda da escola que se desenhou o estudo que consubstancia esta tese de doutoramento. Assim, tomando a inovação como elemento central de um triângulo de forças e lógicas intercruzadas que implicam as lideranças e as culturas de escola, a autonomia e os processos de regulação e controlo, as práticas e o capital profissional dos professores, pretende-se compreender *quais são os impulsos e obstáculos que enredam a inovação nas escolas*.

Assumindo um plano pluri/multimetodológico, foram combinados métodos qualitativos e quantitativos, num estudo compreensivo envolvendo uma subpopulação de 60 escolas e agrupamentos de escolas portuguesas que foram avaliados no terceiro ciclo de avaliação da Inspeção, no período de 2018 a 2021. O estudo de perceções de diretores, coordenadores de departamento, professores e elementos da equipa de autoavaliação de escola, bem como, de relatórios de avaliação externa e documentos estruturantes de escola, permitiu reunir evidências, sistematizadas em sete artigos, que indiciam a existência de organizações que operam como sistemas debilmente articulados, marcados por ordens espontâneas frágeis e por existências pseudomórficas, onde a inovação assume um caráter marginal. As evidências reunidas apontam para um sistema educativo que reverbera numa interdependência frágil, enredado na complexidade de gerar articulação nas realidades intrincadas dos mega-agrupamentos de escolas, com problemas de mobilização coletiva, com culturas de avaliação que servem o propósito da legitimação, com dificuldade em gerar climas de inovação profícuos e de um capital decisional que suporte a transformação da escola. Urge gerar uma outra organização de escola, uma outra liderança, um outro modo de *accountability* e uma outra identidade profissional docente. Por conseguinte, dilucidamos um caminho de construção de uma escola fundada no funcionamento interdependente ativado por lideranças transformadoras que operem, também de modo interdependente, para gerar envolvimento a partir da (re)construção de significados por forma a alavancar e mobilizar as vontades individuais e coletivas para, assim, gerenciar 'estados de fluxo' organizacional favoráveis à mudança. Neste alinhamento da construção de significados que alimentem uma cultura profissional de liberdade, de compromisso e de responsabilidade, enuncia-se um referencial analítico enquadrador da iniciativa de capital de inovação para a educação que tem como desiderato fomentar a construção de uma outra escola.

Palavras-chave: inovação, autonomia, *accountability*, cultura organizacional, avaliação externa, autoavaliação de escola, liderança, capital organizacional, capital profissional, capital transformacional

Abstract

Innovation is the buzzword of the globalised society of the twenty-first century, where multiple geopolitical agendas proliferate to seek solutions to the most pressing social, environmental, and economic challenges. In the 90s, innovation granted the character of a strategic force for progress, human development, and quality of life improvement, challenging education and demanding a new order to fulfil a more equitable society. The innovation agendas for education focused on transforming the schooling processes arose and faced the system's complexity and its *modus operandi* marked by presentism, conservatism, and individualism. Indeed, the school has changed little in the last century despite the impetuses for transformation that are mainly discursive. Under this conjecture of a desirable and profound transformation needed for the school, we developed a study on innovation - the central element of a triangle of intersecting forces that imply the school leaders and cultures, autonomy and processes of regulation, practices and the professional capital of teachers. Hence, we intended to understand *the impulses and obstacles that entangle innovation in schools*.

Assuming a multi-methodological plan that combined qualitative and quantitative methods, we developed a comprehensive study involving a subpopulation of Portuguese schools and school clusters evaluated in the 3rd evaluation cycle of the Inspection from 2018 to 2021. The study mobilised principals, headteachers, teachers, and the members of the schools' self-evaluation teams, as well as the external evaluation reports and the schools' structuring documents. The evidence gathered indicates the existence of organisations that operate as feebly articulated systems, marked by fragile spontaneous orders and *pseudomorphic* existences, where innovation takes on a marginal role. The documental *corpus* points to an educational system that echoes a fragile interdependence, with problems of collective mobilisation, cultures of evaluation that serve the purpose of legitimation, a functional distance between leaders and those led and between the power and action centres, troubles regarding the complexity of generating articulation in the realities of the schools' mega-clusters, and the difficulty of developing fruitful innovation climates and a decision-making capital that support the school transformation.

It is urgent to generate another school organisation, another leadership, another mode of accountability, and another professional teaching identity. Hence, we present a path for a school based on interdependent functioning activated by distributed, empowering, and transforming leaderships that operate in an interdependent way. They are the forces to generate involvement for the (re)construction of meanings, leverage individual and collective wills, and manage organisational 'flow states' favourable to change. They can nurture a professional culture of freedom, commitment, and responsibility. In this alignment, we enunciate an analytical framework of the innovation capital initiative for education that aims to foster the design of a generative and transformational grammar of the school and, thus, the construction of another school.

Keywords: innovation, autonomy, *accountability*, organisational culture, external evaluation, school self-evaluation, leadership, organisational capital, professional capital, transformational capital

Índice Geral

Introdução Geral	1
1. Um contexto para o problema e a emergência do objeto de estudo	2
2. Do objeto de estudo e respetivo contexto à metodologia de investigação	7
3. Dimensão ética na investigação	13
Referências	14
Artigo 1. Concetualizar a inovação enquanto processo fundacional da transformação da escola	19
Resumo gráfico	21
Resumo	22
Abstract	22
Resumen	22
1. Introdução	23
2. Metodologia	23
3. Dimensão histórico-social da inovação em educação	24
3.1 Que conexões podem ser estabelecidas entre os contextos transnacional e português e o processo de transformação educacional?	24
3.2. Como vem variando a conceção de inovação ao longo da história?	27
4. Quais são as dimensões chave de uma definição de inovação?	30
4.1 Inovação: raiz ontológica enquanto conceito emergente do campo socioeconómico	31
4.2. Inovação: raiz epistemológica enquanto processo de transformação educacional	34
5. Conclusões e considerações finais	36
Referências	37
Artigo 2. Mapping Innovation in Educational Contexts: Drivers and Barriers	41
Graphic Abstract	43
Abstract	44
1. Introduction	44
2. Materials and methods	45
3. Critical analysis of literature and synthesis	47
3.1. Innovation for school transformation	47
3.2. Promoters and hindrance factors in educational innovation	48
4. A classification of promoters and hindrance factors in educational innovation	55
5. Conclusions and final considerations	58
References	59
Appendix 1	64
Artigo 3. The Role of External Evaluation Control Mechanisms and the Missing Loop of Innovation	67
Graphic Abstract	69
Abstract	70
1. Introduction	70
2. Theoretical frameworks / Theoretical Background information	71
2.1. The perspective of educational policies	71
2.2. A new generation of accountability	72

3. Methodology	75
3.1. Sample and data collection	75
3.2. Measurements and Data Analysis	76
4. Results	77
4.1. Descriptive statistics of the sample and control variables	77
4.2. Documental analysis data	79
4.3. Hypothesis test	84
5. Discussion	86
5.1. Schools' Modes of Organisation and Functioning	86
5.2. Explicative factors of schools' modes of action	88
5.3. Limitations and future research	91
4. Conclusions	92
References	93
Appendix 1	98
Appendix 2.	101
Artigo 4. Innovation on the Margins of the External Evaluation of Portuguese Schools	102
Graphic Abstract	104
Abstract	105
1. Introduction	105
2. Theoretical frameworks	106
2.1. Autonomy hand in hand with accountability	106
2.2. Innovation hand in hand with teachers and school leaders	107
3. Methodology	109
3.1. Data collection	109
3.2. Measurements and Data Analysis	110
4. Results	110
4.1. Schools' organisation and practices	110
4.2. Predictors of Schools' External Evaluation	114
5. Discussion	118
5.1. Limitations and future research	120
6. Conclusions	121
References	122
Artigo 5. Pseudomorphosis of Schools' Systems and the Fiction of its Regulatory Processes: a Study of Educational Narratives	128
Graphic Abstract	130
Abstract	131
1. Introduction	131
2. Theoretical Framework	132
2.1. A 'new' supportive and welcome accountability	132
2.2. A 'new' leadership to play in an accountable system	134
3. Methodology	135
4. Results and Discussion	137
4.1. Global Analysis of Educational Narratives	137
4.2. In-deep Analysis of Educational Narratives	141
4.3. Cluster Analysis of the Educational Narratives	151
4.4. Self-evaluation Reports Analysis	155
5. Limitations and Suggestions for Future Research	157
6. Conclusions	157

References	160
Appendix 1.	165
Artigo 6. The Weak Articulations, Inconsistencies, and Power Limits of School Leaders	166
Graphic Abstract	168
Abstract	169
1. Introduction	169
2. Theoretical framework	170
2.1. Organisational innovation	171
2.2. Cultural innovation	172
2.3. Pedagogical innovation	173
2.4. Technological innovation	174
3. Methods	174
3.1. Data source and sample	174
3.2. Instrument	175
3.3. Data Analysis	175
4. Results	176
4.1. Respondents profile	176
4.2. Construct validity	177
4.3. Hypotheses testing	177
5. Discussion	180
5.1. Effects on Teachers' Ways of Working	181
5.2. Effects on Classroom Teachers' Practices	182
6. Conclusions	183
References	184
Appendix 1.	189
Artigo 7. Do School Leaders Lead? Rhetoric, Ambiguities, Weak Articulations, and Organised Anarchy	190
Graphic Abstract	192
Abstract	193
1. Introduction	193
2. Conceptual framework	194
2.1. Paths for Unlocking the School Transformation	194
2.2. Context and Organisational Culture as the Onus of Leadership	195
2.3. Innovation and Involvement as the Onus for Transformation	196
3. Methodology	197
3.1. Instrument	197
3.2. Hypotheses test	199
3. Results and Discussion	200
3.1. Instrument validation	200
4.2. Findings	205
5. Conclusions	215
References	216
Artigo 8. O Lugar da Inovação nas Escolas Portuguesas: as conclusões de um estudo, os seus paradoxos e tensões	222
Resumo Gráfico	224
Resumo	225

Abstract	225
1. Introdução	226
2. O lugar da inovação nas escolas... um olhar sobre o sistema educativo português	229
2.1. Lógicas, razões, paradoxos e tensões implicando as políticas educativas	229
2.2. Lógicas, razões, paradoxos e tensões implicando as culturas organizacionais – o segundo argumento	239
2.3. Lógicas, razões, paradoxos e tensões implicando as práticas profissionais – o terceiro argumento	244
3. Um modelo para mensurar a inovação nas escolas	250
4. Considerações finais - Um vislumbre do referencial para a inovação em ação e perspetivação futura	259
Referências	260
Apêndice 1	265
Bibliografia Geral	268

Índice de Tabelas

Introdução Geral

Tabela 1. Objetivos e questões de investigação por domínio de análise	12
--	----

Capítulo 1

Tabela 1. Concetualização transversal da inovação	30
--	----

Capítulo 2

Table 1. Domains and dimensions defined for building the classification	44
--	----

Appendix 1. A typology for innovation centred on the fostering factors and obstacles	61
---	----

Capítulo 3

Table 1. Descriptive statistics of the sample concerning size, region, and sociocultural context	73
---	----

Table 2. Descriptive statistics of the sample concerning the schools' external evaluation	
--	--

Table 3. Results of Kruskal–Wallis and Mann-Whitney tests for the control variables	74
--	----

Table 4. Results of qualitative content analysis of "school strengths" identified by the Inspectorate (N=60)	74
---	----

	76
--	----

Table 5. Results of qualitative content analysis of "areas of school improvement" identified by the Inspectorate (N=60)	78
--	----

--	--

Appendix 1. Odds ratio results regarding schools' strengths and improvement areas	93
--	----

Appendix 2. Odds ratio results regarding innovation	96
--	----

Capítulo 4

Table 1. External evaluation of schools by domain (N=60)	104
---	-----

Table 2. Results of the Mann-Whitney U test for causal relationships between the research variables and the Inspectorate evaluation	109
--	-----

Table 3. Results of the Mann-Whitney test for causal relationships between the variables related to innovation and the Inspectorate evaluation	110
---	-----

Table 4. Results of the rank-biserial correlation for the model research variables	110
---	-----

Capítulo 5

Table 1. School clusters characteristics	128
---	-----

Table 2. Framework for documental analysis	129
---	-----

Table 3. Methodological key stages of the research process	130
---	-----

Table 4. Results of frequency of words in documental corpus regarding innovation	131
---	-----

Table 5. Similarity, by codes and words, between the PIP and SEP	132
---	-----

Table 6. Results of the content analyses of SSR regarding decisional capital	148
---	-----

Appendix 1. Results of frequency and percentage of occurrence of codes per SG and document	158
---	-----

Capítulo 6

Table 1. Samples' descriptive statistics	168
---	-----

Table 2. Kaiser-Meyer-Olkin's and Bartlett's tests results	169
---	-----

Table 3. EFA's results	170
-------------------------------	-----

Table 4. Construct's descriptive statistics and correlations	170
---	-----

Table 5. Results of standardised coefficients from SEM analysis	171
--	-----

Table 6. Calculated results regarding the indirect effects	171
---	-----

Appendix 1. Questionnaire selected items according to EFA	181
--	-----

Capítulo 7

Table 1. Statistics for scale validity	192
---	-----

Table 2. Dimensionality analysis of constructs	195
---	-----

Table 3. Sample description	197
------------------------------------	-----

Table 4. Latent variables descriptive statistics and reliability of the constructs	198
---	-----

Table 5. Results of the Kruskal-Wallis test	199
--	-----

Table 6. Results of the Wilcoxon-Mann-Whitney test	200
---	-----

Table 7. Results of backward multiple linear regression modelling concerning TCI	202
---	-----

Capítulo 8

Apêndice 1. Itens do questionário mobilizados para o ensaio do referencial de inovação	255
---	-----

Índice de Figuras

Introdução Geral

Figura 1. Contexto para o estudo da inovação e domínios de análise	3
Figura 2. Autonomia e controlo no sistema educativo português	5
Figura 3. Modelo de estudo da inovação nas escolas	10
Figura 4. Perspetiva temporal dos eixos da empiria e enquadramento no contexto educativo português	11
Figura 5. Estrutura da tese: artigos	13

Capítulo 1

Figura 1. Impasse da educação versus caminho para a perspetivação da mudança	25
Figura 2. Linha temporal relativa ao conceito de inovação	28
Figura 3. Geografia da inovação: modelo diagramático de definição de inovação	35

Capítulo 2

Figure 1. Model for studying innovation	43
Figure 2. Synopses of forces for innovation centred on teachers	48
Figure 3. The integral perspective of innovation strategy in schools considering the role of the educational actors	52
Figure 4. Dendrogram of factors that influence innovation in schools reported as organisational capital	54
Figure 5. Dendrogram of factors that influence innovation in schools reported as professional capital	55

Capítulo 3

Figure 1. Hypothesised research model	72
Figure 2. Results of pairwise association between variables	80

Capítulo 4

Figure 1. Distribution and frequency of schools' strengths by evaluation domain (N=60)	106
Figure 2. Distribution and frequency of improvement areas by external evaluation domain (N=60)	107
Figure 3. Global portrait of Portuguese schools' evaluation predictors ($p < .05$)	113

Capítulo 5

Figure 1. Hierarchic graph of codes and respective coding frequency	132
Figure 2. Cross-analysis of coding results of decisional, organisational, and transformational capitals	145
Figure 3. Cluster analysis of PIP according to the Jaccard coefficient	145
Figure 4. Cluster analysis of SEP according to the Jaccard coefficient	146
Figure 5. Cluster analysis of EER according to the Jaccard coefficient	147

Capítulo 6

Figure 1. Model for studying transformational capital	163
Figure 2. SEM analysis results	172
Figure 3. Schools' desirable vs. observed organisational structure	175

Capítulo 7

Figure 1. Correlations and magnitude of effects on TCI perceived by all the educational actors (A, B) and teachers (C, D)	204
Figure 2. Correlations and magnitude of effects of leadership on TCP (A) and TCI teaching perspective on learning (B)	205

Capítulo 8

Figura 1. Modelos de processos de transformação organizacional	218
Figura 2. Modelos de formas de trabalho nas escolas	224
Figura 3. Princípios de um modelo de transformação da escola.	228
Figura 4. Modelo para a transformação da escola	245
Figura 5. Referencial analítico para mensurar a iniciativa de capital de inovação	246
Figura 6. Ensaio preliminar da aplicação do referencial analítico de mensuração da inovação	250

Lista de Abreviaturas

AE- Aprendizagens Essenciais
AFC – Autonomia e Flexibilidade Curricular
CIF - Comparative Fit Index
CI - School for Innovation
CTI - School Climate for Involvement
EER – External Evaluation Report
EFA - Exploratory Factorial Analysis
ENEC – Estratégia Nacional de Educação para a Cidadania
ANOVA – Análise de Variância
IB - Innovative Behaviour
IELS – International Early Learning and Child Wellbeing Study
IFI - Incremental Fit Index
IGEC – Inspeção Geral da Educação e Ciência
KMO - Kaiser-Meyer-Olkin Measure of Sampling Adequacy
LSL - Learning-oriented and Supportive Leadership
ML - Mobilising Leadership
OECD - Organisation for Economic Cooperation and Development
PADDE - Plano de Ação de Desenvolvimento Digital da Escola
PAFC – Projeto de Autonomia e Flexibilidade Curricular
PASEO – Perfil dos Alunos à Saída da Escolaridade Obrigatória
PEA – Projeto Educativo de Agrupamento
PEIRLS – Progress in International Reading Literacy Study
PID – Projeto de Intervenção do Diretor
PIP – Principals’ Intervention Project
PISA – Program for International Students Assessment
RAE – Relatório de Avaliação Externa de escola
RAA – Relatório de Autoavaliação de escola
RMSEA - Root Mean Error Approximation
SCI - School Climate for Innovation
SEM - Structural Equation Model
SEP – Schools’ Educational Project
SKDC - School Knowledge for Decisional Capital
SKI - School Knowledge for Innovation
SLML - Supportive Learning Middle Leadership
SSR – Schools’ Self-evaluation Report
SST - Self-evaluation Teams’
SV – School Vision
TCI - Transformational Capital Initiative
TCIs - Transformational Capital Initiative (students’ perspective)
TCIt - Transformational Capital Initiative (teaching practices)
TCP - Teachers’ Collaborative Practices
TIMSS – Trends in Mathematics and Science Study
TLI - Tucker Lewis Index
UNESCO - United Nations Educational, Scientific and Cultural Organisation

Introdução Geral

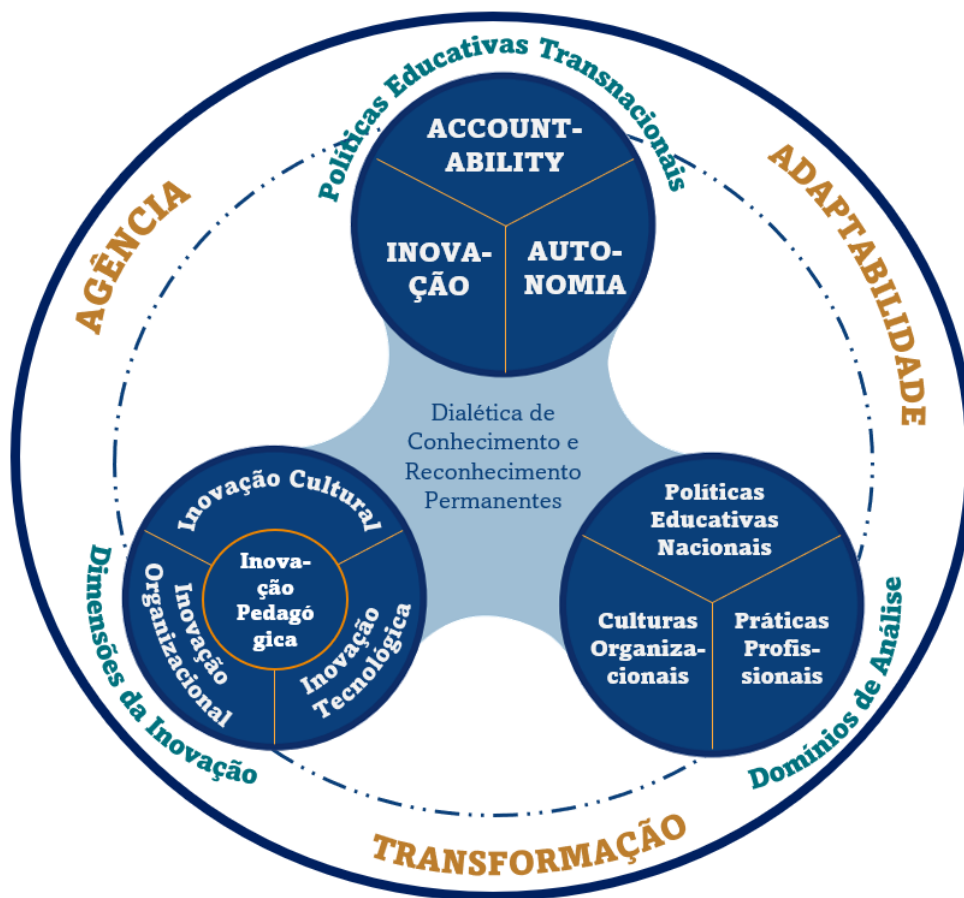
1. Um contexto para o problema e a emergência do objeto de estudo

A inovação protagoniza o espírito da sociedade moderna, detendo um papel relevante na esfera pública e nas agendas políticas governamentais nacionais e internacionais. As políticas de inovação corporizam um interface entre a investigação, a política de desenvolvimento tecnológico e a política industrial (Polluveer, 2023), estando associadas a contextos onde o progresso e o bem-estar social e humano são valorizados (von Schomberg & Blok, 2021a). Estrategicamente, as políticas de inovação da OECD e da UNESCO consomem-se também como matéria de governança em educação, tendo gerado um campo de política educacional global. As preocupações e o investimento em investigação e na educação configuram projetos de soluções para os problemas atuais e futuros, respostas societárias que de acordo com a UNESCO (United Nations, 2023) demandam que os países desenvolvam políticas estratégicas resilientes e sustentáveis para construir sistemas educacionais eficientes, relevantes e transformadores. No mesmo alinhamento, o diretório da OECD (2022) *Education and Skills* afirma-se como um parceiro dos países na gestão dos seus sistemas de educativos e na implementação de reformas que contribuam para o desenvolvimento de conhecimentos, capacidades, atitudes e valores necessárias ao longo da vida. Nesta conjuntura, as questões da educação vêm-se enredadas no paradigma da inovação que protagoniza a força para a transformação da escola tradicional numa escola inclusiva e socialmente mais responsiva.

Presentemente, o caráter transversal da inovação na sociedade remete, segundo Schomberg e Blok (2021b) para a vivência da *era turbulenta da inovação*. A palavra inovação tem emergido em múltiplos contextos, sendo percecionada como uma premissa para gerar desenvolvimento e progresso. Este noção moderna de inovação tem as suas raízes em Joseph Schumpeter (1997) que a consagrou como processo de renovação cujo desenvolvimento ocorre na forma de ondas sucessivas e se assume como fator de competitividade e de sucesso. Na sociedade atual, a inovação social transcorre como um novo processo social ou novo produto e resultado social que representa uma solução não apenas para problemas focalizados, mas também, para questões sistémicas e estruturais (Nicholls et al., 2015). Estes novos desenvolvimentos podem ser vistos como motor de transformações, de mudanças de paradigmas sociais (Lévesque, 2014). Na educação, uma mudança de paradigma urge ser desenhada e firmada sobre um *ethos* de inovação, pois a educação enfrenta uma crise tripla. Uma crise de equidade e inclusão, dado que milhões permanecem fora da escola; uma crise de qualidade, pois muitos dos que estão na escola não estão a aprender nem o básico; e uma crise de relevância, pois muitos sistemas educacionais não estão a prover as novas gerações com os valores, conhecimentos e capacidades para prosperar no mundo complexo de hoje (United Nations, 2023). Sobre esta tríade, enunciamos como objeto central deste estudo a *inovação na escola pública nas suas interações com as políticas educativas, as culturas organizacionais e as práticas profissionais* (fig. 1).

Figura 1.

Contexto para o estudo da inovação e domínios de análise



A conjuntura atual remete para a necessidade de transformação profunda da escola, num processo identificado por Edgar Morin (2021) de *metamorfose da escola* entendida como uma radicalidade transformadora ligada à conservação. “A mudança em contexto educativo e escolar implica as dimensões organizacional, curricular e pedagógica” (Pacheco, 2019, p.9) e requer o recurso à inovação enquanto ferramenta de transformação da educação. Reinventar práticas de escolarização implica gerar oportunidades para que as comunidades profissionais ousem pensar, imaginar e caminhar em direção a uma escola que opera em defesa de uma educação universal, orientada para a aprendizagem de todos os alunos (Cabral & Alves, 2017). Se é pretendido que uma metamorfose se opere nas escolas então, segundo Tan e Hung (2020), é suposto que as inovações se disseminem e, para tal, a totalidade do sistema precisa intervir. Contudo, a transformação e a inovação da escola afiguram-se complexas e multifacetadas, pois paradoxos e dilemas subjazem às lógicas inter cruzadas que operam nos níveis mega, macro, meso e micro de organização dos sistemas educativos, como o referem Torres e Alves (2016)

“A força desta tensão, que aponta para sentidos de educação nem sempre conciliáveis, faz-se sentir nos diferentes patamares do sistema educativo, desde o nível da formulação transnacional das políticas educativas (plano mega), ao espaço nacional de recontextualização e operacionalização de modos de regulação da educação (plano

macro), passando ainda pelos modos de organização e gestão das organizações escolares (plano meso) e, por fim, pelo próprio coração dos processos e dinâmicas de escolarização (plano micro).” (p.255)

Políticas de globalização em educação vêm determinando, de forma nem sempre fácil, a transferência de teorias e a ‘viagem’ de paradigmas (Barzanò, 2009) para os sistemas educativos dos países. Um quadro tríptico pode ser enunciado reportado ao alinhamento transnacional em matéria de política educativa que implica a autonomia, a inovação e os sistemas de *accountability* (fig.1). A OECD (2020) destaca, na publicação *Back to the Future of Education*, que o acréscimo da autonomia local e das escolas detém o potencial de empoderamento dos atores educativos de se auto-organizarem e colaborarem com o intuito de construir respostas educativas contextualizadas e efetivas. Acrescenta ainda que os países devem encorajar a inovação nos seus sistemas educativos, enquanto, os seus sistemas de *accountability* devem operar com o intuito de minimizar os riscos e erros. Os mecanismos de *accountability*, desejados inteligentes, devem gerar conhecimento que sustente a melhoria das aprendizagens (Cochran-Smith, 2021; Lillejord, 2020) num processo equilibrado que implique a avaliação externa e a autoavaliação de escola (Brady, 2019; Hopkins et al., 2016). Deste silogismo transcorre um discurso de proposições com asserções interpelantes que sustentam a questão de partida que mobiliza o estudo de investigação que integra esta dissertação: *Quais os impulsos e obstáculos que enredam a inovação quando consideradas as suas conexões com as lideranças, a avaliação de escola, as culturas de escola e o comportamento inovador dos professores?*

A inovação em diálogo com as lideranças, as culturas de escola, a organização escolar e o autoconhecimento assente na avaliação detém, no plano teórico e das orientações para a ação, o potencial de gerar um articulado de forças de caráter matricial instigadoras de mudanças organizacionais, pedagógicas e culturais e, assim, de transformar os modos de ensinar e de aprender. Liderar é um processo que extravasa a mera ação de gestão administrativa da organização (González-Falcón et al., 2020). Um liderança comprometida na melhoria efetiva da educação opera através da mobilização e do envolvimento das lideranças intermédias e demais comunidade, da instigação de um sentido de missão por referência a uma visão de escola, da inspiração dos professores, da valorização de ambientes de confiança, da promoção de culturas colaborativas, do enfoque no ensino e na aprendizagem e do fomento do capital decisional através do uso e da capacitação para o uso do conhecimento produzido pela avaliação de escola (Andrews & Conway, 2020; Azorín & Fullan, 2022; Ezzani, 2015; González-Falcón et al., 2020; Rechsteiner et al., 2022; Tayag & Ayuyao, 2020; Xhomara, 2018). A liderança é considerada como sendo um dos fatores com maior potencial de influenciar diretamente a capacidade de inovação das organizações, pela via da substrução de culturas de aprendizagem (Chen et al., 2016), assim como, de influenciar indiretamente a aprendizagem dos alunos através do efeito exercido nos professores (Day, 2017; Hitt & Tucker, 2016; Leithwood & Jantzi, 2008; Kenneth Leithwood et al., 2004).

As políticas transnacionais para a educação aconselham os países e os governos a investir em processos equipendentes e homeostáticos que equacionem a descentralização e a regulação a par da autonomia e da *accountability*. É reconhecido que a centralização e a tendência para prosseguir segundo lógicas burocráticas limita a capacidade de as escolas concretizarem as suas finalidades e processos de mudança (Kılıçoğlu & Kılıçoğlu, 2021). Apesar da ideologia em crescimento de que a descentralização contribui para o aumento da autonomia local, esta acomodou mecanismos que, paradoxalmente, vêm produzindo o aumento do controlo central, pelo que as escolas e os atores educativos emergem como alvos de processos de re-regulação em função dos resultados (Helgøy et al., 2007). Barroso (2018, 2022), a propósito das políticas de reforço da autonomia das escolas e das preocupações gestionárias da *nova administração pública*, elenca quatro níveis de regulação no sistema educacional português: o transnacional, alocado a programas internacionais de avaliação de alunos e a processos de controlo com enfoque nos resultados; o nacional orientado para o controle ao nível dos procedimentos; o municipal, responsável pela autonomia administrativa e financeira; e o das escolas, que assumem a autonomia curricular e pedagógica (fig. 2).

Figura 2.

Autonomia e controlo no sistema educativo português



Nota: PASEO – Perfil dos Alunos à saída da Escolaridade Obrigatória; AE – Aprendizagens Essenciais; ENEC – Estratégia Nacional de Educação para a Cidadania

As pressões orientadas para assegurar as aprendizagens dos alunos enformam os processos de *accountability* das escolas e dos diretores, pelo que têm vindo a limitar a própria autonomia das escolas e dos professores e a gerar sistemas hierarquizados e burocratizados que parecem precursores de uma hipocrisia organizada (Kılıçoğlu & Kılıçoğlu, 2021). Este dialogismo remete para a crescente importância concedida à autoavaliação a par da avaliação externa e a valorar, de acordo com os investigadores (Brady, 2019; Fullan et al., 2015; Hopkins et al., 2016), as organizações não governamentais (Schleicher, 2018) e os próprios inspetores (Donaldson,

2013). A autoavaliação de escola surge como um instrumento de autonomia pois, “não basta regulamentar a autonomia. É preciso criar condições para que ela seja construída em cada escola” (Barroso, 2022, p.79) e, tal implica mudanças culturais e a transformação das culturas organizacionais, bem como, segundo Barroso (2018) uma transversalidade de regulações ou multi-regulação.

As culturas de escola, indexadas a estruturas organizacionais específicas, retumbam em complexidade para o sistema decorrente do conjunto de valências e premissas que definem os grupos colegiais de atores educativos, bem como da forma como estes percebem, compreendem e vivenciam a identidade da organização por referência às próprias vivências e padrões. Por conseguinte, as culturas profissionais assumem-se como fatores imbricados na capacidade de inovação e de transformação da escola (Gil et al., 2018; Song & Choi, 2017; Tan & Hung, 2020). A literatura documenta que estruturas mais flexíveis, descentralizadas e pós-burocráticas se revelam mais promissoras na promoção de processos de inovação (Dischner, 2015; Mckenna et al., 2010), gerando espaços e oportunidades para as lideranças operarem em simbiose e desenvolverem uma cultura de confiança relacional e de esperança sob uma visão norteada para liderar o aprimoramento pedagógico (Conway & Andrews, 2016). Contudo, as escolas são organizações que operam entre lógicas de ação política, contextual, cultural, gestacional e relacional. Por conseguinte, a multiplicidade de lógicas de ação está conectada a tensões, dilemas e paradoxos que tendem a produzir um sistema e organizações debilmente articulados (Brunsson, 2006; Orton & Weick, 1990; Weick, 1976), caracterizados por um funcionamento que impactua as estruturas formais e os princípios da instituição, subverte as práticas organizacionais e produz fenômenos de fragmentação horizontal e vertical na escola e entre os vários níveis de governança (Elken & Vukasovic, 2019). Considerando ainda os modos de organização das instituições, erigem-se lógicas de auto-organização segundo ordens espontâneas que não atentam a objetivos específicos, mas a propósitos individuais geradores de ordens em crescimento no próprio sistema (diZerega, 1989; Hayek, 1979; Luban, 2020). Os modos de ação escolar surgem numa deriva entre lógicas de ação instrumentais e racionais e lógicas de ação espontâneas, fragmentadas e debilmente articuladas. Por conseguinte, estudar os processos de transformação das escolas requer a compreensão das organizações como sistemas de atores (Friedberg, 1995), abordagem explorada neste estudo (fig. 1).

Soerguer uma escola inclusiva e que valoriza a diferença implica construir culturas colaborativas que combinam a responsabilidade individual e as expectativas coletivas, em processos iluminados pelo conhecimento de escola e por uma visão e um sentido de missão alimentados transversalmente nas instituições. A transformação da escola associada à inovação emerge como um processo dinâmico e sistêmico, individual e coletivo, cultural e social, intencional e multidimensional que carece de ser mobilizado, engajado e enraizado na construção de novas soluções que alimentem o processo educativo e impactuem todo o sistema. Assim, uma sinfonia para a inovação terá de ser conduzida a quatro compassos, com quatro instrumentos (fig. 1): a inovação tecnológica que congrega os dispositivos para a transformação, assumindo um papel instrumental; a inovação cultural, pragmaticamente, traduzida na disposição

e abertura da organização para a mudança; a inovação organizacional que congrega a visão e tece a ação estratégica de transformação; a inovação pedagógica, segundo Walder (2017), entendida como as novas práticas de ensino que diferem da instrução tradicional e que têm como propósito melhorar aprendizagens. Atendendo a que a educação pouco tem mudado ao longo dos últimos cento e cinquenta anos (Nóvoa, 2019), urge gerar uma transformação cultural suportada pela tecnologia que se converta numa reforma cultural e pedagógica profunda (Figueiredo, 2020).

2. Do objeto de estudo e respetivo contexto à metodologia de investigação

Portugal vem incorporando os ideais de política educativa transnacionais na sua própria agenda para educação e alinhando intervenções mobilizadas pela administração central com a intenção de transformar o sistema educativo (fig. 3). O Perfil dos Alunos à Saída da Escolaridade Obrigatória (PASEO) constitui o documento de referência para uma nova organização do sistema educativo e o Decreto-Lei n.º 55/2018 veio instrumentalizar a sua operacionalização, preconizando a Autonomia e Flexibilidade Curricular como uma ferramenta disponibilizada às escolas para empreenderem a própria transformação. Este normativo, em linha com o documento *The Future of Education and Skills. Education 2030* (OECD, 2018), prefigura uma nova organização pedagógica e proclama maior proatividade para as escolas por via do exercício da sua autonomia. O novo paradigma para a educação remete para compromissos com o desenvolvimento de competências ao longo da vida que surgem operacionalizadas no PASEO em dez áreas de competência e que configuram um alinhamento com as competências-chave evocadas no documento *Key Competences for Life Long Learning* (European Commission, 2019). Uma educação transformativa que valoriza uma cidadania ativa global e a inclusão são desideratos preconizados na educação em Portugal que transbordam em documentos internacionais como *Transformative Education, Bridging Education for Change* (Arbeiter & Bučar, 2021), *A New Social Contract for Education* (UNESCO, 2021) e *Equity and Inclusion, Finding Strength through Diversity* (OECD, 2023). Contudo, “as tradições e as culturas nacionais podem colocar limites à transferência fácil de teorias e à ‘viagem’ de paradigmas” (Barzanò, 2009, p. 46), uma vez que a problemática da transformação da educação é um processo enformado em complexidades múltiplas.

A par de uma visão humanista para a educação proliferam também discursos de índole performativa, como o ideário *What makes high-performing school systems different* (Schleicher, 2018) que remete para necessários e complexos processos de regulação compósita discutidos por Barroso (2022). A autonomia inscrita num processo de desregulação do Estado surge ligada a novos modelos de regulação pós-burocrática com formas de controlo e de autorregulação a que, mesmo autor, cunha como um processo de autonomia como uma utopia necessária. A coexistência de dois discursos em Portugal - um imposto por culturas de avaliação instrumentalistas e outro centrado na inclusão e numa avaliação para as aprendizagens - gera dilemas no sistema educativo e transpõe um enredo complexo para a realidade escolar, com

efeitos no desenrolar da ação educativa nas dimensões organizacional, curricular e pedagógica. Paradoxos em matéria de orientação educativa são percebidos pelos atores educativos, ambivalência na definição de culturas de escola, ambiguidades no plano estratégico e dubiedades na ação das lideranças povoam o sistema educativo.

A experiência de 30 anos vivida como professora do ensino básico e secundário, pautada pela participação ativa em múltiplas comissões de serviço e pelo exercício de diversos cargos de coordenação, orientação e supervisão pedagógica, incluído a coordenação do processo de Autonomia e Flexibilidade Curricular, permite-nos dilucidar sobre os dilemas que enredam o trabalho nas escolas e sobre a exigência e a importância que as lideranças assumem nos períodos de normalidade organizacional e pedagógica, assegurando atividade num continuum paradigmático e, ainda mais, nos momentos em que mudanças radicais se operam no sistema fruto alterações de paradigma. Partilhamos com Machado & Formosinho (2016) a percepção de que “as mudanças só serão sustentáveis se os professores forem os seus sujeitos e dirigirem os seus esforços individuais e coletivos para o aperfeiçoamento do serviço que a educação presta aos alunos e à comunidade educativa” (p. 27 e 28). Assim, rumar à transformação da escola implica falar de currículo num contexto de inovação “significa entendê-lo como uma prática dinâmica flexível e não como uma prática pré-determinada e estática, em resposta a requisitos sociais, bem como a necessidades individuais de aprendizagem” (Pacheco, 2019, p. 142). A inovação surge como um recurso que poderá alavancar o processo de transformação da educação, numa conjuntura profícua em complexidades quando consideradas as estruturas e os atores, os mecanismos de controlo e a regulação, as lideranças e as culturas de escola, a transformação das práticas e a sustentabilidade da mudança. Por conseguinte, compreender a inovação neste quadro e conceptualizar a empiria que subjaz ao seu estudo demanda a decomposição da questão de partida enunciada para esta investigação nos problemas seguintes:

- i) Que obstáculos e que estímulos à inovação pedagógica e organizacional são percecionados pela avaliação de escola?
- ii) Será que a autoavaliação é promotora de práticas de inovação? Se sim, será que o conhecimento gerado em relação à escola contribui para a sustentabilidade da inovação?
- iii) A escola opera num coletivo de lideranças ou sob lógicas de liderança individualizada? Será que a gramática da(s) liderança(s) detém potencial para gerenciar inovação?
- iv) Que práticas organizacionais se instituem como facilitadoras e obstaculizantes de inovação? Estas práticas consubstanciam-se em ciclos de inovação?
- v) Será que o sistema de policulturas de escola se conjuga para produzir a agência do professor em ações coletivas e colegiais com efeito na transformação da sala de aula? Que fatores a obstaculizam e a favorecem?

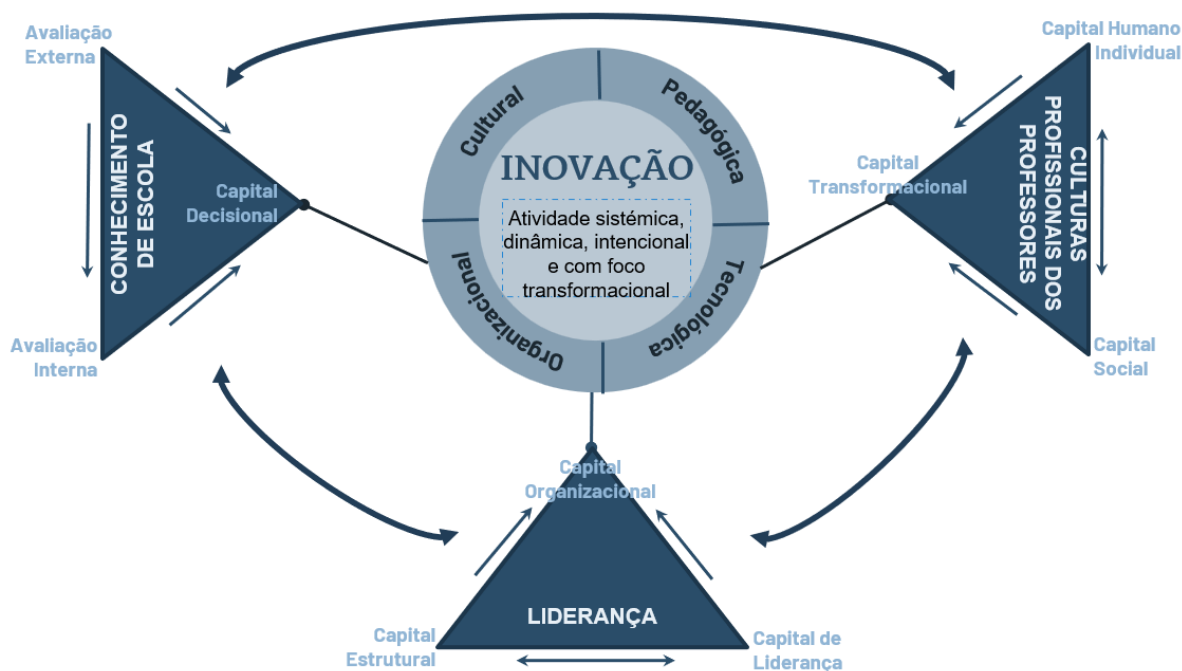
A multidimensionalidade subjacente ao objeto de investigação, aos domínios em análise (fig, 1) e aos problemas delineados remete para a construção de um *design* metodológico que requer um *corpus* documental alargado e contemplando uma análise autonómica e articulada nos níveis

macro, meso e micro da organização dos sistemas educativos. O *design* metodológico definido para o estudo considera um plano multi/plurimetodológico que combina métodos quantitativos com métodos qualitativos, seguindo uma metodologia mista. A investigação assume-se como um estudo de tendência orientado para a intelecção da inovação em diferentes sujeitos - diretores, coordenadores de departamento, elementos das equipas de autoavaliação de escola e professores. Sob o ponto de vista metodológico, o estudo pretendido do tipo compreensivo, quanto à finalidade assume-se como uma investigação pura ou básica uma vez que “o objetivo primeiro é conseguir novos conhecimentos, aumentar a teoria” (Coutinho, 2020, p.41). O plano de investigação, enquadrado com o paradigma sociocrítico, preconiza uma abordagem do tipo *ex post facto*, numa investigação descritiva e comparativa-causal, centrada na procura de possíveis relações causa e efeito (Coutinho,2020). A opção por um plano não experimental justifica-se pela intenção de observar e mensurar os efeitos decorrentes das opções estratégicas e organizacionais e das culturas de escola sobre o desenvolvimento curricular, no atual ciclo de inovação pedagógica. Literalmente, pretende-se compreender a inovação na escola “a partir do facto passado” (Zanella, 2017, p.38), pelo que os dados serão coletados de forma retrospectiva, estudando-se as mudanças em contextos naturais, sem manipulação de variáveis independentes.

O estudo empírico, ponderado o seu caráter misto, preconiza a complementaridade metodológica mediante a combinação de métodos e técnicas de recolha de dados, abordagem considerada vantajosa por deter o potencial de proporcionar uma melhor intelecção do fenómeno que está sob investigação e de obter uma compreensão mais completa e holística do mesmo (Coutinho, 2020). Assim, pretende fazer-se uso da triangulação de dados obtidos por diferentes métodos e com base em diferentes sujeitos de investigação, para analisar, sob diferentes perspetivas, o objeto empírico e, assim, configurar uma imagem global do fenómeno em estudo, a inovação nas suas interações com as políticas educativas, as lideranças e as culturas de escola (fig. 1). A empiria é desenvolvida com três focos que estão documentados no modelo global de análise (fig. 3) e tem como alvo o universo de escolas não agrupadas e agrupamentos de escolas de Portugal Continental que foram alvo de avaliação externa, no período de 2018 a 2021. O critério usado para definir a população elegível para este estudo decorre de o terceiro ciclo de avaliação da Inspeção Geral de Educação e Ciência (IGEC), incluir no referencial de avaliação, pela primeira vez, um indicador que aprecia a inovação curricular e pedagógica. As referidas instituições educativas foram alvo de avaliação externa no período designado por *ciclo de inovação pedagógica* (Pacheco & Sousa, 2018) e, simultaneamente, a sua ação subentende as últimas alterações do quadro legislativo. Assim, integraram a população em estudo 60 instituições avaliadas entre 2018 e 2021, tendo sido excluídas as avaliadas na fase piloto de implementação do terceiro ciclo avaliativo da IGEC, escolas artísticas, escolas profissionais e escolas particulares.

Figura 3.

Modelo de estudo da inovação nas escolas



Prévia e subsidiariamente ao trabalho empírico foi realizada a revisão de literatura para “situar o estudo no contexto e, com isto, estabelecer um vínculo entre o conhecimento existente e o tema – o chamado estado da arte” (Coutinho, 2020, p.59). Este trabalho foi orientado para:

- i) A concetualização do objeto de estudo numa abordagem histórico-social ao conceito de inovação, segundo duas dimensões, a ontológica e a epistemológica. Esta abordagem constitui uma revisão narrativa de literatura que está consagrada no capítulo 1 da dissertação;
- ii) O mapeamento dos fatores promotores e obstaculizantes da inovação a partir da literatura, concretizado na construção de uma tipologia que obsta do capítulo 2 da dissertação.

O trabalho empírico desenvolvido secunda o objetivo geral de *identificar os fatores que impelem a inovação e a transformação das escolas*. As questões de investigação e respetivos objetivos específicos delineados e indexados aos domínios de análise definidos, são explicitados na tabela 1. O *corpus* documental mobilizado para o estudo é diversificado e consagra três eixos empíricos no que reporta aos processos de recolha e análise de informação (fig. 4):

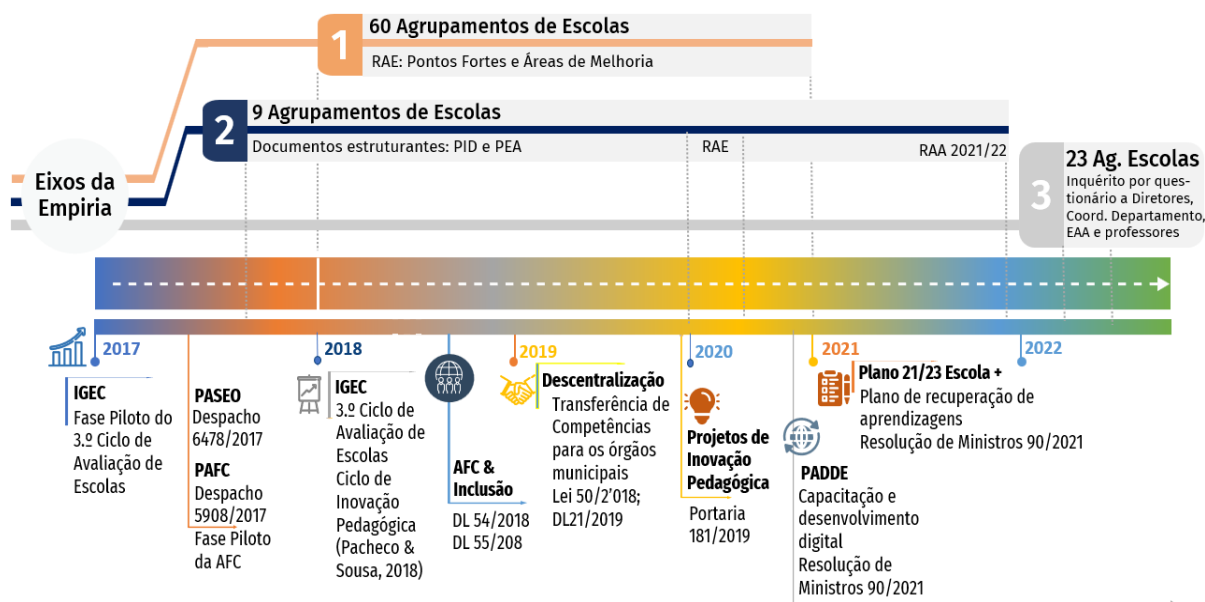
- i) **Eixo 1:** destinado a capturar olhar da inspeção em relação ao objeto de estudo, numa abordagem extensiva, sustentada na recolha de dados por via da análise de conteúdo focada estritamente nas *forças* e nas *áreas de melhoria* dos Relatórios de Avaliação Externa. Posteriormente, os dados foram tratados de forma quantitativa, com recurso a técnicas estatísticas. Este eixo empírico consagra abordagens exploradas no escopo

do “conhecimento de escola” do modelo de estudo (fig. 3) e deu origem ao trabalho de investigação explanado nos capítulos 3 e 4 desta dissertação;

- ii) **Eixo 2:** configura um estudo qualitativo de caráter intensivo de narrativas sobre educação, que procura confrontar discursos e visões de escola explicitados nos documentos estruturantes de nove agrupamentos de escola, o Projeto de Intervenção do Diretor e o Projeto Educativo, nos respetivos Relatórios de Avaliação Externa, todos produzidos no período de janeiro a abril de 2020, e nos Relatórios de Autoavaliação elaborados no ano letivo seguinte. Este desfasamento temporal destina-se a perceber mudanças induzidas pela Avaliação Externa na ação educativa, o que acrescenta, em certa medida, uma dimensão vertical analítica à empiria. Este eixo empírico é transversal às três dimensões preconizadas no modelo de estudo (fig. 3) e conduziu ao trabalho de investigação documentado no capítulo 5 desta dissertação;
- iii) **Eixo 3:** consagra um estudo extensivo quantitativo que tem por base as perceções dos autores educativos em relação à ação educativa empreendida nas suas escolas, auscultadas por via da aplicação de inquéritos por questionários. Numa abordagem comparativa-causal os dados recolhidos foram tratados com recurso a métodos de inferência estatística. Este eixo empírico é transversal às três dimensões do modelo de estudo (fig. 3) e deu origem à linha investigativa transcrita nos capítulos 6 e 7 desta dissertação.

Figura 4.

Perspetiva temporal dos eixos da empiria e enquadramento no contexto educativo português



Nota. PID – Projeto de Intervenção do Diretor; PEA – Projeto Educativo de Agrupamento; RA E – Relatório de Avaliação Externa; RAA – Relatório de Autoavaliação; AFC – Autonomia e Flexibilidade Curricular; PAFC – Projeto de Autonomia e Flexibilidade Curricular; IGEC – Inspeção Geral de Educação e Ciência; PASEO – Perfil dos Alunos à Saída da Escolaridade Obrigatória; PADDE – Plano de Ação para o Desenvolvimento Digital das Escolas

Tabela 1.*Objetivos e questões de investigação por domínio de análise*

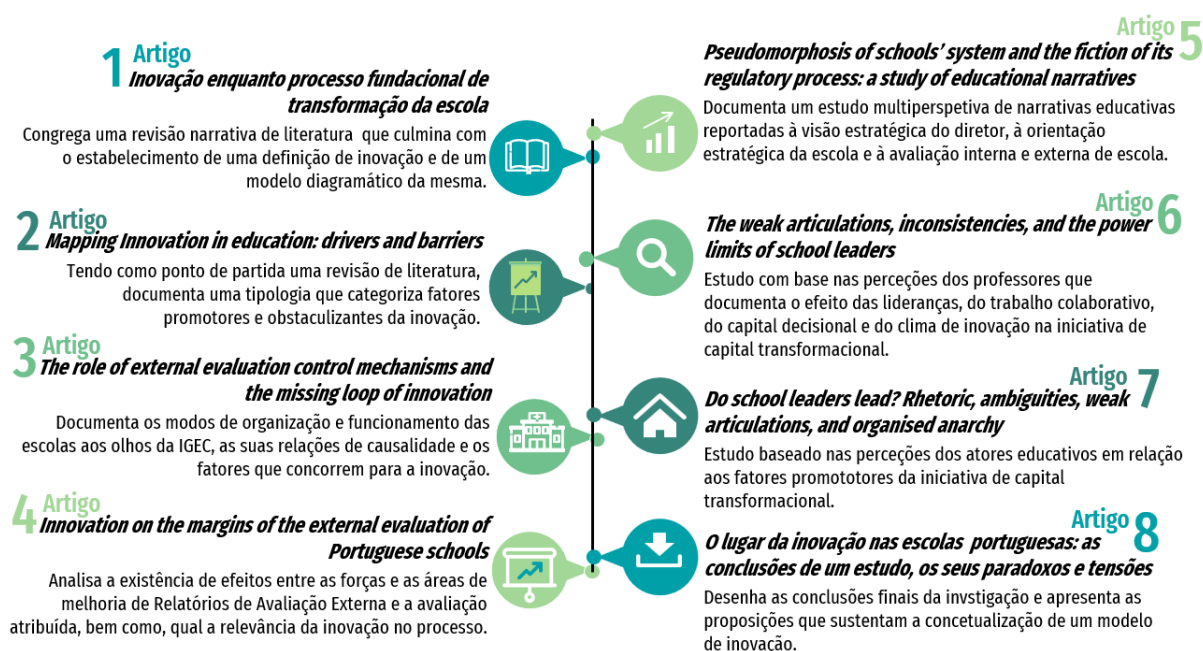
Domínios de análise			
Políticas educativas	Culturas organizacionais		Práticas profissionais
Objetivos			
I. Compreender o contributo autonomia e da avaliação externa na transformação das escolas.	II. Compreender o contributo da cultura de avaliação da escola na regulação dos processos melhoria.	III. Compreender se a estrutura organizacional e as culturas de escola são promotoras da inovação e detêm potencial para idear a melhoria contínua.	IV. Conhecer as práticas profissionais docentes operadas nas escolas sob a conjuntura da autonomia curricular e pedagógica.
Questões de investigação			
I.1. Que organização e práticas são percebidas pela avaliação externa nas escolas por via do exercício da sua autonomia?	II.1. Operam-se mudanças nas culturas de avaliação de escola no quadro da autonomia consignada às escolas? Se sim, quais?	III.1. Qual é a orientação educativa constante nos documentos estruturantes de escola em matéria de inovação? III.2. As lideranças mobilizam e suportam os processos de inovação e transformação de ensino aprendizagem?	IV.1. O comportamento inovador e o trabalho colaborativo constituem fatores determinantes da transformação do ensino aprendizagem? IV.2. Operam-se mudanças na gramática escolar e no processo de ensino aprendizagem na sequência da autonomia consignada às escolas?
1.2. Que mudanças, em matéria de inovação, são percebidas nas escolas pela avaliação externa, por via do exercício da autonomia?	II.2. Os resultados da autoavaliação de escola contribuem para o capital decisional? Se sim, tem impacto na transformação organizacional?	III.3. Existe uma visão e um clima de escola que contribui para a transformação do ensino aprendizagem?	
Objetivos interdomínios			
A. Compreender se a avaliação externa e a autoavaliação enformam um processo de co-regulação da autonomia de escola com vista à melhoria das aprendizagens.		B. Compreender se existe uma associação entre as práticas e culturas de escola e a transformação do ensino aprendizagem.	
Questões de investigação			
A.1. Será que a avaliação de escola e a autonomia estão a potenciar transformações nas escolas?		B.1. Existe sintonia entre as narrativas para a ação e as práticas e articulação entre estas e a transformação do ensino aprendizagem?	
Objetivo geral			
C. Identificar fatores promotores e obstaculizantes da inovação que poderão sustentar a transformação da escola.			
Questões de investigação			
C.1. Quais são os fatores promotores da inovação, nas escolas?		C.2. Quais são os fatores obstaculizantes da inovação, nas escolas?	

A presente dissertação de doutoramento está organizada sob a forma de artigos¹, assumindo-se como uma compilação, devidamente enquadrada, de um conjunto coerente de trabalhos de investigação que integram o projeto global de investigação e o respetivo objeto de indagação, a inovação (fig. 5). O último artigo da dissertação, a conclusão, compila e articula o acervo de conhecimento procedente da empiria e projeta uma modelo para mensurar a inovação.

¹ Conforme estabelece o regulamento aprovado pelo Conselho Científico da Faculdade de Educação e Psicologia, da Universidade Católica Portuguesa (n.º 5 do artigo 9.º e aditamento estabelecido pelo mesmo Conselho em 22 de janeiro de 2020)

Figura 5.

Estrutura da tese: artigos



3. Dimensão ética na investigação

O trabalho de investigação operado respeitou integralmente os princípios e valores inscritos no *Código de Ética e de Conduta da Universidade Católica Portuguesa*², de 2015 e no aditamento datado de 2021. Por ser verdade, declaramos que o processo de investigação implementado esteve alinhado com os pilares de integridade científica enunciados no artigo 11.º do referido Código que estarei o compromisso com a Verdade, a Ética e a Responsabilidade Social.

Adicionalmente, toda a investigação foi pautada por padrões de atuação que acautelaram, a pluralidade e diversidade constitutivas das Ciências da Educação, em linha com o enunciado na *Carta Ética da Sociedade Portuguesa de Ciências da Educação*, de 2020³. Em concreto, os investigadores primaram a sua ação pelo cumprimento cabal dos princípios éticos expressos na referida Carta e, dessa forma, atuaram em conformidade com os princípios consagrados na Declaração Universal dos Direitos Humanos (1948) e nas diversas Convenções das Nações Unidas referentes à proteção dos direitos universais. Assim, declara-se que todos/as intervenientes na investigação deram o seu Consentimento Livre e Informado de participação, foi acautelada a Confidencialidade e Privacidade dos dados recolhidos, respeitada a decisão de Desistência de Participação e acautelado o seu Bem-estar e Integridade. Na relação com a comunidade de investigadores/as foram respeitados os princípios éticos e deontológicos relativos a questões de Autoria e Coautoria, Revisão de Pares e Publicação, bem como, nas relações havidas com os/as Estudantes e Profissionais da Educação, com os Promotores e Colaboradores da Investigação, com as Comunidades e com a Sociedade em geral.

² https://www.porto.ucp.pt/pt/provedor_etica - https://www.porto.ucp.pt/pt/provedor_etica

³ <https://www.spce.org.pt/assets/files/CARTA-TICA2.EDICAOFINAL-2020-COMPACTADO.pdf>

Referências

- Andrews, D., & Conway, J. M. (2020). Leadership for Ongoing Sustainability of Whole School Improvement. *Leading & Managing*, 26(1), 128–129.
<https://search.informit.org/doi/10.3316/informit.437744412395345>
- Arbeiter, J., & Bučar, M. (2021). Transformative Education, Bridging Education for Change. In *European Union*. <https://doi.org/10.13140/RG.2.2.30182.96322>
- 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>
- 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>
- Barroso, J. (2022). *Administração e política educacional. um percurso de investigação* (Issue June). Instituto de Educação da Universidade de Lisboa.
- Barzanò, G. (2009). *Culturas de liderança e lógicas de responsabilidade* (1ª). Fundação Manuel Leão.
- 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>
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Cabral, I., & Alves, J. M. (2017). Ensaio breve para reinventar as práticas de escolarização. In I. Cabral & J. Matias Alves (Eds.), *Da Construção do Sucesso Escolar, uma Visão Integrada* (pp. 7–10). Fundação Manuel Leão.
- 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>
- Cochran-Smith, M. (2021). Rethinking teacher education: The trouble with accountability. *Oxford Review of Education*, 47(1), 8–24. <https://doi.org/10.1080/03054985.2020.1842181>
- Conway, J. M., & Andrews, D. (2016). A school wide approach to leading pedagogical enhancement: An Australian perspective. *Journal of Educational Change*, 17(1), 115–139.
<https://doi.org/10.1007/s10833-015-9258-0>
- Coutinho, C. P. (2020). *Metodologias de investigação em Ciências Sociais e Humanas* (2ª). Edições Almedina, S.A.
- Day, C. (2017). Leadership as a Way. *Profesorado*, 21(2), 21–26. https://doi.org/10.1007/978-981-10-3549-4_7
- Dischner, S. (2015). Organizational structure, organizational form, and counterproductive work behavior: A competitive test of the bureaucratic and post-bureaucratic views. *Scandinavian Journal of Management*, 31(4), 501–514.
<https://doi.org/10.1016/j.scaman.2015.10.002>
- diZerega, G. (1989). Democracy As A Spontaneous Order. *Critical Review*, 3(2), 206–240.
<https://doi.org/10.1080/08913818908459563>
- Donaldson, G. (2013). Starter Paper on Inspection and Innovation. *Starter Paper on Inspection and Innovation*, 1–8. <http://www.nmva.smm.lt/wp-content/uploads/2013/06/SICI-Paper-Bratislava-2013-final-version-24-05-Graham-Donaldson.pdf>
- Elken, M., & Vukasovic, M. (2019). *The Looseness of Loose Coupling: The Use and Misuse of “Loose Coupling” in Higher Education Research*. *October*, 53–71.
<https://doi.org/10.1108/s2056-375220190000005005>
- European Commission. (2019). *Directorate-General for Education, Youth, Sport and Culture, Key competences for lifelong learning*.
<https://doi.org/https://data.europa.eu/doi/10.2766/569540>
- Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education*, 2(1). <https://doi.org/10.1080/2331186X.2015.1018698>

- Figueiredo, A. D. (2020). The renewed human dimension of the school in the digital era. *EDUCA - International Catholic Journal of Education*, 6(January 2020), 168–176. <https://www.researchgate.net/publication/353669761>
- Friedberg, E. (1995). *O poder e a regra: dinâmicas da ação organizada*. Instituto Piaget.
- Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analysis Archives*, 23(15), 1–18. <http://dx.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>
- González-Falcón, I., García-Rodríguez, M. P., Gómez-Hurtado, I., & Carrasco-Macías, M. J. (2020). The importance of principal leadership and context for school success: insights from '(in)visible school.' *School Leadership and Management*, 40(4), 248–265. <https://doi.org/10.1080/13632434.2019.1612355>
- Hayek, F. (1979). *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy. Vol.3*. Routledge.
- 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/eej.2007.6.3.198>
- Hitt, D. H., & Tucker, P. D. (2016). Systematic Review of Key Leader Practices Found to Influence Student Achievement: A Unified Framework. *Review of Educational Research*, 86(2), 531–569. <https://doi.org/10.3102/0034654315614911>
- Hopkins, E., Hendry, H., Garrod, F., McClare, S., Pettit, D., Smith, L., Burrell, H., & Temple, J. (2016). Teachers' views of the impact of school evaluation and external inspection processes. *Improving Schools*, 19(1), 52–61. <https://doi.org/10.1177/1365480215627894>
- Kılıçoğlu, G., & Kılıçoğlu, D. Y. (2021). Understanding organizational hypocrisy in schools: the relationships between organizational legitimacy, ethical leadership, organizational hypocrisy and work-related outcomes. *International Journal of Leadership in Education*, 24(1), 24–56. <https://doi.org/10.1080/13603124.2019.1623924>
- Leithwood, K., & Jantzi, D. (2008). Linking Leadership to Student Learning: The Contributions of Leader Efficacy. *Educational Administration Quarterly*, 44(4), 496–528. <https://doi.org/https://doi.org/10.1177/0013161X08321501>
- Leithwood, Kenneth, Louis, K. S., Anderson, S., Wahlstrom, K., Minnesota Univ., M. C. for A. R. and E. I., & Ontario Inst. for Studies in Education, T. (2004). How leadership influences student learning. Review of research. *The Wallace Foundation*. <https://doi.org/https://hdl.handle.net/11299/2035>
- Lévesque, B. (2014). As inovações sociais podem contribuir para transformações, mas isso não é tão evidente. *Revista Ciências Em Debate*, 1(2), 179–199.
- Lillejord, S. (2020). From “unintelligent” to intelligent accountability. *Journal of Educational Change*, 21(1), 1–18. <https://doi.org/10.1007/s10833-020-09379-y>
- Luban, D. (2020). What Is Spontaneous Order? *American Political Science Review*, 114(1), 68–80. <https://doi.org/10.1017/S0003055419000625>
- Machado, J., & Formosinho, J. (2016). Equipas educativas e comunidades de aprendizagem. *Revista Portuguesa de Investigação Educacional - Escolas, Melhoria e Transformação*, 16, 11–31. <https://doi.org/https://doi.org/10.34632/investigacaoeducacional.2016.3419>
- Mckenna, S., Garcia-Lorenzo, L., & Bridgman, T. (2010). Managing, managerial control and managerial identity in the post-bureaucratic world. *Journal of Management Development*, 29(2), 128–136. <https://doi.org/10.1108/02621711011019260>
- Morin, E. (2021). *Elogio da metamorfose*. Portal EcoDebate. <https://www.ecodebate.com.br/2010/01/12/elogia-da-metamorfose-artigo-de-edgar-morin/>
- Nations, U. (2023). *Report on the 2022 Transforming Education Summit* (Issue January). https://www.un.org/sites/un2.un.org/files/report_on_the_2022_transforming_education_summit.pdf

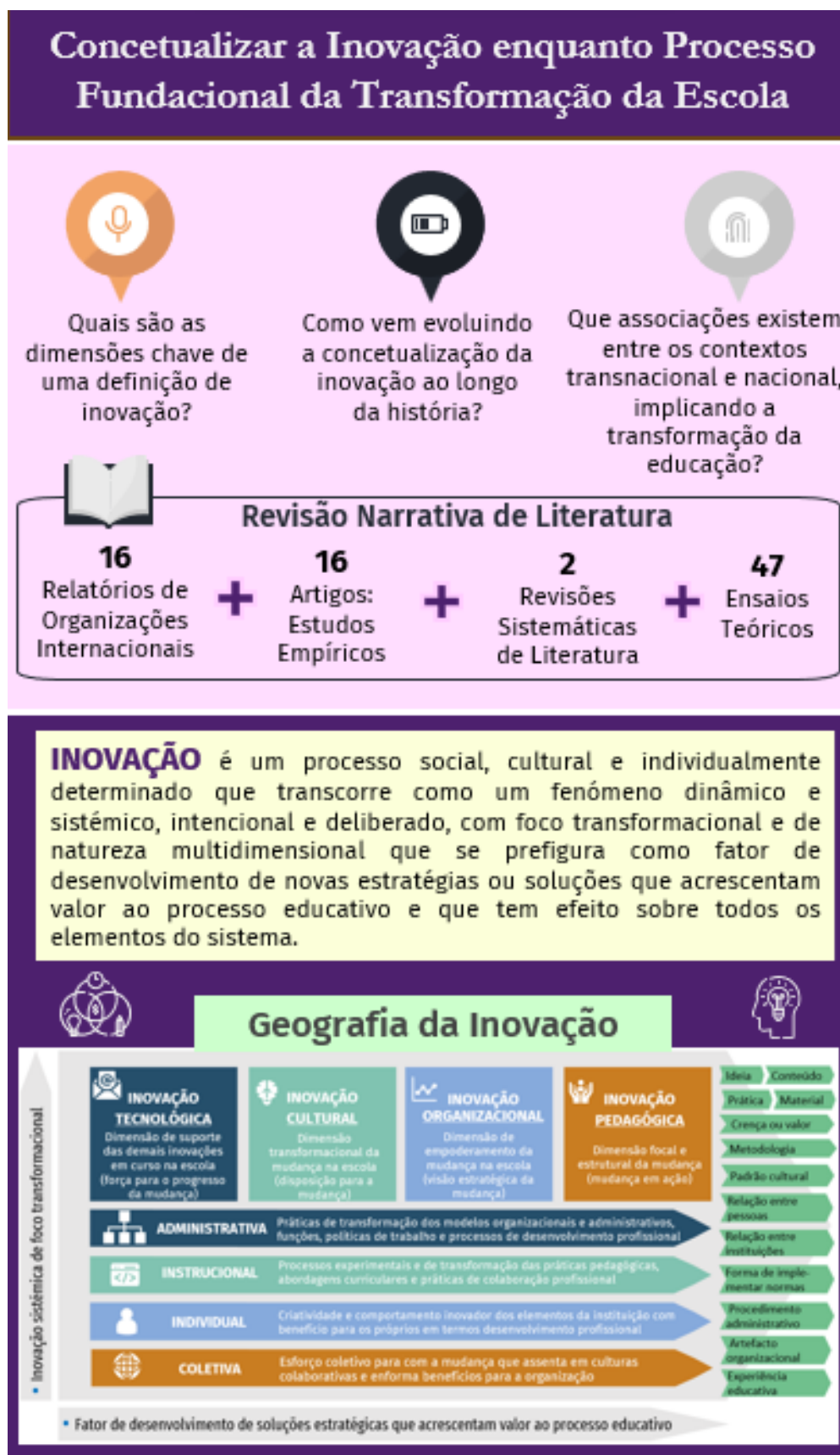
- Nicholls, A., Simon, J., & Gabriel, M. (2015). Introduction: Dimensions of Social Innovation. In A. Nicholls, J. Simon, & M. Gabriel (Eds.), *New Frontiers in Social Innovation Research* (pp. 1–27). Palgrave Macmillan. [https://doi.org/Palgrave Macmillan](https://doi.org/Palgrave%20Macmillan)
- Nóvoa, A. (2019). Os Professores e a sua Formação num Tempo de Metamorfose da Escola. *Educação & Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>
- OECD. (2018). The Future of Education and Skills: Education 2030. *OECD Education Working Papers*, 23. [http://www.oecd.org/education/2030/E2030 Position Paper \(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
- OECD. (2020). Back to the Future of Education - FOUR OECD SCENARIOS FOR SCHOOLING. In *Pmla* (Vol. 133, Issue 3).
- OECD. (2022). *OECD work on education & skills. Directorate for Education and Skills Education and Skills*. 22.
- OECD. (2023). *Equity and Inclusion in Education: Finding Strength through Diversity*. <https://doi.org/10.1787/e9072e21-en>
- Orton, J. D., & Weick, K. E. (1990). Loosely Coupled Systems: A Reconceptualization. *Academy of Management Review*, 15(2), 203–223. <https://doi.org/10.5465/amr.1990.4308154>
- Pacheco, J. A. (2019). *Inovar para Mudar a Escola* (1ª). Porto Editora.
- Pacheco, J. A., & Sousa, J. R. (2018). Políticas curriculares no período pós-LBSE (1996-2017). Ciclos de mudança na educação pré-escolar e nos ensinos básico e secundário. In J. A. Pacheco, M. C. Roldão, & M. T. Estrela (Eds.), *Estudos de currículo* (1ª, pp. 129–176). Porto Editora.
- Polluveer, K. (2023). *Política de inovação - Fichas técnicas sobre a União Europeia*. www.europarl.europa.eu/factsheets/pt
- Rechsteiner, B., Compagnoni, M., Wullschleger, A., Schäfer, L. M., Rickenbacher, A., & Maag Merki, K. (2022). Teachers involved in school improvement: Analyzing mediating mechanisms of teachers' boundary-crossing activities between leadership perception and teacher involvement. *Teaching and Teacher Education*, 116, 103774. <https://doi.org/10.1016/j.tate.2022.103774>
- Schleicher, A. (2018). What makes high-performing school systems different. In *World Class: How to Build a 21st-Century School System* (pp. 61–137). OECD Publishing. <https://doi.org/10.1787/9789264300002-3-en>
- Schumpeter, J. (1997). *Os Economistas* (M. . Trad. Possas (ed.)). Editora Nova Cultural.
- Song, K. O., & Choi, J. (2017). Structural analysis of factors that influence professional learning communities in Korean elementary schools. *International Electronic Journal of Elementary Education*, 10(1), 1–9. <https://doi.org/10.26822/iejee.2017131882>
- Tan, M. Y., & Hung, D. W. L. (2020). Models of innovation scaling in Singapore schools: process objects as multi-level role clusters and outcomes—a multiple case study approach. *Asia Pacific Education Review*, 21(4), 553–571. <https://doi.org/10.1007/s12564-020-09642-0>
- 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>
- Torres, L., & Alves, M. (2016). Nota introdutória ao núcleo temático - A Educação na Europa do Sul: Constrangimentos e Desafios em Tempos Incertos. *Revista Portuguesa de Educação*, 29(2), 255. <https://doi.org/10.21814/rpe.10275>
- UNESCO. (2021). *Reimagining our futures together: a new social contract for education*. International Commission on the Futures of Education - UNESCO. <https://doi.org/978-92-3-100478-0>
- von Schomberg, L., & Blok, V. (2021a). Technology in the Age of Innovation: Responsible Innovation as a New Subdomain Within the Philosophy of Technology. *Philosophy and Technology*, 34(2), 309–323. <https://doi.org/10.1007/s13347-019-00386-3>
- von Schomberg, L., & Blok, V. (2021b). The turbulent age of innovation. *Synthese*, 198(s19), 4667–4683. <https://doi.org/10.1007/s11229-018-01950-8>
- Walder, A. M. (2017). Pedagogical Innovation in Canadian higher education: Professors'

- perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, 54, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>
- Weick, K. E. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 19. <https://doi.org/10.2307/2391875>
- Xhomara, N. (2018). Influence of school leadership style on effective teaching and teacher-student interaction. *Pedagogika*, 132(4), 42–62. <https://doi.org/10.15823/p.2018.132.3>
- Zanella, L. C. H. (2017). Metodologia de Pesquisa 2013 2ª edição reimpressa. *Departamento de Ciências Da Administração/ UFSC*.
http://arquivos.eadadm.ufsc.br/EaDADM/UAB_2014_2/Modulo_1/Metodologia/material_didatico/Livro texto Metodologia da Pesquisa.pdf

Artigo 1. Concetualizar a inovação enquanto processo fundacional da transformação da escola

Artigo submetido à *Revista Portuguesa de Educação* em coautoria com José Alves e Diana Soares e, ainda, sob os títulos, em inglês e espanhol, “*Conceptualising innovation as the foundational process of school transformation*” e “*Concetualizar la innovación como el proceso fundacional de la transformación escolar*”. As referências foram redigidas segundo as normas da APA – 7.^a edição.

Resumo gráfico



Resumo

Múltiplos estudos vêm sendo realizados sobre as dificuldades, as possibilidades e a sustentabilidade da mudança, bem como, sobre o conservadorismo e a resiliência dos sistemas educativos. A inovação vem assumindo uma centralidade neste processo de mudança, por ser considerada um fator potenciador da transformação pedagógica, um pequeno elo de uma cadeia de necessárias metamorfoses que abarcam de forma sistêmica toda a organização escolar.

Nesta revisão narrativa de literatura foi concretizada uma abordagem histórico-social relativa ao conceito de inovação, visando sustentar a concetualização do construto segundo duas dimensões, a ontológica e a epistemológica. Neste alinhamento, propomos um modelo diagramático e uma definição de inovação que sumarizam a essência plural do processo inovativo em educação. A definição de inovação, considerada a sua natureza multidimensional e o seu caráter sistêmico e dinâmico, assenta em cinco eixos: o âmbito, o objeto, a responsabilidade entendida como capacitação organizacional, o foco e o percurso.

Palavras-chave: Inovação; transformação educacional; sustentabilidade da mudança.

Abstract

Several studies have been developed about the difficulties of school change, the complexity of sustainability surrounding the process and the conservatism and resilience that mark the educational system. Innovation assumes centrality in the process of changing because is an important factor for the transformation of teachers' practices, a small link on a chain of changes that systemically pursues the school organisation.

This narrative literature review conducted a historical-social approach to innovation. The purpose is to conceptualise the construct, following two dimensions, the ontological and the epistemological. Therefore, we propose a diagrammatic model and a synthetic definition of innovation that summarises the pluralist essence of educational innovation. The definition of innovation, considering its multidimensional nature and its dynamical and systemic features, follows five dimensions: scope, object, responsibility, focus and course.

Keywords: innovation; educational transformation; sustainable change.

Resumen

Se han realizado múltiples estudios sobre las dificultades y la sostenibilidad del cambio, así como sobre el conservadurismo y la resiliencia de los sistemas educativos. La innovación viene asumiendo una centralidad en este proceso de cambio, pues se considera un factor que potencia la transformación pedagógica, un pequeño eslabón en una cadena de cambios necesarios que abarcan toda la organización escolar de manera sistémica.

En esta revisión narrativa bibliográfica se ha valorado un enfoque histórico-social relacionado con el concepto de innovación, en una concepción del constructo según dos dimensiones, ontológica y epistemológica. Así, proponemos un modelo diagramático y una definición de innovación que resumen la esencia del proceso innovador en educación. La definición de innovación, considerada su naturaleza multidimensional y su carácter sistémico y dinámico, se basa en cinco ejes: el alcance, el objeto, la responsabilidad entendida como capacitación organizacional, el enfoque y el curso.

Palabras clave: innovación; transformación educativa; sostenibilidad del cambio.

1. Introdução

A inovação apresenta-se como um fenómeno multidimensional, cultural e socialmente determinado, sendo claro, em meio século de estudo, que na educação emergiu da interação dos contextos socioeconómico, cultural e político (Arar et al., 2019). Apesar de estar originalmente alocada ao campo económico, a inovação foi assumindo uma dimensão panótica e foi integrada gradualmente nos vários contextos onde o progresso e o bem-estar social e humano são valorizados (von Schomberg & Blok, 2021).

A inovação enquanto dinâmica de transformação da escola constitui a dimensão enunciada neste artigo, prefigurando-se a sua compreensão enquanto fator potenciador de mudanças pretendidas para o sistema educativo. Esta transformação para ser efetiva tem de tornar-se sistémica, ecológica, consistente e progressiva (Serdyukov, 2017) num processo profundo de compreensão da própria essência do trabalho que se desenrola nas escolas (Fullan et al., 2017). A mudança radicada nas escolas carece de inovação ao nível das práticas de ensino e aprendizagem, bem como, no plano organizacional para que possa consubstanciar-se em preparação dos jovens para a vida em sociedade (Serdyukov, 2017). As mudanças de gramática escolar, isto é, das estruturas regulares e das regras de organização do trabalho instrucional (Tyack & Tobin, 1994), são requeridas para que se efetive a transformação sistémica das escolas (Alves & Cabral, 2019, 2021; Machado, 2018) que a par da problemática da sustentabilidade da mudança (Córdoba-Pachón et al., 2021; Mogren et al., 2019; Shirley et al., 2020) se afirmam como elementos chave no processo.

Transformação e inovação em educação são dois construtos indissociáveis que têm subjacente uma dimensão histórico-social e outra ontológico-epistemológica que sustentam a abordagem adotada nesta revisão de literatura. Na vertente ontológica é propósito deste artigo enveredar por uma análise que visa sistematizar a essência na qual está envolto o conceito de inovação. No plano epistemológico, o foco reside na compreensão dos processos de produção e difusão da inovação para potenciar a identificação de condições facilitadoras da transformação da escola. Assim, é objetivo deste artigo perceber: quais são as dimensões chave de uma definição de inovação? como vem variando a sua concetualização ao longo da história? e que conexões podem ser estabelecidas entre os contextos transnacional e português em matéria de educação e o processo de transformação educacional? É ainda nosso propósito enunciar uma definição holística de inovação, a par de um modelo diagramático que possam orientar o estudo e a inteligência do processo de transformação pretendido para as organizações escolares.

2. Metodologia

A revisão narrativa de literatura seguiu um processo estruturado em três etapas, nos moldes propostos por Levy & Ellis (2006): a) pesquisa bibliográfica e triagem; b) extração e análise de

dados; c) redação da revisão da literatura, um processo de síntese radicado em atos de combinação, integração, modificação, reorganização, projeção, composição e generalização.

Primeiramente, socorremo-nos de várias bases de dados eletrônicas, incluindo a SCOPUS e a WoS, para identificar e selecionar literatura relevante. Neste processo foram seguidas três linhas de pesquisa visando a obtenção de um *corpus* documental: (a) sobre política educativa para a inovação nos planos nacional e transnacional; (b) que sustentasse a definição de um construto de inovação, historicamente enquadrado e assente na inteleção de um paralelismo entre a inovação no campo económico e a inovação educacional; (c) que integrasse elementos reportados à concetualização da inovação e ao processo inovativo. Na pesquisa, em português e inglês, foram usadas as combinações de termos: [inovação, mudança/transformação educativa/escolar], [inovação, liderança escolar] e [comportamento inovador, cultura escolar]. A resenha documental reunida incluiu ainda autores seminais e fontes bibliográficas secundárias. Assim, a análise de dados incidiu sobre 14 relatórios e documentos similares produzidos por organizações internacionais não governamentais, 10 artigos empíricos, 2 artigos referentes a revisões de literatura e, ainda, 33 ensaios teóricos, dos quais 6 remetiam para modelos, mapas, programas e projetos de inovação.

Este artigo foi organizado em três partes tendo em vista a enunciação de um conceito de inovação centrado nas dimensões ontológica e epistemológica. A análise assentou em fatores de ordem contextual e história, pelo que a primeira secção do artigo enuncia a dimensão histórico-social da inovação educacional. Este construto sustenta a abordagem que se segue, a explanação das dimensões-chave que devem ser alocadas a uma definição de inovação radicada numa dimensão ontológica e noutra epistemológica. Finalmente, é construída uma definição de inovação e o respetivo modelo diagramático, procurando sistematizar, integrar e unificar as conceções difundidas na literatura.

3. Dimensão histórico-social da inovação em educação

3.1 Que conexões podem ser estabelecidas entre os contextos transnacional e português e o processo de transformação educacional?

A Agenda Metas para o Desenvolvimento Sustentável, proposta pela Organização das Nações Unidas preconiza para a educação uma ação transformativa com enfoque na aprendizagem de cada indivíduo, num processo que abrange as dimensões cognitiva e socio-emocional, a par da educação cidadã (UNESCO, 2019). Efetivamente, percebe-se a necessidade de instituir um ensino aprendizagem orientado para: a aquisição de conhecimento, análise crítica e exposição experiencial (UNESCO, 2019); intervenções que aliem os quatro pilares da educação (Delors et al., 1998) ao aprender a aprender e ao desenvolvimento de competências (Walters & Watters, 2017); pedagogias diversificadas que alavanquem o intercâmbio intergeracional e intercultural em abordagens mais participativas e colaborativas e

que prefigurem a transição de salas de aula convencionais para comunidades de aprendentes (UNESCO, 2021); abordagens mais humanistas que combinem o conhecimento disciplinar e interdisciplinar, capacidades e atitudes e possibilitem o desenvolvimento de competências (OECD, 2018) com destaque para as competências transformacionais (OECD, 2019).

Portugal vem incorporando estes ideais transnacionais na sua própria agenda para educação e vem alinhando intervenções mobilizadas pela administração central com a intenção de transformar o sistema educativo. O Perfil dos Alunos à Saída da Escolaridade Obrigatória⁴ constitui o documento de referência para uma nova organização do sistema educativo e o Decreto-Lei nº 55/2018 veio instrumentalizar a sua operacionalização, preconizando a Autonomia e Flexibilidade Curricular como uma ferramenta disponibilizada às escolas para empreenderem a própria transformação. Contudo, “as tradições e as culturas nacionais podem colocar limites à transferência fácil de teorias e à ‘viagem’ de paradigmas” (Barzanò, 2009, p. 46), uma vez que a problemática da transformação da educação é um processo enformado em complexidades múltiplas. A realidade é que as escolas se vêm comportando como sistemas conservadores, resilientes e resistentes à mudança e às inovações (Alves, 2021; Arar et al., 2019; Hargreaves & Shirley, 2009; Messina, 2001; Rogers, 2003; Runhaar et al., 2016), sendo que a educação pouco tem mudado ao longo dos últimos cento e cinquenta anos (Nóvoa, 2019). Nas escolas prevalece uma gramática escolar que aplica o mesmo processo para todos os alunos como se operasse uma linha de produção fabril, em cada ano de escolaridade, em cada turma e com cada professor em frente à sua máquina disciplinar. Esta pode ter sido a resposta adequada de um sistema educativo do passado que procurava solucionar as necessidades impostas pela revolução industrial, mas não o é mais na atual sociedade tecnológica pós-contemporânea onde

"the focus on the importance of 'soft', 'transferable', 'non-cognitive' or 'twenty-first century' skills has enriched current thinking on educational content and methods (...) Although this rationale is key to the economic function of education, it must not overshadow the need to develop those competencies that individuals and communities require for the multiple dimensions of human existence – competencies that contribute to the empowerment of both." (UNESCO, 2019, p.41).

Uma nova ordem social mais participativa e inclusiva aconselha a transformação da escola e “a necessidade de repensar a profissão de professor à luz dos desafios atuais, face ao fim do modelo escolar e ao princípio de um novo tempo para o ensino e a educação” (Nóvoa, 2019, p.7). “A mudança em contexto educativo e escolar implica as dimensões organizacional, curricular e pedagógica” (Pacheco, 2019, p.9) e requer o recurso à inovação enquanto ferramenta de transformação da educação. Contudo, empreender mudanças como as que se tentam operar em Portugal, num alinhamento com modelos *top-down*, obriga a que se considere que o novo

⁴ Despacho n.º 6478/2017, 26 de julho

desiderato para a educação poderá não ter “nenhuma estrutura para acolher o novo” (Morin, 2002, p.35). As resistências dos sistemas educativos e o conhecimento das organizações escolares e dos profissionais da educação têm de ser percecionados, se é pretendido o sucesso da mudança. Efetivamente, os professores são os árbitros finais da mudança educacional e nenhum plano de mudança os pode ignorar (Hargreaves & Shirley, 2009). A transformação pretendida para o sistema educativo, um sistema conservador, apela a que se analise o impasse e a obstinação que o caracteriza e que se considere premente, como reverbera Morin (2010), a sua metamorfose. Sobre esta questão, Fullan (2007) afirma existir uma

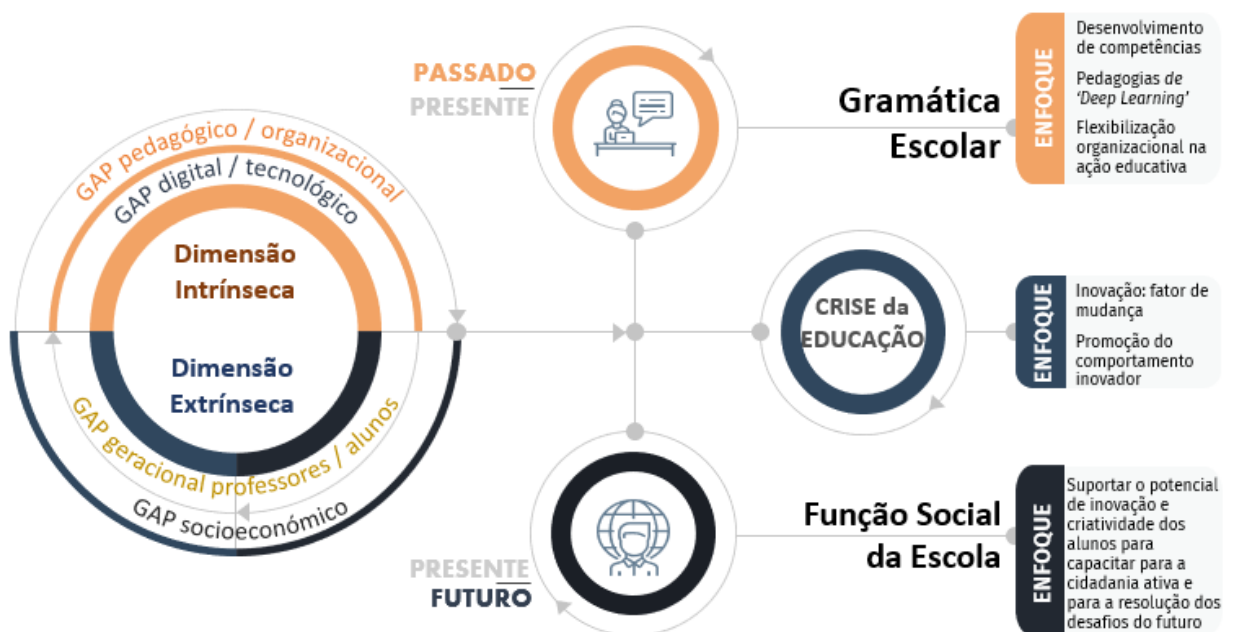
"great pressure and incentives to become innovative, and this resulted in many schools adopting reforms that they did not have capacity (individually or organizationally) to put into practice. Thus, innovations were adopted on the surface, with some language and structures becoming altered, but not the practice of teaching." (p.6)

A crise dos sistemas educativos apresenta duas dimensões, uma intrínseca e outra extrínseca e está relacionada com ‘gaps’ nos fundamentos do processo educativo (fig. 1). A este nível, destacam-se as características chave das culturas escolares marcadas pelo: ‘*presentismo*’ decorrente do foco na ação a curto prazo; ‘*conservadorismo*’ resultante da concentração nas pequenas mudanças ao invés das grandes e integradas transformações da escola; e ‘*individualismo*’ traduzido em ações educativas de isolamento profissional (Hargreaves, 2010). A crise extrínseca reside no continuum presente-futuro e prende-se com a função social da educação entendida como chave de progresso social e económico e como alavanca para a resposta aos grandes desafios da humanidade. No atual contexto, a sociedade busca uma escola responsiva para estes desafios, missão que carece de ser interiorizada pelos profissionais da educação. Trata-se de integrar e concetualizar a metáfora da OCDE (2019), a bússola para aprendizagem 2030, que enuncia uma visão ambiciosa para o futuro da educação e enfatiza a necessidade de os alunos aprenderem a navegar sozinhos em contextos desconhecidos. A escola democrática, na lógica da inclusão, pauta-se pela responsividade a todos os alunos e é compelida a se descentrar de ações isoladas de foco disciplinar em grupos estáticos de alunos, mais ou menos centradas no professor e a se metamorfosear (Alves & Cabral, 2019; Fullan et al., 2020; Hargreaves & Shirley, 2009; Machado & Formosinho, 2016). O *core* do processo de ensino e aprendizagem deve transitar para o desenvolvimento de competências (OECD, 2019; UNESCO, 2019), para as pedagogias focadas na aprendizagem profunda (Fullan et al., 2020) e para a flexibilização organizacional traduzida em mudanças de gramática escolar (Alves et al., 2020; Alves & Cabral, 2021; Machado & Formosinho, 2016; Nóvoa, 2019). A esta dimensão da crise da educação acresce a dimensão intrínseca que se consubstancia num continuum passado-presente e se prende com a lacuna geracional natural existente entre professores e alunos. Esta lacuna tem âmbito tecnológico-digital e pedagógico-organizacional. Os professores em Portugal, profissionais cuja média de idades é 49 anos (TALIS, 2018), foram alunos e iniciaram a sua formação profissional num mundo analógico, em que a tecnologia estava ausente da escola, todo o conhecimento era livresco e professaram, segundo Cabral e Alves (2016), uma

gramática escolar organizada de forma a permitir a transmissão de conhecimento do professor para os alunos, à semelhança do que acontecia no modo individual de ensino entre mestre e discípulo. Em contrapartida, atualmente os alunos aprendem num mundo onde a tecnologia é um conetor ou um amplificador (Fullan et al., 2020) e onde aprender é um processo multissensorial, colaborativo, interativo, mediático, criativo, alicerçado no pensamento crítico e com enfoque na comunicação e na cidadania. Estas diferenças radicadas nas vivências reclamam a transformação das mentalidades e das razões dos professores a par da adoção de comportamento inovador, entendido como a capacidade para providenciar aos alunos novos modelos e ferramentas em atividades dentro e fora da sala de aula, para assim fomentar a criatividade dos alunos e produzir novos *outcomes* (Nemeržitski et al., 2013). Para Nóvoa (2019) “trata-se do fim da escola, tal como a conhecemos, e do princípio de uma nova instituição, que certamente terá o mesmo nome, mas que será muito diferente” (p.2).

Figura 1.

Impasse da educação versus caminho para a perspetivação da mudança



Fonte: Elaboração Própria.

3.2. Como vem variando a conceção de inovação ao longo da história?

A palavra inovação instalou-se no quotidiano social, afigurando-se como o denominador de uma sociedade globalizada com múltiplas agendas para a inovação, levando Schomberg e Block (2021) a asseverar que presentemente se vivencia a ‘era turbulenta da inovação’. Contudo, o termo inovação é vetusto, remontando à Grécia Antiga, verificando-se que o seu uso, ao longo dos tempos, se vem pautando por uma controversa conotação. Segundo Smith (2018) depois de avocada a palavra *καινοτομία* (inovação) por Xenophon (430-354 a.C.) com o propósito de

expressar progressos na economia ateniense, os seus contemporâneos, Sócrates, Platão e Aristóteles, concederam-lhe uma conotação predominantemente negativa. Para estes filósofos, a essência da palavra, ao remeter para a ideia de mudança e de incerteza, opunha-se aos princípios que perfilhavam em torno da criação de uma sociedade idealizada que perdurasse ao longo de gerações, intuindo, segundo Schomberg e Blok (2021), a inovação como subversiva e uma ameaça à ordem estabelecida. Esta conceção de uma sociedade conservadora na qual a inovação era encarada como destrutivamente disruptiva e, portanto, uma ameaça à atividade produtiva (Smith, 2018) impôs-se durante séculos, até que as novas fundações do conceito começaram a ser temperadas por Joseph Schumpeter. O fundador da Teoria do Desenvolvimento Económico, publicada em 1911, evoca a inovação como foco de renovação em processos cujo desenvolvimento acontece na forma de ondas sucessivas e se assume como fator de competitividade e sucesso (Schumpeter, 1997). Assim, o construto positivo subjacente às ideias schumpeterianas decorre de a inovação conceder uma certa estabilidade e resiliência à sociedade quando confrontada com a mudança (Smith, 2018). Uma estratégia de mudança carece de ser sustentada e, segundo Schumpeter (1997), remete para processos dinâmicos e considera premissas reportadas às questões da liderança, às características do processo inovativo e aos atores no cenário organizacional, pressupondo que a inovação

“não consiste simplesmente em descobrir ou criar a coisa nova, mas em impressionar com ela o grupo social de modo a arrastá-lo em sua esteira.” (p. 94) (...) Contudo, se um ou alguns tiverem avançado com êxito, muitas dificuldades desaparecem. Outros podem então seguir esses pioneiros (...) até que finalmente a inovação se torna habitual e sua aceitação uma questão de livre escolha.” (pp.214-215).

A partir dos anos setenta, a inovação tornou-se numa referência recorrente no campo educacional, e a literatura produzida, de forma inequívoca, veio ao encontro das ideias de Schumpeter de conservadorismo também nas organizações educativas, das dificuldades da mudança e em relação ao papel que os inovadores e as lideranças representam nas instituições (Cuenca et al., 2006; Messina, 2001; Nemeržitski et al., 2013; Runhaar et al., 2016; Serdyukov, 2017). Por conseguinte, a metamorfose da escola defendida por Edgar Morin é percecionada como necessária e integra uma agenda sociopolítica que indubitavelmente alia as questões da inovação. O artigo do autor ‘*Éloge de la métamorphose*’, publicado no jornal *Le Monde*, explora a ideia de que quando um sistema é incapaz de tratar os seus problemas vitais, ele se degrada ou desintegra ou então é capaz de suscitar um meta-sistema capaz de lidar com os seus problemas: ele se metamorfoseia (Morin, 2010). Este construto remete para a necessidade de mudança, renovação e inovação dos sistemas educativos, aliás considerada a primeira das sete reformas necessárias ao século XXI (Morin, 2009).

Contudo, uma diferença demarca a educação da economia, talvez porque nesta, a inovação irrompe como uma força aliada à competitividade e a pressões impostas pelas leis de mercado (Kogabayev & Maziliauskas, 2017). A existência de forças impulsionadoras do desenvolvimento

económico, aconselham à identificação das próprias forças motrizes que nos sistemas educativos detêm o potencial de gerar *inputs* que se consubstanciem em mudança. A centralidade desta questão decorre do conservadorismo que persiste arreigado no sistema educativo cujas práticas pouco têm mudado no último século, no que respeita às formas de trabalho dos professores – entre si e com os alunos - apesar dos ímpetus de mudança, sobretudo discursiva, que se delineiam em matéria de política educativa e das controvérsias associadas à performatividade da escola. A mudança em educação percebe-se indubitavelmente como mais difícil, referindo Hargreaves e Shirley (2009) que em educação as inovações foram episódicas e passageiras, desfrutando de pouco apoio duradouro de líderes ou colegas. Esta problemática remete para a questão da difusão da inovação, processo explicado por Everett Rogers, quando em 1962, publica o livro *Difusion of Innovations*. Rogers (2003) percebe o processo de adoção das inovações como estando relacionado com os seus atributos, a vantagem relativa, a compatibilidade, a complexidade, a experimentabilidade e a observabilidade. Estas características demarcam a polissemia da inovação e vêm fazendo do processo inovativo um vasto campo de investigação, incluindo no domínio da educação.

Em Portugal, à semelhança do registado no panorama internacional, na década de 70 do século passado, observou-se a proliferação da investigação educacional (Nóvoa, 1995), nela perfilando também a temática da inovação. Em 1989, o Ministério da Educação, criou o Instituto de Inovação Educacional⁵ com o objetivo de definir orientações em matéria de investigação educativa, privilegiando as áreas do desenvolvimento curricular, da inovação e da avaliação do sistema educativo. Nóvoa, em 1995, numa narrativa sobre a investigação educacional realizada em Portugal, dá-nos conta sobre as dificuldades indexadas à adoção e difusão da inovação. Previamente, já Nunes (1989) alertava para a importância da criação de uma visão comum de desiderato de escola ao retratar, de forma acutilante, a problemática da falta de adesão dos professores à inovação, motivada por: (i) abordagens *top-down*; (ii) perspectivas de inovação unilaterais não sustentadas; (iii) modelos de inovação desajustados das dinâmicas de ensino e centralizados mais nos produtos do que nos processos.

A inovação em educação, também em Portugal, cedo ficou demarcada pelo seu caráter polissémico e pela complexidade em relação aos processos e modelos de implementação, difusão e sustentabilidade. A documentar esta ideia Cardoso (1997) relatou o parco “conhecimento das variáveis pessoais e organizacionais que interactuam no complexo processo inovador [pelo que] a legitimação política ou a racionalidade científica dos projectos inovadores não constituem garantia de êxito da sua implementação” (p.6). A resistência à transformação da escola consubstanciada na falta de adesão à inovação e a mudanças reverbera num fenómeno marcado pela obstinação intemporal e, numa alusão metafórica à obra de Salvador Dalí, parece remeter para uma *'persistência da memória'* do processo pedagógico e organizacional. Por conseguinte, esta narrativa breve em redor da história da inovação (fig. 2) aconselha à análise concetual do construto e da dialética de forças que carecem de ser racionalizadas para resolver

⁵ Através do Decreto-Lei n.º 435/89, de 18 de dezembro.

a problemática de uma escola que segundo Nóvoa (2019) “parece perdida, inadapta da às circunstâncias do tempo presente, como se ainda não tivesse conseguido entrar no século XXI” (p.3).

Figura 2.

Linha temporal relativa ao conceito de inovação



Fonte: Elaboração Própria. ¹Hargreaves e Shirley (2009).

4. Quais são as dimensões chave de uma definição de inovação?

O novo paradigma de inovação, remetendo para a ideia de inovação social, aponta para mudanças fundamentais que implicam toda a estrutura organizacional da escola e os próprios sistemas de inovação (Howaldt et al., 2016). Na área da educação, a sustentabilidade na ação educativa e a inovação social tornaram-se elementos-chave (Córdoba-Pachón et al., 2021), sendo a última considerada um processo de criação coletiva que surge como uma nova combinação e/ou uma nova configuração de práticas sociais com caráter intencional e direcionadas para a resolução de problemas da humanidade (Domanski et al., 2020). Por conseguinte, importa uma concetualização da inovação orientada, não apenas para perspetivar os produtos e os processos da inovação, mas também para a inteção dos modos de integração na estrutura social e da própria transformação do objeto da inovação (Domanski et al., 2020). Assim, estão subsidiárias a esta concetualização uma dimensão ontológica que considera a essência do conceito de inovação a par de uma dimensão epistemológica mais processual.

4.1 Inovação: raiz ontológica enquanto conceito emergente do campo socioeconómico

Joseph Schumpeter (1997), quando aborda a questão do desenvolvimento definindo-o como realização de novas combinações, aponta para uma concetualização de inovação que se traduz em: “introdução de um novo bem; introdução de um novo método de produção; abertura de um novo mercado; conquista de uma nova fonte de oferta de matérias-primas ou de bens” (p.76). Em economia, genericamente, associa-se a inovação a mudanças tecnológicas e ao uso de novas combinações de processos produtivos como forma de resolução de problemas de mercado. Em educação os riscos do tecnocentrismo decorrentes do enfoque nas inovações tecnológicas, pode levar ao negligenciar de outras mudanças (Serdyukov, 2017) pois a transformação digital que está em curso não é só digital, é acima de tudo organizacional, cultural e pedagógica (Figueiredo, 2020). Existe um consenso entre os profissionais da educação, os políticos e a comunidade científica de que as inovações tecnológicas *per se* não detêm o poder de superação dos desafios sociais e económicos impostos às sociedades modernas (Domanski et al., 2020) e, por conseguinte, a transformação da escola tem de ser alocada à transformação humana pois

“instead of building a digital transformation of the school, we build a cultural and human transformation of the school — a transformation supported by technology, because technology belongs to our times, but a transformation that goes far beyond the instrumental use of technology, to become a deep cultural and pedagogical reform.”
(Figueiredo, 2020, p.170)

Considerar a inovação a outros níveis, que não só o da educação, decorre de aquela prefigurar um fenómeno societal e de o próprio processo educativo se afigurar como uma ação da sociedade e para a sociedade (tabela 1). Em economia o conceito de inovação surge invariavelmente alocado às lógicas de mercado e no plano da realização relaciona-se com os produtos, os serviços, as operações, os processos e as pessoas (Ghazinoory et al., 2021; Kogabayev & Maziliauskas, 2017). Neste contexto, a inovação é entendida, não como um fenómeno único, mas como algo longo e cumulativo que decorre de um grande número de processos de tomada de decisão organizacional que vão desde a fase da geração da nova ideia até à fase da implementação (Kogabayev & Maziliauskas, 2017). Mais, a inovação é vista como a translação da ideia criativa ou descoberta numa tecnologia ou novo método tangível (Ghazinoory et al., 2021). Estas duas dimensões, temporal e processual, alocadas à noção de inovação remetem para um processo multifásico, complexo, multifacetado e sistémico indexado, segundo Ghazinoory et al. (2021) a ecossistemas de inovação. Assim, a inovação implica o processo, a mudança e o resultado, pelo que é conjecturada como a invenção depois de comercializada (Kogabayev & Maziliauskas, 2017), o que, em educação, corresponde a

renovados processos de ensino-aprendizagem depois de operadas as transformações organizacionais, culturais e pedagógicas que ocorrem nos bastidores das salas de aula.

Para Kogabayev e Maziliauskas (2017) a inovação tem caráter sistémico, levando a uma mudança em todos ou em alguns elementos do sistema, e é transfuncional por natureza, produzindo melhorias ao quebrar regras antigas e ao resultar em soluções para os problemas do sistema. Estes atributos da inovação transcorrem para o plano da educação. Efetivamente, inovação, mudança e melhoria são um trinómio com sentido em educação, principalmente, quando se reconhece que nas escolas impera o isolamento dos professores que conduz a culturas de não-inovação e de individualismo, onde: (a) as inovações assumiram caráter episódico e fugaz, recebendo pouco apoio das lideranças e colegas (Hargreaves & Shirley, 2009); (b) as lógicas da ação educativa são descontinuas, individualistas e voluntaristas e as escolas enquanto elementos de um mega sistema burocrático operam como *locus* de reprodução normativa, de produção e infidelidade normativa (Alves & Cabral, 2019; Lima, 1992). O conceito de inovação em educação está radicado no conceito económico como o documenta a definição da OECD (tabela 1). A inovação é entendida como um produto ou processo novo ou melhorado, ou um novo método de mercado ou um novo método organizacional (OECD, 2015), assumindo as vertentes de inovação de produto, de inovação de processo, de inovação de *marketing* e de inovação organizacional (Eurostat, 2018). A importância e a necessidade de empoderamento das pessoas para a inovação constituiu a primeira das prioridades definidas pela OECD (2010) na Estratégia para a Inovação, remetendo para a educação a responsabilidade de desenvolver as capacidades necessárias à inovação a par da flexibilidade para melhorar a adaptação às mudanças. Na publicação da OECD (2016) *Innovating Education and Education for Innovation*, a definição difundida no setor económico é considerada aplicável à educação, reemergindo apenas com pequenas modificações. O documento explana que as organizações educativas podem introduzir: (a) novos produtos e serviços, como por exemplo novos recursos educativos; (b) novos processos de prestação do serviço educativo, como o recurso a e-learning; (c) novas formas de organização das atividades, como o recurso a novas metodologias de ensino; (d) novas técnicas de mercado, como a oferta de vias profissionalizantes.

Tabela 1.

Concetualização transversal da inovação

Dimensão contextual da inovação	Dimensão concetual da inovação	Autores	Dimensão tecnológica da inovação	Dimensão da ação / realização da inovação
Economia	Inovação como realização de novas combinações.	Schumpeter (1997)	Tecnologia como raiz do processo inovativo.	Inovação constitui um novo produto, processo, mercado ou organização.
(Lógicas de competitividade e de mercado)	Inovação como processo organizacional, longo, cumulativo, complexo, multifásico e sistémico.	Kogabayev & Maziliauskas (2017); Ghazinoory et al. (2021)		Inovação traduz-se nos produtos, serviços, operações, processos e pessoas.

Organizações não governamentais	Inovação como processo de empoderamento, capacitação e adaptação num mundo em acelerada mudança.	OECD	Tecnologia como fator de desenvolvimento social e económico.	Inovação como novos produtos e serviços, processos, métodos de mercado, atividades ou técnicas e organização. <i>Em educação:</i> Inovação como processo de desenvolvimento de competências (conhecimentos, capacidades e atitudes). Inovação é institucional e enforma uma visão humanista orientada para o desenvolvimento sustentável e social. <i>Em educação:</i> Inovação como transformação organizacional, pedagógica, curricular e de culturas profissionais.
(Lógicas transcendental, de aplicação de noções mercado à educação e de resposta aos desafios sociais)	Inovação como mudança, visando a resposta a necessidades económicas, sociais e ambientais e sob o desiderato de alcançar maior justiça social e a transformação do futuro da humanidade.	UNESCO		
Educação	Mudança traduzida em melhoria face a um objetivo previamente determinado.	Cuenca et al. (2006)		Inovação como novo(a): • Ideia de natureza prática • Conteúdo • Metodologia • Padrão cultural • Forma de relacionamento entre pessoas ou instituições • Forma de implementação de uma norma • Procedimento administrativo • Artefacto organizacional • Crença ou valor • Experiência educativa (Cuenca et al., 2006)
(Lógica societal focada na função social da educação)	Inovação com foco administrativo (organizacional) e instrucional (currículo e práticas pedagógicas).	Ellison (2009)		
	Inovação como atividade intencional, deliberada, benéfica e que se traduz em mudança.	Bocconi et al. (2013)		
	Inovação com uma dimensão individual (processo criativo) e uma dimensão pluralista (focada nas interações e processos coletivos).	Aydemir (2021)	Tecnologia como suporte da transformação pedagógica, curricular e organizacional.	
	Inovação como processo coletivo em que ideias antigas servem de suporte a novas combinações.	Leadbeater (2014) Shirley et al. (2020)		
	Inovação como processo multiestado que põe em prática novas ideias.	Runhaar et al. (2016)		
	Inovação como novas estratégias e soluções para o ensino/aprendizagem	Henriques et al. (2020)		

A agenda para Educação 2030 (UNESCO, 2016) consagra uma visão humanista de desenvolvimento, reiterando uma educação que preconize para todos os indivíduos uma “aquisição sólida de conhecimentos, o desenvolvimento do pensamento crítico e criativo e de habilidades colaborativas, bem como a aquisição da curiosidade, coragem e resiliência” (p.26) sob um ideário alinhado com a “defesa dos direitos humanos, a valorização das diferenças culturais e a promoção de uma cultura de paz, da cidadania global e da contribuição da cultura para o desenvolvimento sustentável” (p.48). Sob esta conjetura, a UNESCO conceitualiza um novo contrato social para a educação, radicando-a na cooperação e na solidariedade, sendo que ‘reimaginar o nosso futuro em conjunto’ envolve estratégias em que o objeto da ação inovativa a desenvolver atentam na: (a) aprendizagem participativa, colaborativa, problematizadora e interdisciplinar, intergeracional e intercultural; (b) aprendizagem ativa orientada para desenvolver conhecimento conceitual e procedimental; (c) renovação da profissão docente buscando ambientes educacionais inclusivos para um desenvolvimento curricular sustentado na reflexão; (d) mudança para uma escola onde os tempos e espaços escolares servem melhores aprendizagens; (e) transformação para escolas que operam como plataformas de cooperação, cuidado e mudança, onde as salas de aula constituem comunidades aprendentes, suportadas por pedagogias diversificadas alavancadas no digital; (f) criação de culturas de colaboração profissional e de conhecimento necessários à transformação das práticas (UNESCO, 2021). Em suma, neste relato de base ontológica transparece uma ideia de inovação como fundação para a transformação educacional que atenta a mudanças profundas nos sistemas educativos para produzir respostas e mudanças sociais.

4.2. Inovação: raiz epistemológica enquanto processo de transformação educacional

A inovação constitui um conceito multidimensional cuja definição, centrada na raiz da palavra latina *innovationis*, que significa renovação, alteração e inovação, em sintonia com o termo do qual deriva, *innovatio*, que se refere a ideia, enquanto objeto ou processo que é criado de novo, permite indexar-lhe dois componentes: “(a) a alteração de sentido a respeito da prática corrente e (b) o caráter intencional, sistemático e planejado, em oposição às mudanças espontâneas” (Messina, 2001, p.226). Assim, parte-se do pressuposto que para melhorar as escolas é necessário compreender quais as dinâmicas que permitem efetivamente inovar, quais permitem transformar a escola e quais obstaculizam a metamorfose da escola. A OECD (2017) estabelece três perspectivas para mensurar a inovação: a inovação na sala de aula (a perspectiva das práticas pedagógicas); a inovação nas escolas (a perspectiva das práticas organizacionais e da profissionalidade docente) e a inovação na comunidade (a perspectiva de interação ou societal).

A investigação em educação aponta no sentido de considerar a inovação como um fenómeno dinâmico de mudança que acrescenta valor ao processo educativo (Bocconi et al., 2013), como um processo multiestado em que os professores, enquanto agentes de inovação, criam e põem

em prática novas ideias (Runhaar et al., 2016) e, ainda, como sendo invariavelmente um fenómeno colaborativo (Leadbeater, 2014; Shirley et al., 2020), frequentemente, baseado em ideias mais antigas que servem de suporte a novas combinações (Leadbeater, 2014). Para Aydemir, (2021) o conceito de inovação apresenta duas dimensões, a primeira é individual e está indexada à criatividade individual e, a segunda é pluralista pois inclui a transformação de interações alocada a esforços coletivos. Com enfoque sistémico, Alves & Cabral (2019) propuseram um modelo integrado destinado à análise das condições para a inovação educativa que considera catorze variáveis-chave da ação pedagógica distribuídas por três níveis, a saber: no nível macro, as culturas de escola e identidades profissionais; no nível meso, as variáveis organização do tempo dos alunos, do tempo dos professores e dos espaços, o agrupamento dos alunos, a alocação de docentes aos grupos de alunos, o desenvolvimento profissional docente e as redes de aprendizagem; e no nível micro, os modos de trabalho docente, gestão do currículo, modos de trabalho pedagógico, estratégias de ensino e estratégias de avaliação das aprendizagens. Num estudo realizado por Bocconi et al. (2013) foram enunciadas cinco características chave associadas à inovação: atividade intencional e deliberada em que o inovador implementa novas ideias; atividade benéfica para o inovador, a equipa ou para a organização; atividade que implica inovação incremental, radical ou disruptiva e um certo grau de novidade; processo dinâmico e imprevisível que implica interações complexas entre os atores que aprendem entre si; processo que ocorre num contexto específico que determina o seu desenvolvimento, difusão e uso generalizado. Assumindo que as inovações têm início numa análise crítica de uma situação original, Cuenca et al. (2006) definiram a inovação como uma mudança que se traduz em melhoria, com respeito a um objetivo previamente determinado que pode reportar a uma ideia, um material, uma prática, um conteúdo, uma metodologia, um padrão cultural, uma relação entre pessoas ou instâncias que participam no processo educativo, uma forma de implementar uma norma, um procedimento administrativo, um artefacto organizacional, uma crença ou valor, enfim, inovação pode aludir a uma grande diversidade de experiências educativas. Efetivamente, em educação, a inovação ao ser compreendida como polissémica, sistémica e transfuncional, adquire a dimensão de fator de “desenvolvimento de novas estratégias e soluções de ensino aprendizagem” (Henriques et al., 2020, p.145) quer se trate de uma inovação administrativa, quer seja instrucional. Estas duas formas de inovação educacional foram consideradas por Ellison (2009). A primeira reporta a práticas de transformação dos modelos organizacionais e administrativos da escola, funções, políticas de trabalho e processos de desenvolvimento da profissionalidade. A inovação instrucional remete para processos experimentais e de transformação das práticas pedagógicas, abordagens curriculares, avaliação de alunos e colaboração profissional.

Ponderada esta pluridimensionalidade, a inovação educativa prefigura-se com uma geografia complexa e como um processo em que inovar, segundo Messina (2001), consiste, antes de mais nada, em uma “disposição permanente em direção à inovação ou de inovar a inovação” (p. 227), o que em educação significa gerar valor pedagógico e a efetiva transformação da escola.

5. Conclusões e considerações finais

Esta revisão de literatura permitiu concretizar um modelo diagramático e uma definição de inovação que sumarizam a essência do processo em educação. A definição de inovação construída está sustentada em três pressupostos. Primeiro, o pressuposto da inovação ter uma dimensão fenomenológica por ser considerada um processo não indissociável dos contextos e da sociedade. Segundo, o pressuposto de a inovação evidenciar uma valência proposicional ao assumir um carácter fundacional e explicativo do processo de mudança com repercussões nos vários níveis em que é exercida a ação educativa nas escolas. Terceiro, o pressuposto de a inovação deter uma dimensão subjetiva e situacional por ser determinada pelo capital profissional da instituição que, segundo Fullan et al. (2015), reporta ao capital humano individual, ao capital social e ao capital decisional de cada escola. Acresce referir que o modelo (fig. 3) e a definição de inovação propostos unificam elementos diversos de definições prévias (tabela 1). De forma integrada, definimos inovação como um processo social, cultural e individualmente determinado que transcorre como um fenómeno dinâmico e sistémico, intencional e deliberado, com foco transformacional e de natureza multidimensional que se prefigura como fator de desenvolvimento de novas estratégias ou soluções que acrescentam valor ao processo educativo e que tem efeito sobre todos os elementos do sistema. Por conseguinte, a multidimensionalidade indexada ao conceito de inovação concretiza-se em cinco domínios:

- 1) *Âmbito*** da inovação reportado às dimensões tecnológica, cultural, organizacional e pedagógica numa conciliação entre a apropriação cultural das tecnologias digitais e a renovação da dimensão humana nas escolas.
- 2) *Objeto*** da inovação que pode implicar uma ideia, um conteúdo, um material, uma metodologia, uma prática, um padrão cultural, uma relação entre pessoas ou instituições, uma forma de implementar uma norma, um procedimento administrativo, um artefacto organizacional, uma crença ou valor ou uma experiência educativa;
- 3) *Responsabilidade*** pela inovação traduzida em capacitação para inovar e para a adoção da inovação, alicerçadas na aprendizagem organizacional e no desenvolvimento profissional;
- 4) *Foco*** da inovação que pode ser administrativo ou instrucional, se está alocado, respetivamente, à transformação de modelos organizacionais ou às práticas pedagógicas e a abordagens curriculares; pode ainda ter um foco individual, indexado à criatividade individual em estreita interceção com os esforços coletivos empreendidos rumo à mudança e, por conseguinte, assumir também foco coletivo;
- 5) *Percurso*** da inovação que considera as fases de desenvolvimento, difusão e uso generalizado, sendo nestas duas últimas que as questões da sustentabilidade têm de ser consideradas através da exaltação do sentido de missão a par do robustecimento de inter-relações produtivas.

Figura 3.

Geografia da inovação: modelo diagramático de definição de inovação



Fonte: Elaboração Própria.

A definição de inovação apresentada, apesar de não se consubstanciar numa análise exaustiva de literatura, congrega uma abordagem unificada e integrada de elementos de um processo plural que permitem compreender as qualidades transformacionais das organizações escolares orientadas para a mudança, tanto pelos atores educativos (lideranças e professores) como pelos decisores políticos e investigadores. A definição de inovação proposta não visa rejeitar outras definições existentes; pelo contrário, pretende complementar e unificar as demais concetualizações de inovação para disponibilizar outras lentes teóricas para a compreensão do fenómeno.

Conflito de interesses e autoria do artigo: Os autores declaram não existirem conflitos de interesses externos, diretos ou indiretos, pessoais ou financeiros relacionados com o presente artigo, garantindo a imparcialidade do seu conteúdo. Os autores declaram que o artigo submetido à Revista Portuguesa de Educação é original e não se encontra publicado ou submetido à apreciação noutra revista.

Referências

Alves, J. M. (2021). Uma gramática generativa e transformacional para gerar outra escola. In *Mudança em movimento – Escolas em tempos de Incerteza* (pp. 25–48). Católica Editora. <https://www.uceditora.ucp.pt/pt/digital/3077-mudanca-em-movimento.html>

- Alves, J. M., & Cabral, I. (2019). Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino. In M. C. Roldão (Ed.), *Quem lidera o ensino e a aprendizagem nas escolas? Um estudo de caso múltiplo sobre lideranças pedagógicas*. (pp. 13–34). Fundação Manuel Leão.
- Alves, J. M., Cabral, I., & Bolívar, A. (2020). Lideranças, gestão escolar e melhoria das escolas: recomendações para o desenvolvimento das políticas educativas. In I. Cabral & J. M. Alves (Eds.), *Gestão escolar e melhoria das escolas* (1ª, pp. 143–180). Fundação Manuel Leão.
- Arar, K., Tamir, E., & Abu-Hussain, J. (2019). Understanding reforms, school reactions to major changes: the case of Israel. *Journal of Educational Administration and History*, 51(4), 402–418. <https://doi.org/10.1080/00220620.2019.1624511>
- Aydemir, A. (2021). Social Innovation And Lateral Thinking Tendencies Of Preservice Social Studies Teachers. *International Journal of Progressive Education*, 17(3), 0–1. <https://doi.org/10.29329/ijpe.2021.346.16>
- Barzanò, G. (2009). *Culturas de liderança e lógicas de responsabilidade* (1ª). Fundação Manuel Leão.
- Bocconi, S., Kampylis, P., & Punie, Y. (2013). Framing ICT-enabled Innovation for Learning: The case of one-to-one learning initiatives in Europe. *European Journal of Education*, 48(1), 113–130. <https://doi.org/10.1111/ejed.12021>
- Cabral, I., & Alves, J. M. (2016). Um modelo integrado de promoção do sucesso escolar (MIPSE) - a voz dos alunos. *Revista Portuguesa de Investigação Educacional*, 16 (Escolas Melhoria e Transformação), 81–113. <https://doi.org/1645-4006>
- Cardoso, A. (1997). *Educação e inovação*. Millenium, 1984.
- Córdoba-Pachón, J. R., Mapelli, F., Taji, F. N. A. Al, & Donovan, D. M. (2021). Systemic Creativities in Sustainability and Social Innovation Education. *Systemic Practice and Action Research*, 34(3), 251–267. <https://doi.org/10.1007/s11213-020-09530-z>
- Cuenca, P. O., Solís, M. E., Guerrero, J. L., Rayón, A. E., Martínez, C., Téllez, L., & Hernández, B. (2006). Modelo de Innovación Educativa. Um Marco para la Formación y el Desarrollo de una Cultura de la Innóvación. *Ier. Congreso Internacional Innovación Educativa - La Cultura de La Innovación En La Educación*, 1–20.
- Delors, J., Al-Mufti, I., Amagi, I., Carneiro, R., Chung, F., Geremek, B., Gorham, W., Kornhauser, A., Manley, M., Quero, P. M., Savané, M.-A., Singh, K., Stavenhagen, R., Suhr, W. M., & Nanzhao, Z. (1998). *Educação: um tesouro a descobrir. Relatório para a UNESCO da Comissão Internacional sobre Educação para o Séc. XXI*. In *Unesco da Comissão Internacional sobre Educação*. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Educação:+um+tesouro+a+descobrir.+Relatório+para+a+UNESCO+da+Comissão+Internacional+sobre+Educação+para+o+século+XXI#0>
- 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>
- Ellison, S. (2009). Hard-Wired for Innovation? Comparing Two Policy Paths toward Innovative Schooling. *International Education*, 39(1), 30–48.
- Eurostat. (2018). *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation*. <http://doi.org/10.1787/9789264304604-en>
- Figueiredo, A. D. (2020). The renewed human dimension of the school in the digital era. *EDUCA - International Catholic Journal of Education*, 6(January 2020), 168–176. <https://www.researchgate.net/publication/353669761>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- Fullan, M., Quinn, J., Drummy, M., & Gardner, M. (2020). *Education Reimagined: The Future of Learning*. <http://aka.ms/HybridLearnigPaper>
- Fullan, M., Quinn, J., & Mceachen, J. (2017). *Deep Learning: Engage the World Change the World* (1st ed.). Thousand Oaks, CA: Corwin Press. <https://us.corwin.com/en-us/nam/deep-learning/book255374>

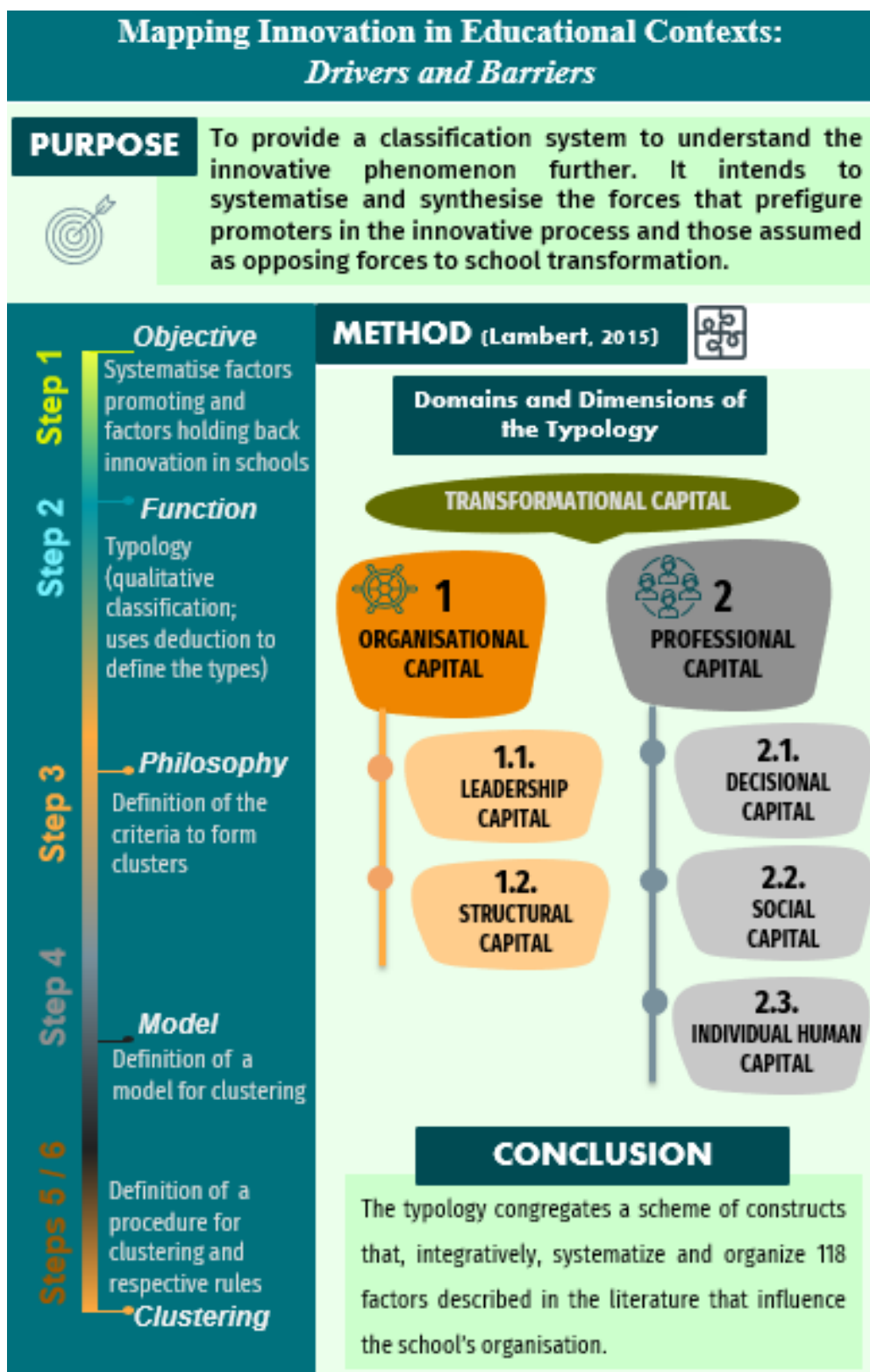
- Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analysis Archives*, 23(15), 1–18. <http://dx.doi.org/10.14507/epaa.v23.1998>
- Ghazinoory, S., Phillips, F., Afshari-Mofrad, M., & Bigdelou, N. (2021). Innovation lives in ecotones, not ecosystems. *Journal of Business Research*, 135(June), 572–580. <https://doi.org/10.1016/j.jbusres.2021.06.067>
- Hargreaves, A. (2010). Presentism, individualism, and conservatism: The legacy of Dan Lortie's Schoolteacher: A sociological study. *Curriculum Inquiry*, 40(1), 143–154. <https://doi.org/10.1111/j.1467-873X.2009.00472.x>
- Hargreaves, A., & Shirley, D. (2009). The fourth way: The inspiring future for educational change. In *The Fourth Way: The Inspiring Future for Educational Change*. <https://doi.org/10.4135/9781452219523>
- Henriques, S., Abelha, M., Seabra, F., & Mouraz, A. (2020). Avaliação externa de escolas e inovação educativa. In J. A. Pacheco, J. C. Morgado, & J. R. Sousa (Eds.), *Avaliação institucional e inspeção: perspectivas teórico-conceituais* (1ª, pp. 121–140). Porto Editora.
- Howaldt, J., Domanski, D., & Kaletka, C. (2016). Social innovation: Towards a new innovation paradigm. *Revista de Administracao Mackenzie*, 17(6), 20–44. <https://doi.org/10.1590/1678-69712016/administracao.v17n6p20-44>
- Kogabayev, T., & Maziliauskas, A. (2017). The definition and classification of innovation. *HOLISTICA – Journal of Business and Public Administration*, 8(1), 59–72. <https://doi.org/10.1515/hjbpa-2017-0005>
- Leadbeater, C. (2014). *The Frugal Innovator: Creating Change on a Shoestring Budget* (Vol. 13, Issue April). Palgrave Macmillan UK. <https://doi.org/10.1057/9781137335371>
- Levy, Y., & Ellis, T. J. (2006). A Systems Approach to Conduct an Effective Literature Review in Support of Information Systems Research. *Informing Science Journal*, 9, 181–212. <http://www.inform.nu/Articles/Vol9/V9p181-212Levy99.pdf>
- Lima, L. (1992). *A Escola como Organização e a Participação na Organização Escola* [Universidade do Minho]. [https://doi.org/ISBN 972-8098-24-3](https://doi.org/ISBN%20972-8098-24-3)
- Machado, J. (2018). Autonomia, currículo e liderança: na crista da onda de um paradoxo. In C. Palmeirão & J. M. Alves (Eds.), *Escola e mudança: construindo autonomia, flexibilidade e novas gramáticas de escolarização - os desafios essenciais* (1ª, pp. 9–19). Universidade Católica Portuguesa. <https://doi.org/10.34632/9789898835543>
- Machado, J., & Formosinho, J. (2016). Equipas educativas e comunidades de aprendizagem. *Revista Portuguesa de Investigação Educacional - Escolas, Melhoria e Transformação*, 16, 11–31.
- Messina, G. (2001). Mudança e inovação educacional: notas para reflexão. *Cadernos de Pesquisa*, 114, 225–233. <https://doi.org/10.1590/s0100-15742001000300010>
- Mogren, A., Gericke, N., & Scherp, H. Å. (2019). Whole school approaches to education for sustainable development: a model that links to school improvement. *Environmental Education Research*, 25(4), 508–531. <https://doi.org/10.1080/13504622.2018.1455074>
- Morin, E. (2002). *Os Sete Saberes para a Educação do Futuro. (Tradução Ana Paula Viveiros)*. Edições Piaget.
- Morin, E. (2009). *The seven necessary reforms of the 21st Century*. 1–7.
- Morin, E. (2010). *Eloge de la métamorphose*. Le Monde. https://www.lemonde.fr/idees/article/2010/01/09/eloge-de-la-metamorphose-par-edgar-morin_1289625_3232.html
- 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>
- Nóvoa, A. (1995). *O IIE e a investigação educacional*. http://catalogo.ul.pt/F/?func=item-global&doc_library=ULB01&type=03&doc_number=00018233%0Ahttp://hdl.handle.net/10451/691
- Nóvoa, A. (2019). Os Professores e a sua Formação num Tempo de Metamorfose da Escola. *Educação & Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>

- Nunes, I. S. (1989). Uma proposta para viabilizar a verdadeira inovação educativa. *Arquipélago. Ciências Sociais*, 3, 45–55. <http://hdl.handle.net/10400.3/5634>
- OECD. (2010). *The OECD Innovation Strategy: Getting a Head Start on Tomorrow*. <https://doi.org/10.1787/9789264083479-en>
- OECD. (2015). *The Innovation Imperative Contributing to Productivity, Growth and Well-Being*. <https://doi.org/https://doi.org/10.1787/9789264239814-en>
- OECD. (2016). *Innovating Education and Education for Innovation: The Power of Technologies and Skills*. <http://dx.doi.org/10.1787/9789264265097-en>
- OECD. (2017). *Schools at the Crossroads of Innovation in Cities and Regions*.
- OECD. (2018). The Future of Education and Skills: Education 2030. *OECD Education Working Papers*, 23. [http://www.oecd.org/education/2030/E2030 Position Paper \(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
- OECD. (2019). *OECD Future of Education and Skills 2030 - OECD Learning Compass: a Series of Concept Notes*. http://www.oecd.org/education/2030-project/contact/OECD_Learning_Compass_2030_Concept_Note_Series.pdf
- Pacheco, J. A. (2019). *Inovar para Mudar a Escola* (1ª). Porto Editora.
- Rogers, E. M. (2003). *Everett_M* (5th ed.). Free Press.
- 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>
- Schumpeter, J. (1997). *Os Economistas* (M. . Trad. Possas (ed.)). Editora Nova Cultural.
- 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>
- Shirley, D., Hargreaves, A., & Washington-Wangia, S. (2020). The sustainability and unsustainability of teachers' and leaders' well-being. *Teaching and Teacher Education*, 92. <https://doi.org/10.1016/j.tate.2019.102987>
- Smith, R. (2018). καινοτομία: On the Greek Origins of Innovation. *Research Technology Management*, 61(6), 48–49. <https://doi.org/10.1080/08956308.2018.1516931>
- TALIS. (2018). *Teaching and Learning International Survey: Insights and Interpretations*. http://www.oecd.org/education/talis/TALIS2018_insights_and_interpretations.pdf
- Tyack, D., & Tobin, W. (1994). The “Grammar” of Schooling: Why Has it Been so Hard to Change? *American Educational Research Journal*, 31(3), 453–479. <https://doi.org/10.3102/00028312031003453>
- UNESCO. (2016). *Educação 2030: Declaração de Incheon e Marco de Ação para a implementação do Objetivo de Desenvolvimento Sustentável 4: Assegurar a educação inclusiva e equitativa de aprendizagem ao longo da vida para todos*. https://unesdoc.unesco.org/ark:/48223/pf0000245656_por
- UNESCO. (2019). *Framework for the Implementation of Education for Sustainable Development (Esd) Beyond 2019. September*. https://www.iau-hesd.net/sites/default/files/documents/unesco_esd2030_framework.pdf
- UNESCO. (2020). *Innovation technical and vocational education and training*. https://unevoc.unesco.org/pub/innovating_tvet_framework.pdf
- UNESCO. (2021). *Reimagining our futures together: a new social contract for education*. International Commission on the Futures of Education - UNESCO. <https://doi.org/978-92-3-100478-0>
- von Schomberg, L., & Blok, V. (2021). The turbulent age of innovation. *Synthese*, 198(s19), 4667–4683. <https://doi.org/10.1007/s11229-018-01950-8>
- Walters, S., & Watters, K. (2017). Towards a global common good? In *Adult Education Quarterly* (Vol. 67, Issue 3). <http://www.unesco.org/fileadmin/MULTIMEDIA/FIELD/Cairo/images/RethinkingEducation.pdf>

Artigo 2. Mapping Innovation in Educational Contexts: Drivers and Barriers

Artigo submetido à revista *International Journal of Innovation and Learning*, aceite para publicação, encontrando-se *in press*. O artigo foi elaborado em coautoria com José Alves e Diana Soares. As referências foram redigidas segundo as normas de Harvard.

Graphic Abstract



Abstract

The present demand for school transformation considers innovation a tool that operates in a triangle of strengths: leadership, school cultures, and school accountability. Considering the growth and diversification of literature on this subject, we propose discussing the factors influencing innovation. This article exposes a literature review focused on the systematization of factors that foster or inhibit innovation, presenting a qualitative classification sustained on two main criteria: organizational capital and professional capital. The built typology harmonizes criteria concerning innovation's functional, strategic, relational, behavioural, and environmental aspects. Additionally, it aims to fulfil an epistemic, phenomenological, and propositional purpose. The typology congregates a scheme of constructs that interactively systematize and organize 118 factors described in the literature that influence the school's organization.

Keywords: Innovation; typology; transformational capital; organizational capital; professional capital

1. Introduction

In half a century of studying innovation as an educational phenomenon, significant knowledge was generated that allowed it to be understood as multidimensional and polysemic (Lambriex-Schmitz et al., 2020; Sloka, 2020). The literature on educational innovation enables us to understand it as a cultural, economic, political, and socially determined process (Arar et al., 2019) as well as a tool for school transformation, translated into improving the quality of learning and teaching processes (Cuenca et al., 2006; Serdyukov, 2017).

In the educational field, innovation can involve changes at various levels, including the organisational, cultural, digital, curricular, and pedagogical (Sotiriou et al., 2016; Woolner et al., 2018; Alves and Cabral, 2019; Pathak and Mishra, 2019; Wisetsat and Nuangchalerm, 2019; Figueiredo, 2020; Blömeke et al., 2021). The change lies in the educational institutions being an interdependence of the school cultures and of the innovative processes that are generated and spread (Hall and Rowland, 2016; Navarro-Corona, 2016; Song and Choi, 2017; Amorim et al., 2019; Mogren et al., 2019; Alves, 2021; Córdoba-Pachón et al., 2021). In biological systems, evolutionary changes are driven by genetic variations that are generated by mutations and the forces of natural selection indexed to the environment. Similarly, at schools, innovation corresponds to a mutational force that wants to change the DNA of the school itself. In education, natural selection corresponds to internal and external forces, the cultures established in schools and the societal forces of change. In nature, most mutations are deleterious and end up being eliminated, others are silent, producing no effects, and only an insignificant percentage are successful. This is mirrored in schools where most changes have also been nothing more than attempts. Therefore, the extreme resilience of natural systems has parallelism in schools.

Resilience in educational systems is widely documented (Bocconi et al., 2013; Cuenca et al., 2006; Fullan, 2007; Hargreaves, 2012; Nóvoa, 2019). Eyal (2009) defines resilience as the “conservation of opportunities for renewal of the system”, and in the face of “degeneracy, it loads the system with extreme resilience, enabling it to resist systemic changes” (p.488). Educational resistance is decoded into a lack of sustainability of change (Arar et al., 2019; Córdoba-Pachón et al., 2021; Fullan, 2007; Hargreaves and Shirley, 2009; Lambriex-Schmitz et al., 2020). To Smith (2018), the “acceptance of innovation comes from the kind of stability that gives a society resilience in the face of change” and “can be embraced as a force that will benefit society as a whole.” Similarly, in education, innovation may act as a force that may impact schools, making them more responsive to societal demands. Hence, it is crucial not only to understand the transformational qualities of schools but also to identify factors that promote innovation and those that hinder innovation to better support change-oriented organisations. This article discusses a taxonomy for defining factors influencing innovation in the educational field. Considering that principles that underlie classification schemes improve the potential to leverage from prior research (Lambert, 2015), we propose a classification system that provides a further understanding of the innovative phenomena. We intend to systematise and synthesise the forces that prefigure promoters in the innovative process and the ones assumed as opposing forces to school transformation.

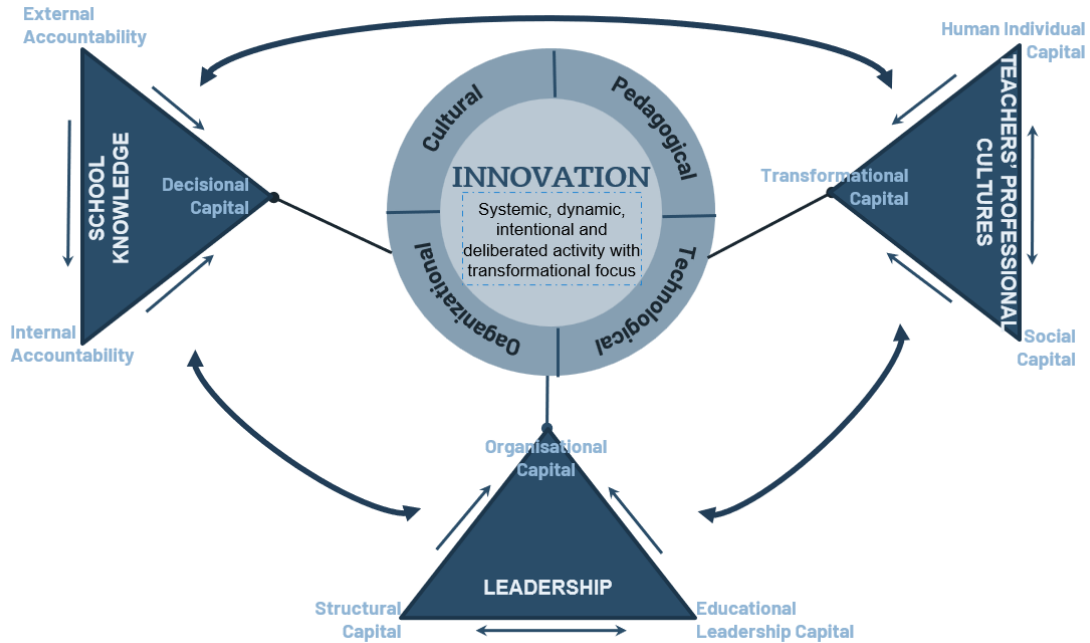
2. Materials and methods

“Classification is a necessary step for understanding a research area” [Lambert, (2015), p.50] to classify complex objects into a smaller number of categories using taxonomies, categorisation schemes, or typologies (Ahlquist and Breunig, 2012). “A typology is a hierarchical system of categories used to organize objects according to their similarities and dissimilarities” [Fonseca, (2013), p.2]. Therefore, we propose a taxonomy for systematising and synthesising factors that influence innovation in educational systems according to literature, including empirical studies. In this study, we follow a six-step methodology design proposed by Lambert (2015). The first step states the objective of classification: to systematise factors promoting and factors holding back innovation in complex institutions, namely, schools. The second step consists of defining the function and characteristics of the classification, assuming the feature of a typology. In the third step, considering the classification philosophy, we follow mainly an essentialism viewpoint to define the criteria to form categories, which are conceptually derived, and to identify objects that fit the categories. The fourth step consists in identifying the classification principles that flow from a theoretical model conceived for studying innovation in educational systems. This model highlights the main criteria for clustering (Figure 1): leadership capital interrelated with structural capital and incorporated into a broader construct, which is organisational capital; school knowledge related to school evaluation, which leads to the school’s decisional capital; and teachers’ professional cultures, arise from social capital and individual human capital. Cluster membership is only meaningful as an explanatory construct when we have pre-existing empirical

evidence of clustering the relevant variables (Ahlquist and Breunig, 2012). Hence, this classification has an additional purpose: to identify variables (factors) that may be allocated to each field of the theoretical model for studying innovation in schools.

Figure 1.

Model for studying innovation



The fifth and sixth steps consist, respectively, in choosing a procedure to establish categories through observation (a process to discover variables) and deciding the rules to operationalise the procedure. To accomplish that, we followed the method adopted by Tyunnikov (2017), which consists in:

- Identifying and ontologisation of the rationale for classification sustained in literature. Hence, employing databases SCOPUS and WoS, it was identified and selected relevant literature using the combination of terms: [innovation, school change], [innovation, leadership], [innovative behaviour, school cultures], and [teacher’s innovative behaviour; leadership]. The documents gathered also included seminal authors and secondary bibliographic resources from the revised articles. Of 138 documents considered due to the relevance of the title, keywords, and abstracts, 77 were selected after integral text reading. Therefore, the analysis included 33 articles exposing empirical studies, three literature reviews, and 37 texts, including books, articles on theoretical essays, and reports.

- Defining selection criteria and establishing a framework for classification criteria (Table 1).
- Clustering factors that promote or hinder innovation in schools.

Table 1.

Domains and dimensions defined for building the classification

Structural domains	Dimensions	
<p>Transformational capital A systemic, sustainable, and driven-mission process that happens in schools, leading to its transformation. It is how professional capital and organizational capital is used to transform teaching and learning.</p>	<p>1. Organizational capital The purview of leadership for devising new forms of organizational capital to produce high-leverage teaching and learning strategies, enabling its transformation. It is considered leadership for capacity building for transformation.¹</p>	<p>1.1. Educational leadership capital Social and symbolic capital for educational leadership used to articulate a clear mission or vision for the school.²</p>
	<p>2. Professional capital It is a function of an interactive and multiplicative combination of three kinds of capital: decisional, social, and individual.⁴</p>	<p>1.2. Structural capital Internal processes and information that belongs to the organization.³</p>
		<p>2.1. Decisional capital The wisdom and expertise to make sound judgments about learners cultivated over many years.⁴</p>
		<p>2.2. Social capital Teachers and other school professionals work together in a collaborative culture that allows them to learn from each other.⁴</p>
		<p>2.3. Individual human capital Personal attributes - knowledge, experience, and skills - of teachers that can improve the teaching-learning process.⁴</p>

Source: ¹Dimmock (2011) and Yakavets et al. (2017), ²Bartee (2007), ³Sujudi et al. (2020), and ⁴Hargreaves and Fullan (2012)

3. Critical analysis of literature and synthesis

3.1. Innovation for school transformation

Education is in a transitional stage, in the process of reconstruction and reset of its identity as a response to challenges imposed by globalisation. In this context, innovation emerges as a key element for school transformation, given that it is recognised that in school cultures of non-innovation, professional isolation prevails, and innovations have been assuming an episodic and fleeting character, receiving little support from leaders and colleagues (Hargreaves and Shirley, 2009). Alves and Cabral (2019) mention that discontinuity, individualism, and voluntarism shape the logic of educational actions in schools, which are mega-bureaucratic systems. Therefore, the educational change translated as the ability to spread pedagogical and educational advances (Fullan, 2007) is related to innovation, a necessary and positive instrument of change (Serdyukov, 2017).

Considering that school systems are refractors of the global forces of change, the main work is to understand the process of social refraction (Goodson, 2014) and to find a balance between internal issues, external relations, and individual determinants of change (Goodson, 2001). Because innovations adopted have been superficial and have had almost no impact on teaching practices (Pacheco, 2019), the transformation of schools will have to consist:

- in changing the school cultures instead of top-bottom policies (Fullan, 2007)
- in transforming school grammar (Cabral and Alves, 2016; Machado, 2018; Alves and Cabral, 2019, 2021; Fullan, 2020a)
- in taking into consideration and transforming the personal beliefs and missions of teachers (Goodson, 2014), using the professional capital of schools under the concept “use the group to change the group” [Fullan et al., (2015), p.6]
- in transforming leaderships considering their influence on the school’s organisational climate, teachers learning and in empowering innovative behaviour (Sattayaraksa and Boon-Itt, 2012; Shirley et al., 2020; Tayag and Ayuyao, 2020; Vermeulen et al., 2020; Pan and Chen, 2021).

The resignification of the role of teachers and other educational actors is necessary (Goodson, 2014) because at the heart of school transformation settles personal and professional involvement as well as cultural, organisational, and pedagogical features of schools.

3.2. Promoters and hindrance factors in educational innovation

The school transformation is ecological, which means that innovation in the classroom is supported by systemic changes and becomes imperative in a future-oriented education (Straub and Vilsmaier, 2020). At the organisational level, innovations are an interdependence between leaders, self-knowledge generated in school, and school cultures. So, it is essential to identify the school’s extrinsic factors that can promote or hinder innovation and the intrinsic factors of educational institutions, plus the individual factors allocated to each element of the educational community that influences it. This analysis logic stems from internal and external issues and personal perspectives indexed to the agents of change that need to be addressed so that the problem of sustainability and generalisation is attempted.

3.2.1. Teachers and professional cultures

Teachers are key elements to change and scaffold students to meet educational goals and are also requirements for preparing 21st-century citizens (Wisetsat and Nuangchalerm, 2019). Considering the importance that the transformation of school has been assuming, boosting innovation and creativity in education requires the existence of a supportive environment that profiles organisational change, fosters responsibility, and impulses teachers to work

collaboratively and autonomously towards organisational success (Pathak and Mishra, 2019). An environment of trust and teachers' identification with the school mission strengthens teachers' sense of belonging and innovative behaviour. Cultures of trust or active trust promote our highest collective values (Hargreaves and Shirley, 2009), and trust is a dimension of the school climate that empowers innovative behaviour (Pathak and Mishra, 2019; Tian and Zhang, 2020). On the other hand, teachers who work in closed environments feel restrictions and demotivation, which produce an inability to lead to organisational improvements (Pathak and Mishra, 2019). Hargreaves (2010) points out that teachers focus on the daily challenges and immediate and concrete rewards of their work, exhibiting a professional attitude marked by 'presentism' (focused on the short-term), 'conservatism' (concentrate on small-scale changes rather than global school changes), and 'individualism'. The prevailing professional culture drifts between isolation and superficial collaboration and between balkanisation and forced collegiality (Messina, 2001; Fullan, 2007; Alves and Cabral, 2019). In response to this *modus operandi* that marks the profession, transformational grammar is required to alter the organisational structures and scaffold agency in teachers (Alves and Cabral, 2021). The emergence of this new school grammar is indexed to innovation dependent on moderating forces that include professional autonomy and enhances a more autonomous, collaborative, interactive, deliberative, committed, and responsible professional teaching practice (Alves and Cabral, 2021).

3.2.2. Teachers' individual and professional factors

Teachers' professional behaviour is marked by individual features and professional structural factors that determine engagement with the school, involvement with the teaching process and commitment to their continuous development. Empirical studies have identified statistically significant effects between innovation, professional self-efficacy perception, and teaching motivation (Serdyukov, 2017; Cao et al., 2020). According to Roness (2011), motivation has an intrinsic dimension, reporting satisfaction with teaching experiences, and an extrinsic dimension due to wage benefits and other rewards. The same author appends an altruistic dimension that stems from the teacher's perception of teaching as a social good and his hope to play a role in the development of students.

Perception of self-efficacy represents an important factor that contributes to innovative behaviour, being even a measure of potential to express innovative behaviour and associated with other factors that enforce it, like positive self-assessment, favourable self-concept, flexibility, and sharing skills (Cerna, 2014; Wisetsat and Nuangchalerm, 2019; Blömeke et al., 2021; Gao et al., 2021). For Nemeržitski et al. (2013), greater involvement and participation of teachers in professional development and decision-making generates more favourable and supportive environments for creativity and innovative behaviour. Systemic visions of creativity result from understanding it not as individual property but as something that gradually emerges from the connections and interactions between creators and other elements of the community, involving ideas, thoughts, and experiences (Cuenca et al., 2006; Tyunnikov, 2017; Córdoba-Pachón et al.,

2021). Shortage of time, task overload, lack of autonomy, lack of opportunities for reflection, non-believing and lack of hope, scarce communication systems for supporting teachers' work, and lack of opportunities for face-to-face interactions impede innovation in schools (Messina, 2001; Fullan, 2007; Hargreaves and Shirley, 2009; Song and Choi, 2017; Lee et al., 2020).

Teachers' innovative behaviour is a key factor in the process of transformation of teaching practices. It is defined by Nemeržitski et al. (2013) as teachers' ability to provide students with new, unfamiliar models and tools for classroom activities, thus, fostering students' creativity and producing new original outcomes for the learning process. Those authors define two composite factors to evaluate innovative behaviour. First, professional self-development in interaction with cognitive and motivational factors, including management of teachers' own learning, wish for novelty and impulse for experimentation. Second, innovation skills and self-efficacy are interrelated with using students' creativity to support teaching practices and student-oriented teaching practices. Innovative behaviour is also fostered by peers' and leaders' recognition, as the lack of it can negatively impact the willingness to adhere to innovative practices (Cao et al., 2020). The risk of conflicts with co-workers and reduced satisfaction with co-worker relations obstruct innovative change (Janssen, 2003). Innovative behaviour is influenced by employee characteristics (e.g., mood, self-confidence, wide interest, learning goal orientation, reflection, and openness to new experiences), job features (e.g., job complexity, job demands, and supportive supervision), and, especially, by team characteristics (Runhaar et al., 2016). Innovative behaviour is also determined by low or high job involvement attitude due to self-concept or sense of identity (Janssen, 2003).

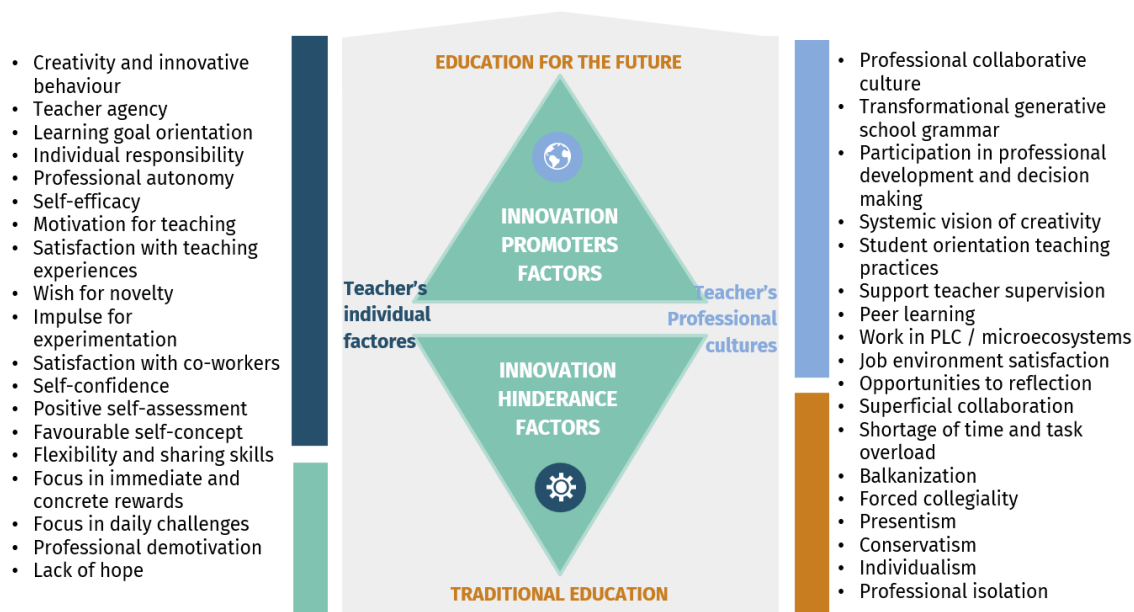
3.2.3. Teachers' collaborative cultures

Collaborative cultures are strongly associated with school success and potential peer learning, providing support and encouragement to teachers to overcome the difficulties of change (Hargreaves and Shirley, 2009), including the ones due to acquired routines through experience and daily practice (Cuenca et al., 2006). Professional collaboration between teachers in planning and realisation of the teaching-learning as well as cooperation at the organisational level, especially participation in decision-making, favour innovation (Nemeržitski et al., 2013). On the other hand, innovations are not favoured by the high levels of discretion that characterise educational actors (Cuenca et al., 2006). Social innovations provide new forms of collaboration between people in co-working spaces (Domanski et al., 2020) that function as micro-ecosystems of innovation or professional learning communities (PLC). Teachers in a robust PLC believed that their colleagues tend to be open to innovation, respectful towards one another, and provide ample support and good advice for their instructional activities. Still, schools with weak teacher communities tend to be conservative toward change, and their teachers are markedly individualistic and have low expectations regarding student learning (Song and Choi, 2017). Innovative school environments are associated with more frequent teacher collaboration, exchange and higher job satisfaction among teachers (Blömeke et al., 2021). Innovativeness

appears as a multifaceted and complex construct that balances individual aspects, school climate and cultural characteristics of schools, to which are added the influence of leadership (Figure 2).

Figure 2.

Synopses of forces for innovation centred on teachers



3.2.4. Leadership, organisational culture, and educational responsibility

Innovation is understood as a central factor for society, enabling improvements in education and promoting transformational social change (Howaldt et al., 2016; Domanski et al., 2020; Córdoba-Pachón et al., 2021). However, in organic organisations designed to facilitate innovativeness, new ideas for changing structure, culture, or strategy may challenge the consensually agreed paradigms, raising resistance to change and disagreement (Janssen, 2003). This justifies the discussion about factors related to leadership. For principals and head departments or middle leaders is important to understand the main psychological characteristics of schools' community which are, according to Hannan and Silver (2000): how community members interpret an institution's culture; the level of discord within that culture; how innovations are received; reasons provided for change and how those changes are facilitated; the status of communications between central and peripheral parts of the culture; and ideas about the past, present, and future changes throughout the culture.

School leaders need to articulate the innovation's alignment with the school's broader goals (Tan and Hung, 2020). Leadership for innovation demands special attention with ongoing community learning, receptiveness to novelty, flexibility, and continuous adaptation. So, it is essential to use "a specific construct of school leaders' learning support, rather than a generic construct of leadership support, to understand how learning-supportive school leaders may affect

teachers' professional learning and work effectiveness" [Lee et al., (2020), p.2]. The leader's support is fulfilled in four main domains:

- Providing infrastructure and resources: Supplying space and structured time, allocating budgets for professional collaboration and knowledge sharing within and outside the school (Song and Choi, 2017; Lee et al., 2020); yielding technology to support teachers' work, the pedagogical process, routines and school structures (Mogren et al., 2019); reducing bureaucratic charge in teacher's work (Fullan, 2007); providing ICT supporting innovative pedagogies considered first-order barriers and purely operational obstacles (Serdyukov, 2017); managing the renovation of the schools' grammar meant as regular structures and rules that organise the work of instruction (Tyack and Tobin, 1994) by allowing a generative transformational grammar (Alves and Cabral, 2021).
- Providing professional development: Fostering professional learning communities and micro-ecosystems for innovation which are new forms of collaboration between people in co-working spaces (Domanski et al., 2020; Shirley et al., 2020); boost formal ongoing relevant formation opportunities and satisfy cognitive needs (Lee et al., 2020) that assure teacher learning support (Song and Choi, 2017); encouraging pedagogical diversity through multidisciplinary or interdisciplinary teams (Shirley et al., 2020; Straub and Vilsmaier, 2020); act intentionally on innovation's second-order barriers, which are applicational and pedagogical (Serdyukov, 2017); encourage uplifting cultural attitudes toward pedagogy (Serdyukov, 2017); fight actively against teacher isolation practices, balkanisation and artificial collegiality (Hargreaves and Fullan, 2012; Amorim et al., 2019).
- Providing knowledge of school: Giving access to relevant data about school and regular information about school evaluation, as well as improving reflection on it and stimulating sustained participation in decision making (Nemeržitski et al., 2013); providing data about monitoring actions of pedagogical, collective, and structured ongoing experiences; supporting professional knowledge creation for action following bottom-up logics (Mogren et al., 2019); to privilege internal accountability for knowledge which means to adopt responsible accountability (Fullan et al., 2015; Serdyukov, 2017).
- Providing psychological robustness among teachers: Satisfy cognitive needs, including autonomy (Lee et al., 2020); harvest engagement (Shirley et al., 2020); inspire an inclusive vision (Hargreaves and Shirley, 2009) and a common purpose to increase cognitive alignment among the innovation ecosystem members (Gomes et al., 2021); foster tolerance, flexibility, openness, and diversity (Nemeržitski et al., 2013); care for job satisfaction among teachers (Blömeke et al., 2021).

3.2.5. Leadership styles for organisational leverage

Schools adopt innovations according to their needs and contexts (Tan and Hung, 2020), which is crucial to embrace a culture of internal and systemic assessment. "Policymakers will need to make a major shift from superficial structural solutions to investing in leveraging internal

accountability and building the professional capital of all teachers and leaders throughout the system” [Fullan et al., (2015), pp.14–15]. This is also true for leaders once it allows them to consider better the needs and design interventions to act in each context and, according to Tan and Hung (2020), to transcend the binary between adaptation and fidelity to allow adoption and diffusion of innovation. Profound professional knowledge and collaboration act as an indispensable platform for “not just overseeing the present” but essentially “to be accountable for the future” [Fullan et al., (2015), p.14]. Leaders must recognise school transformation as a collective phenomenon that yields on professional capital, a construct that considers three elements: professional autonomy; social capital reporting teachers learning from each other; and decisional capital considering developing judgment and expertise over time (Hargreaves and Fullan, 2012; Fullan et al., 2015). Leadership practised through professional capital allows leaders and teachers to deeply understand the teaching profession and pedagogical practices. Additionally, it contributes to scaffolding a school culture sustained in reflection and criticism.

Leaders must be ecological due to schools’ growth, acting as community builders, encouraging a sense of growing together (Tan and Hung, 2020), and administrating school improvement to collectively enhance students’ possibilities for learning (Mogren et al., 2019). It requires proactive, transformational, and empowering leadership that, according to Shirley et al. (2020), includes: first, set performance objectives that will close the growth gap innovation, assuring a means to an end, which is to improve long-run and top-line learning growth; second, consider the current innovation narrative and develop the desired narrative; third, pull the organisational levers to change the work environment and foster narratives that characterise a desired innovative future; fourth, change the ongoing process to accelerate innovation, assuring commitment.

Leadership style plays a prominent role in promoting innovation environments, highlighting the influences of instructional, transformational, transactional, and empowering leadership (Anthony and Hermans, 2020; Atik and Celik, 2020; Canute and Thompson, 2020; Cheong et al., 2016; Daniëls et al., 2019; Gil et al., 2018; Hargreaves and Fullan, 2012; Pellegrini et al., 2020; Vermeulen et al., 2020). Considering the influence of leadership on the capacity that organisations present to operate innovation, the study conducted by Gil et al. (2018) showed that leadership has a positive effect on the learning culture and the structure of the organisation, and these two factors influence the capacity for school innovation.

Being constructive, transactional leadership can promote the team’s creativity and will bring efficient organisational information processing and knowledge sharing to support decisions (Pellegrini et al., 2020; Gao et al., 2021). Gao et al. (2021) reunited empirical evidence that supports the mediated effect due to transitional leadership on creativity related to the injection and cultivation of creative organisations. More creative schools, with the assumption of a culture of innovation, will favour the transformation of teachers’ practices.

The empirical study conducted by Anthony and Hermans (2020) allowed the identification of several items as being conspicuous of transformative leaders: idealised attributes and behaviour of the leader, inspiring motivation, intellectual stimulation, and individual consideration of the

leaders over the led. Transformational leaders encourage unconventional thinking, pay attention to high-level goals, can improve collective effectiveness and individual efficacy, and, in general, promote organisational creativity (Gao et al., 2021), which are determinative features of innovation.

Taking into perspective the effect of empowering leadership, Atik and Celik (2020) found interdependencies between the leadership behaviours of school principals and teachers' satisfaction at work due to the mediating effects of trust and psychological empowerment. Empowering leadership is a process that creates a supportive environment meant to improve teachers' sense of meaning, competence and self-determination, inspiring teachers' intrinsic motivation and fostering innovative behaviour (Zhu et al., 2019). Inducing their psychological empowerment promotes teachers' agency.

3.2.6. Leaders' and teachers' collective responsibility

Andrews and Conway (2020) understood leaders as the key to success and school improvement, along with the comprehension of collective responsibility regarding the progression of school results. Communication is basilar in an institution, and the idea of language having multiple and contested meanings must be considered because it is a mediating tool that shapes every aspect of activity (Tan and Hung, 2020). Communication is needed to improve the school, which, according to Mogren et al. (2019), means developing a shared holistic vision at the school's organisational level. Tools for effective communication include platforms for teachers' dialogical processes, leader-teacher connections, and student-teacher interactions. Communication is necessary for the whole community to embrace the school mission and achieve better pedagogical goals.

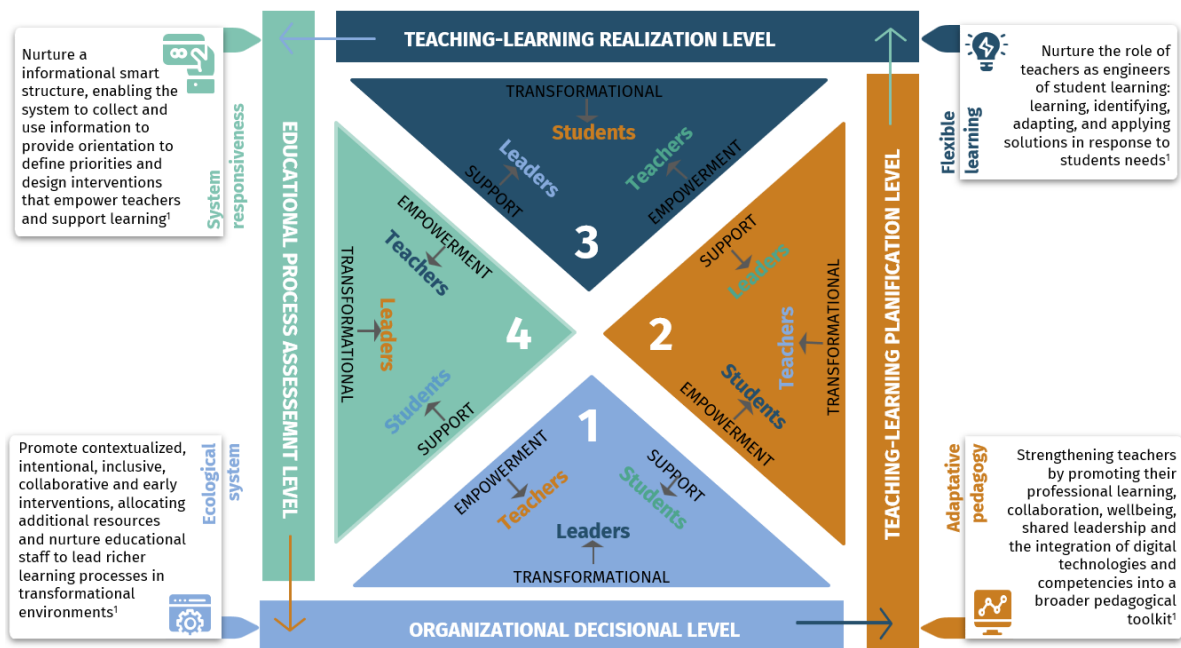
Leaders must be aware of the difficulties of the diffusion innovation process and strategically manage human resources considering that there are different individual characteristics. Rogers (2003) identifies the following: innovators, early adopters, early majority, late majority, and laggards. For laggards and average performers to grow faster is necessary to construct growth-enabling narratives to identify and address the obstacles impeding innovation. Hargreaves and Shirley (2009) defend seven principles for sustainable leadership: depth of purpose in developing student learning; breadth so this purpose and its achievement are shared; endurance over time so that improvement continues across reforms; justice in attending to all students' learning; resourcefulness in using financial resources and human energy; conservation in connecting future visions to traditions in narratives of commitment and hope; and diversity of curriculum, pedagogy, and team contributions in organisations and networks where ideas are cross-pollinated instead of being cloned.

Leadership appears as a complex and multifaceted activity blended with holism, coherence, transparency, competence, determination, resilience, knowledge, and skills. Leadership is related not only to organisational management and pedagogical process but also to human resources

management. Human resource management includes interventions in relevant psychological domains due to motivational aspects and due to the perspectivism indexed to controversial school cultures. Concerning innovation focused on pedagogical and organisational experiences, leaders' actions, as well as teachers' and students' actions, contemplate three dimensions: empowerment, transformation, and support (Figure 3). The first one, empowerment, refers to strategically assuming control and making positive decisions supported by knowledge, based on a vision and predefined goals. Transformation is moving to action focusing on the defined goals and a strategy to transform teaching and learning that is assured by the school's professional capital. At last, support ongoing innovative processes focused on improving and refining practices, assuming individual and collective responsibility, a shared responsibility across the system. In different levels of school structure, empowerment, transformation, and support are shared by leaders, teachers, and students, even though the role accomplished by each element changes.

Figure 3.

The integral perspective of innovation strategy in schools considering the role of the educational actors



Source: ¹(OECD, 2021)

4. A classification of promoters and hindrance factors in educational innovation

Currently, the social demand for innovation and school transformation imposes the adoption of a systemic culture of innovation in educational systems. To support this metamorphosis (Morin, 2010; Nóvoa, 2019), principals, teachers, policymakers, and scholars must access a common

understanding of the multiple factors that restrict innovation. The classification built considers metaclasses, higher-order operators in the typology, defined as structural domains of the educational process of schools' transformation and related dimensions (Table 1). The two domains defined, organisational capital (Figure 4) and professional capital (Figure 5), reunite factors that, by themselves, combined or depending on the degree of their manifestation, impact positively or negatively school transformation. The factors proceeding from the literature review were organised into the domains and dimensions predetermined (Table 1) and then clustered into the categories detailed in Table A1. The typology aims to fulfil an epistemic, phenomenological, and propositional purpose. It harmonises criteria concerning the following aspects of innovation:

- At the functional/strategic level – 'Leadership style' from the dimension of educational leadership capital; 'focus', 'strategy' and 'supervision focus' regarding the dimension of structural capital; 'vision and focus' and 'meaningfulness' from the dimension of decisional capital;
- At the relational level – 'Leadership behaviour', 'professional practices' and 'individual morale' respectively framed with the dimensions of educational leadership capital, social capital and individual human capital;
- At the behavioural level – 'Cognitive support' integrated with the dimension of educational leadership capital and 'individual behaviour', 'innovative behaviour' and 'working posture' from the dimension of individual human capital;
- At the environmental level – 'Procedural principles' and 'responsiveness' belong to the dimension of decisional capital, and 'school capital for transformation' is from the dimension of social capital.

The proposed typology systematising promoters and hindrance factors of educational innovation represents a differentiated approach from the one presented by Tyunnikov (2017) concerning innovation objectives. Both classifications constitute tools to leverage innovative practices in schools and foster more organic institutions. Classifying is an approach to data that involves sorting concepts, events, or constructs into categories. Classifications of innovation are essential tools for a better understanding of relationships between organizational and pedagogical processes in educational contexts.

Figure 4.
Dendrogram of factors that influence innovation in schools reported as organisational capital

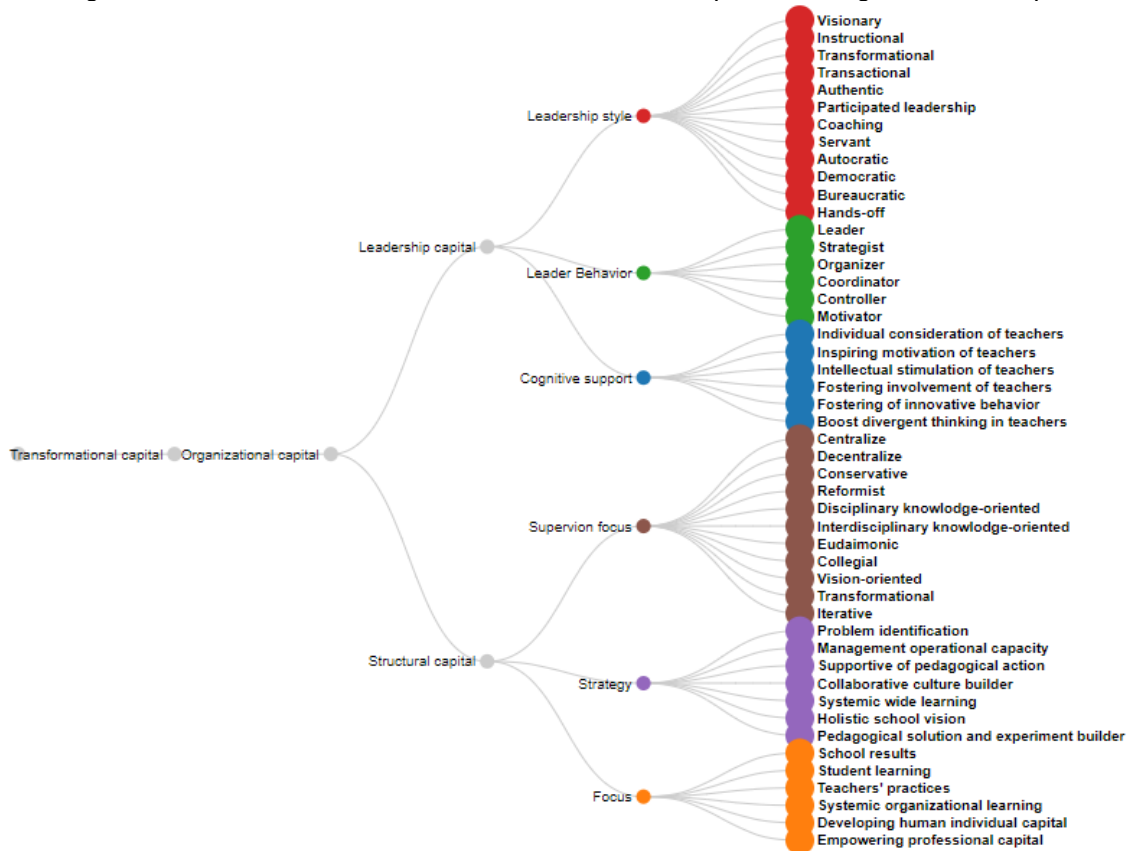
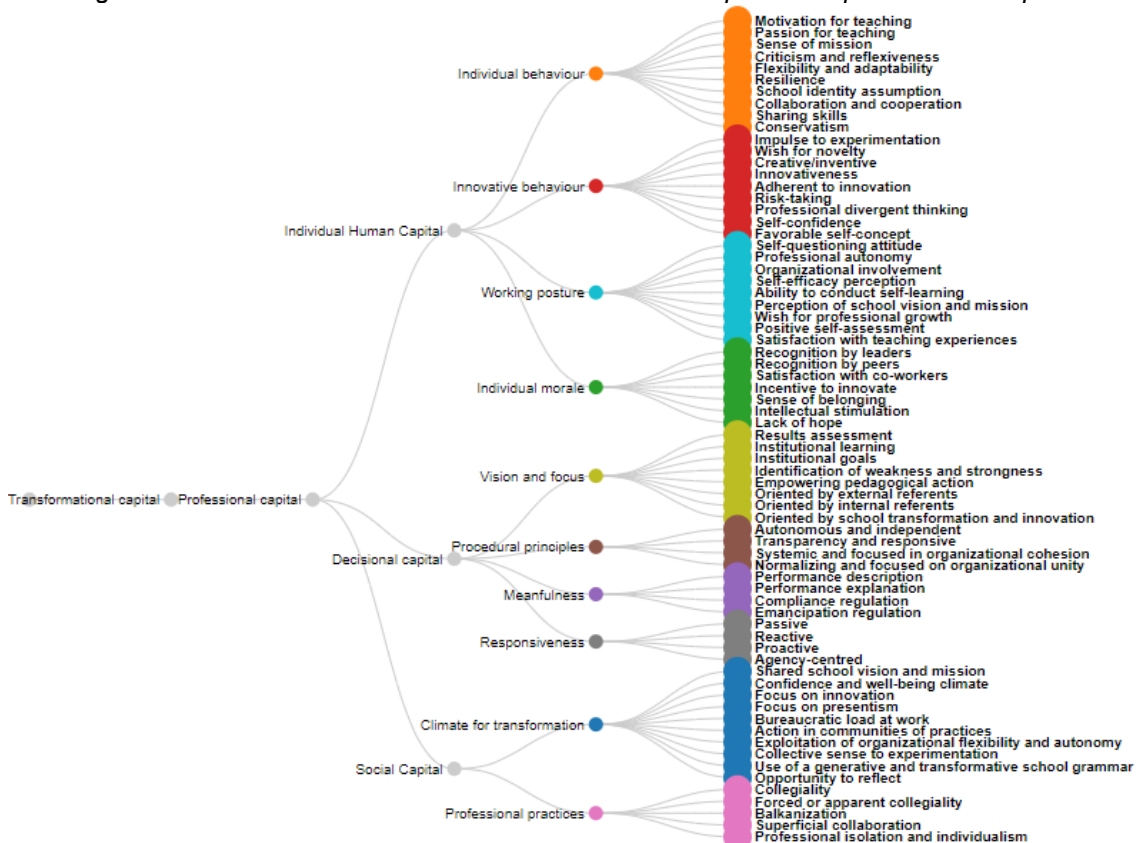


Figure 5.
Dendrogram of factors that influence innovation in schools reported as professional capital



Schools are complex systems, and the equation for understanding it means building solid leadership that can establish ethical and organisational control in building knowledge capital. According to Sujudi et al. (2020), the result will be a reflection of the leadership needed in this current era of disruption. Considering the broader factors that influence innovation and consequently the school transformation, changing becomes a vast and complex process that requires the real mobilisation of the whole institutional school system. The steps to achieve school transformation by making use of the map of innovation exposed in the typology proposed may include:

1. analysing the school context considering the domains, dimensions and categories of classification;
2. identifying contextual promoters and hindrance factors that impact the school as an organisation;
3. defining an articulated and integral system-generated strategy that allows a contextualised intervention;
4. to diffuse the system-generated strategy, promote reflection and involve all school community in a conscious and sustainable school transformation process.

The complexity of educational organisations demands a 'new leadership' characterised by the following components: 'experts in context', "engaging in joint determination throughout the process", establishing a 'culture of accountability', and becoming a 'system player' [Fullan, (2020b), p.140]. By identifying potential promoters and hindrance factors of innovation, this study may support this 'new leadership', allowing a better understanding of the school context and how to promote school transformation.

5. Conclusions and final considerations

Innovation is imperative for a future-oriented teaching profession. Therefore, we present a discussion centred on identifying and typifying the factors that positively mark the innovative phenomenon and the barriers to innovation. Highlighted by a theoretical model for studying innovation in educational systems, a methodology was developed for classification focused on four main strands that characterise schools, which are organisational, pedagogical, cultural, and technological. These four strands led the whole process of reuniting factors identified as being promoters and obstacles to innovation in the literature. The classification outlines the potential paths for implementing innovation in schools and deepening the study of the innovative process. The classification follows a structure of a typology. It appears as a pragmatismal tool that challenges the current thinking to develop and support education. The typology's primary purpose is to make the innovation process more sustainable in schools and leverage students' learning. The typology provides orientations to principals on the complex, multitask, plural, interrelated, adaptative, creative, and challenging process of leadership. The typology also attempted to arrange a

significant and common language to understand and study the problem that assembles innovation and schools' transformation.

Two main domains were pointed to classify factors that entangle innovation. The first one is organisational capital which points out the whole school's management and administration. The second one is professional capital which "consists of simultaneously building individual and collective efficacy and creating links of lateral accountability that push and pull team members to get better at their practice" in a process "described as accountability for student learning" [Fullan et al., (2015), p.8].

This approach does not intend to substitute other classifications or taxonomies on innovation proposed by other scholars. Still, it aims to provide a rational typology on determinant factors that impact educational innovation and schools' leadership, making it possible to differentiate agendas for school transformation and uncover interesting and relevant research questions and issues to follow up. The large number of factors included in the typology, promoters, and obstacles to innovation, make us signal a perspective on the topic of school transformation that may have remained obscured. Even though many factors were identified, studied, and appear as being crucial elements, perhaps, one or two unfavourable factors influencing an organisation, when combined with a higher number of favourable factors, might have a minor impact. The opposite is also a hypothesis. In the context of the predominance of positive combined factors due to school transformation, a single or a few factors might have a considerable impact. This classification and the model that frames the typology present a possible approach for comprehensively and globally studying innovation in schools. Finally, the typology acts as a groundwork for continuing study schools because it provides a broad matrix of variables that might be correlated or act as moderators or mediators for innovation. The typology presented may suggest new lines of analysis and catalyse studies that may provide a further understanding of the innovative phenomenon.

References

- Ahlquist, J.S. and Breunig, C. (2012) 'Model-based clustering and typologies in the social sciences', *Political Analysis*, Vol. 20, No. 1, pp.92–112, DOI: 10.1093/pan/mpr039.
- Alves, J.M. (2021) 'Uma gramática generativa e transformacional para gerar outra escola', in *Mudança em Movimento – Escolas em Tempos de Incerteza*, Católica Editora, Porto, pp.25–48.
- Alves, J.M. and Cabral, I. (2019) 'Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino', in Roldão, M.C. (Ed.): *Quem Lidera o Ensino e a Aprendizagem nas Escolas? Um Estudo de Caso Múltiplo Sobre Lideranças Pedagógicas*, Vila Nova de Gaia: Fundação Manuel Leão, pp.13–34.

- Alves, J.M. and Cabral, I. (2021) 'No regresso à escola – reimaginar e praticar uma gramática generativa e transformacional', in Matias Alves, J. and Cabral, I. (Eds.): *No Regresso à ESCOLA – Reimaginar e Praticar uma Gramática Generativa e Transformacional*, Faculdade de Educação e Psicologia da UCP, Porto, pp.4–20.
- Amorim, S., Cabral, I. and Alves, J.M. (2019) 'Culturas escolares, lideranças e resultados: apresentação de resultados de um estudo duplo', in Cabral, I. et al. (Eds.): *Educação, Territórios e Desenvolvimento Humano: Atas do III Seminário Internacional*, Universidade Católica Portuguesa, Faculdade de Educação e Psicologia, Centro de Estudos em Desenvolvimento Humano, Porto, Portugal, 18–19 July, pp.231–252 [online] <http://hdl.handle.net/10400.14/31393>.
- Andrews, D. and Conway, J.M. (2020) 'Leadership for ongoing sustainability of whole school improvement', *Leading & Managing*, Vol. 26, No. 1, pp.128–129.
- Anthony, F.V. and Hermans, C.A.M. (2020) 'Spiritual determinants and situational contingencies of transformational leadership', *Acta Theologica*, No. DuBrin, pp.60–85, DOI: 10.18820/23099089/actat.Sup30.3.
- Arar, K., Tamir, E. and Abu-Hussain, J. (2019) 'Understanding reforms, school reactions to major changes: the case of Israel', *Journal of Educational Administration and History*, Vol. 51, No. 4, pp.402–418, DOI: 10.1080/00220620.2019.1624511.
- Atik, S. and 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*, Vol. 12, No. 3, pp.177–193, DOI: 10.15345/iojes.2020.03.014.
- Bartee, R. (2007) 'Education leadership as 'capital' for a diverse school setting: understanding the dynamics of social and symbolic capital as exemplars of successful leadership strategies', *Advances in Educational Administration*, Vol. 10, pp.179–194, DOI: 10.1016/S1479-3660(07)10011-1.
- Blömeke, S. et al. (2021) 'Supplemental material for school innovativeness is associated with enhanced teacher collaboration, innovative classroom practices, and job satisfaction', *Journal of Educational Psychology*, DOI: 10.1037/edu0000668.supp.
- Bocconi, S., Kampylis, P. and Punie, Y. (2013) 'Framing ICT-enabled innovation for learning: the case of one-to-one learning initiatives in Europe', *European Journal of Education*, Vol. 48, No. 1, pp.113–130, DOI: 10.1111/ejed.12021.
- Cabral, I. and Alves, J.M. (2016) 'Um modelo integrado de promoção do sucesso escolar (MIPSE) – a voz dos alunos', *Revista Portuguesa de Investigação Educacional, Escolas Melhorias e Transformação*, Vol. 16, pp.81–113, DOI: 1645-4006.
- Cao, C., Shang, L. and Meng, Q. (2020) 'Applying the job demands-resources model to exploring predictors of innovative teaching among university teachers', *Teaching and Teacher Education*, Vol. 89, p.103009, DOI: 10.1016/j.tate.2019.103009.
- Cerna, L. (2014) 'Edu/ceri/cd(2014)17', Centre for Educational Research and Innovation (Ceri) Governing Board, pp.1–38.
- Cheong, M. et al. (2016) 'Two faces of empowering leadership: enabling and burdening', *Leadership Quarterly*, Vol. 27, No. 4, pp.602–616, DOI: 10.1016/j.leaqua.2016.01.006.
- Córdoba-Pachón, J.R. et al. (2021) 'Systemic creativities in sustainability and social innovation education', *Systemic Practice and Action Research*, Vol. 34, No. 3, pp.251–267, DOI: 10.1007/s11213-020-09530-z.
- Cuenca, P.O. et al. (2006) 'Modelo de innovación educativa. Um marco para la formación y el desarrollo de una cultura de la innovación', in *Ier. Congreso Internacional Innovación Educativa – La Cultura de la Innovación en la Educación*, pp.1–20.
- Daniëls, E., Hondeghem, A. and Dochy, F. (2019) 'A review on leadership and leadership development in educational settings', *Educational Research Review*, January, Vol. 27, pp.110–125, DOI: 10.1016/j.edurev.2019.02.003.
- Demirtas, O. and Karaca, M. (2020) *A Handbook of Leadership Styles*, Cambridge Scholars Publishing, Newcastle upon Tyne.
- Dimmock, C. (2011) *Leadership, Capacity Building and School Improvement Concepts, Themes and Impact*, 1st ed., Routledge, London [online] <https://doi.org/10.4324/9780203817452>.

- Domanski, D., Howaldt, J. and 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*, Vol. 28, No. 3, pp.454–474, DOI: 10.1080/09654313.2019.1639397.
- Eyal, O. (2009) 'Degeneracy, resilience and free markets in educational innovation', *Systems Research and Behavioral Science*, Vol. 26, No. 4, pp.487–491, DOI: 10.1002/sres.940.
- Figueiredo, A.D. (2020) 'The renewed human dimension of the school in the digital era', *EDUCA – International Catholic Journal of Education*, January, Vol. 6, pp.168–176 [online] <https://www.researchgate.net/publication/353669761>.
- Fonseca, J.R.S. (2013) 'Clustering in the field of social sciences: that is your choice', *International Journal of Social Research Methodology*, Vol. 16, No. 5, pp.403–428, DOI: 10.1080/13645579.2012.716973.
- Fullan, M. (2007) *The New Meaning of Educational Change*, 4th ed., Teachers College Press, New York.
- Fullan, M. (2020a) 'System change in education', *American Journal of Education*, Vol. 126, No. 4, pp.653–663, DOI: 10.1086/709975. Fullan, M. (2020b) 'The nature of leadership is changing', *European Journal of Education*, Vol. 55, No. 2, pp.139–142, DOI: 10.1111/ejed.12388.
- Fullan, M., Rincón-Gallardo, S. and Hargreaves, A. (2015) 'Professional capital as accountability', *Educational Policy Analysis Archives*, Vol. 23, No. 15, pp.1–18 [online] <http://dx.doi.org/10.14507/epaa.v23.1998>.
- Gao, Y. et al. (2021) 'A study on the cross level transformation from individual creativity to organizational creativity', *Technological Forecasting and Social Change*, June, Vol. 171, p.120958, DOI: 10.1016/j.techfore.2021.120958.
- Gil, A.J., Rodrigo-Moya, B. and Morcillo-Bellido, J. (2018) 'The effect of leadership in the development of innovation capacity: a learning organization perspective', *Leadership and Organization Development Journal*, Vol. 39, No. 6, pp.694–711, DOI: 10.1108/LODJ-12-2017-0399.
- Gomes, L.A. de V., Facin, A.F.F. and Salerno, M.S. (2021) 'Managing uncertainty propagation in innovation ecosystems', *Technological Forecasting and Social Change*, June, Vol. 171, p.120945, DOI: 10.1016/j.techfore.2021.120945.
- Goodson, I. (2000) *Professional Knowledge, Professional Lives: Studies in Education and Change*, Open University Press, Maidenhead.
- Goodson, I. (2001) 'Social histories of educational change', *Journal of Educational Change*, Vol. 2, No. 1, pp.45–63, DOI: 10.1023/A:1011508128957.
- Goodson, I. (2014) 'Context, curriculum and professional knowledge', *History of Education*, Vol. 43, No. 6, pp.768–776, DOI: 10.1080/0046760X.2014.943813.
- Hall, R.D. and Rowland, C.A. (2016) 'Leadership development for managers in turbulent times', *Journal of Management Development*, Vol. 35, No. 8, pp.942–955, DOI: 10.1108/JMD-09-2015-0121.
- Hannan, A. and Silver, H. (2000) *Innovating in Higher Education: Teaching, Learning, and Institutional Cultures*, Open University Press, Philadelphia.
- Hargreaves, A. (2010) 'Presentism, individualism, and conservatism: the legacy of Dan Lortie's Schoolteacher: a sociological study', *Curriculum Inquiry*, Vol. 40, No. 1, pp.143–154, DOI: 10.1111/j.1467-873X.2009.00472.x.
- Hargreaves, A. (2012) 'Singapore: the fourth way in action?', *Educational Research for Policy and Practice*, Vol. 11, No. 1, pp.7–17, DOI: 10.1007/s10671-011-9125-6.
- Hargreaves, A. and Fullan, M. (2012) *Professional Capital: Transforming Teaching in Every School*, Teachers College Press, New York, NY.
- Hargreaves, A. and Shirley, D. (2009) *The Fourth Way: The Inspiring Future for Educational Change*, DOI: 10.4135/9781452219523.
- Henriques, S. et al. (2020) 'Avaliação externa de escolas e inovação educativa', in Pacheco, J.A., Morgado, J.C. and Sousa, J.R. (Eds.): *Avaliação Institucional e Inspeção: Perspetivas Teórico-Conceptuais*, 1st ed., pp.121–140, Porto Editora, Porto.

- Howaldt, J., Domanski, D. and Kaletka, C. (2016) 'Social innovation: towards a new innovation paradigm', *Revista de Administracao Mackenzie*, Vol. 17, No. 6, pp.20–44, DOI: 10.1590/1678-69712016/administracao.v17n6p20-44.
- Janssen (2003) 'Innovative behaviour and job involvement at the price of conflict', *Journal of Occupational and Organizational Psychology*, Vol. 76, p.347, <https://doi.org/10.1348/096317903769647210>.
- Lambert, S.C. (2015) 'The importance of classification to business model research', *Journal of Business Models*, Vol. 3, No. 1, pp.49–61, DOI: 10.5278/ojs.jbm.v3i1.1045.
- Lambriex-Schmitz, P. et al. (2020) 'Towards successful innovations in education: development and validation of a multi-dimensional innovative work behaviour instrument', *Vocations and Learning*, Vol. 13, No. 2, pp.313–340, DOI: 10.1007/s12186-020-09242-4.
- Lee, A.N., Nie, Y. and Bai, B. (2020) 'Perceived principal's learning support and its relationships with psychological needs satisfaction, organisational commitment and change-oriented work behaviour: a self-determination theory's perspective', *Teaching and Teacher Education*, Vol. 93, p.103076, DOI: 10.1016/j.tate.2020.103076.
- Leithwood, K. and Earl, L. (2000) 'Educational accountability effects: an international perspective', *Peabody Journal of Education*, Vol. 75, No. 4, pp.1–18, DOI: 10.1207/S15327930PJE7504_1.
- Machado, J. (2018) 'Autonomia, currículo e liderança: na crista da onda de um paradoxo', in Palmeirão, C. and Alves, J.M. (Eds.): *Escola e Mudança: Construindo Autonomia, Flexibilidade e Novas Gramáticas de Escolarização – Os Desafios Essenciais*, 1st ed., pp.9–19, Universidade Católica Portuguesa, Porto, DOI: 10.34632/9789898835543.
- Maroy, C. and Dupriez, V. (2000) 'La régulation dans les systèmes scolaires. Proposition théorique et analyse du cadre structurel en Belgique francophone', *Revue Française de Pédagogie*, Vol. 130, pp.73–88, DOI: 10.3406/rfp.2000.1054 [online] http://www.persee.fr/web/revues/home/prescript/article/rfp_0556-7807_2000_num_130_1_1054.
- Messina, G. (2001) 'Mudança e inovação educacional: notas para reflexão', *Cadernos de Pesquisa*, No. 114, pp.225–233, DOI: 10.1590/s0100-15742001000300010.
- Mogren, A., Gericke, N. and Scherp, H.Å. (2019) 'Whole school approaches to education for sustainable development: a model that links to school improvement', *Environmental Education Research*, Vol. 25, No. 4, pp.508–531, DOI: 10.1080/13504622.2018.1455074.
- Morin, E. (2010) *Eloge de la Métamorphose*, *Le Monde* [online] https://www.lemonde.fr/idees/article/2010/01/09/eloge-de-la-metamorphose-par-edgar-morin_1289625_3232.html (accessed April 2022).
- Navarro-Corona, C. (2016) 'La transformación colectiva como única alternativa para el cambio sostenible en la escuela', *Revista Electronica de Investigacion Educativa*, Vol. 18, No. 2, pp.1–5.
- Nemeržitski, S. et al. (2013) 'Constructing model of teachers innovative behaviour in school environment', *Teachers and Teaching: Theory and Practice*, Vol. 19, No. 4, pp.398–418, DOI: 10.1080/13540602.2013.770230.
- Nóvoa, A. (2019) 'Teachers and their education at a time of school metamorphosis', *Educacao and Realidade*, Vol. 44, No. 3, pp.1–15, DOI: 10.1590/2175-623684910.
- OCDE (2021) *Education Policy Outlook 2021: Shaping Responsive and Resilient Education in a Changing World*, Éditions OCDE, Paris, <https://doi.org/10.1787/75e40a16-en>.
- Pacheco, J.A. (2019) *Inovar para Mudar a Escola*, 1st ed., Porto Editora, Porto.
- Pan, H.L.W. and Chen, W.Y. (2021) 'How principal leadership facilitates teacher learning through teacher leadership: determining the critical path', *Educational Management Administration and Leadership*, Vol. 49, No. 3, pp.454–470, DOI: 10.1177/1741143220913553.
- Pathak, D.P. and Mishra, S. (2019) 'Assessment of organisational climate through innovative behaviour of the teachers', Vol. 11, No. 3, DOI: 10.18311/gjeis/2019.
- Pellegrini, M.M. et al. (2020) 'The relationship between knowledge management and leadership: mapping the field and providing future research avenues', *Journal of Knowledge Management*, Vol. 24, No. 6, pp.1445–1492, DOI: 10.1108/JKM-01-2020-0034.
- Rogers, E.M. (2003) *Everett_M*, 5th ed., Free Press, New York.

- Roness, D. (2011) 'Still motivated? The motivation for teaching during the second year in the profession', *Teaching and Teacher Education*, Vol. 27, No. 3, pp.628–638, DOI: 10.1016/j.tate.2010.10.016.
- Runhaar, P. et al. (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*, Vol. 68, No. 4, pp.436–452, DOI: 10.1080/13636820.2016.1231215.
- Sattayaraksa, T. and Boon-Itt, S. (2012) 'Leadership as a determinant of product innovation: a systematic review of the literature', *IEEE International Conference on Industrial Engineering and Engineering Management*, pp.677–682, DOI: 10.1109/IEEM.2012.6837825.
- Serdyukov, P. (2017) 'Innovation in education: what works, what doesn't, and what to do about it?', *Journal of Research in Innovative Teaching & Learning*, Vol. 10, No. 1, pp.4–33, DOI: 10.1108/jrit-10-2016-0007.
- Shirley, D., Hargreaves, A. and Washington-Wangia, S. (2020) 'The sustainability and unsustainability of teachers' and leaders' well-being', *Teaching and Teacher Education*, Vol. 92, DOI: 10.1016/j.tate.2019.102987.
- Smith, R. (2018) 'καινοτομία: on the Greek origins of innovation', *Research Technology Management*, Vol. 61, No. 6, pp.48–49, DOI: 10.1080/08956308.2018.1516931.
- Song, K.O. and Choi, J. (2017) 'Structural analysis of factors that influence professional learning communities in Korean elementary schools', *International Electronic Journal of Elementary Education*, Vol. 10, No. 1, pp.1–9, DOI: 10.26822/iejee.2017131882.
- Sotiriou, S. et al. (2016) 'Introducing large-scale innovation in schools', *Journal of Science Education and Technology*, Vol. 25, No. 4, pp.541–549, DOI: 10.1007/s10956-016-9611-y.
- Stefenberga, D. and Sloka, B. (2020) 'Regional development: the importance of the involvement of inhabitants', *Regional Formation and Development Studies*, Vol. 1, pp.112–121, DOI: <http://dx.doi.org/10.15181/rfds.v30i1.2039>.
- Straub, R. and Vilsmaier, U. (2020) 'Pathways to educational change revisited – controversies and advances in the German teacher education system', *Teaching and Teacher Education*, Vol. 96, p.103140, DOI: 10.1016/j.tate.2020.103140.
- Sujudi, N., Komariah, A. and Indonesia, U.P. (2020) 'Leadership characteristics era disruption', *International Conference on Research of Educational Administration and Management (ICREAM)*, Vol. 400, pp.276–279 [online] <https://www.atlantis-press.com/article/125933799.pdf>.
- Tan, M.Y. and Hung, D.W.L. (2020) 'Models of innovation scaling in Singapore schools: process objects as multi-level role clusters and outcomes – a multiple case study approach', *Asia Pacific Education Review*, Vol. 21, No. 4, pp.553–571, DOI: 10.1007/s12564-020-09642-0.
- Tayag, J. and Ayuyao, N. (2020) 'Exploring the relationship between school leadership and teacher professional learning through structural equation modeling', *International Journal of Educational Management*, Vol. 34, No. 8, pp.1237–1251, DOI: 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*, Vol. 54, Nos. 3 and 4, pp.55–73.
- Tian, G. and Zhang, Z. (2020) 'Linking empowering leadership to employee innovation: the mediating role of work engagement', *Social Behavior and Personality*, Vol. 48, No. 10, pp.1–9, DOI: 10.2224/SBP.9320.
- Tyack, D. and Tobin, W. (1994) 'The 'grammar' of schooling: why has it been so hard to change?', *American Educational Research Journal*, Vol. 31, No. 3, pp.453–479, DOI: 10.3102/00028312031003453.
- Tyunnikov, Y.S. (2017) 'Classification of innovation objectives set for continuing professional teacher development', *European Journal of Contemporary Education*, Vol. 6, No. 1, pp.167–181, DOI: 10.13187/ejced.2017.1.167.
- Vermeulen, M., Kreijns, K. and Evers, A.T. (2020) 'Transformational leadership, leader-member exchange and school learning climate: impact on teachers' innovative behaviour in the Netherlands', *Educational Management Administration and Leadership*, Vol. 48, No. 5, pp.1–20, DOI: 10.1177/1741143220932582.

- Wang, S. (2019) 'School heads' transformational leadership and students' modernity: the multiple mediating effects of school climates', *Asia Pacific Education Review*, Vol. 20, No. 3, pp.329–341, DOI: 10.1007/s12564-019-09575-3.
- Wisetsat, C. and Nuangchalem, P. (2019) 'Enhancing innovative thinking of Thai pre-service teachers through multi-educational innovations', *Journal for the Education of Gifted Young Scientists*, Vol. 7, No. 3, pp.409–419, DOI: 10.17478/jegys.570748.
- Woolner, P., Thomas, U. and Tiplady, L. (2018) 'Structural change from physical foundations: the role of the environment in enacting school change', *Journal of Educational Change*, Vol. 19, No. 2, pp.223–242, DOI: 10.1007/s10833-018-9317-4.
- Yakavets, N., Frost, D. and Khoroshash, A. (2017) 'School leadership and capacity building in Kazakhstan', *International Journal of Leadership in Education*, Vol. 20, No. 3, pp.345–370, DOI: 10.1080/13603124.2015.1066869.
- Zhao, J. and de Pablos, P.O. (2009) 'School innovative management model and strategies: the perspective of organizational learning', *Information Systems Management*, Vol. 26, No. 3, pp.241–251, DOI: 10.1080/10580530903017781.
- Zhu, J., Yao, J. and Zhang, L. (2019) 'Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety', *Asia Pacific Education Review*, Vol. 20, No. 4, pp.657–671, DOI: 10.1007/s12564-019-09584-2.

Appendix 1

A typology for innovation centred on the fostering factors and obstacles

Structural domains	Dimensions	Categories
Transformational capital Intellectual capital Educational leadership capital	Leadership style ¹ Leaders' characteristics used for school managing	<ul style="list-style-type: none"> • Visionary, progress-focused • Instructional, supportive, and communicative • Transformational, challenging, and communicative • Transactional, performance-focused • Empowered, enhancing self-efficacy and performance • Authentic, focused on team culture and positive work relationships • Participated leadership, fostering responsibility, involvement, and autonomy • Coaching, motivation-focused • Servant, humble and protective • Autocratic, authoritarian, and result-focused • Democratic, supportive, and innovative • Bureaucratic, hierarchical, and duty-focused • Hands-off, autocratic, and delegatory
	Leader Behavior ² Leaders' actions for school managing	<ul style="list-style-type: none"> • Leader • Strategist • Organizer • Coordinator • Controller • Motivator
	Cognitive support ³ Leadership activity oriented to improving the intellectual consciousness of teachers	<ul style="list-style-type: none"> • Individual consideration of teachers • Inspiring the motivation of teachers • Intellectual stimulation of teachers • Fostering the involvement of teachers • Fostering innovative behaviour • Boost divergent thinking in teachers

Structural capital	<p>Focus The core of the leadership activity concerning school the sustainability of the whole school's improvement ⁴</p>	<ul style="list-style-type: none"> • Focus on school results • Focus on student learning • Focus on teachers' practices • Focus on systemic organizational learning • Focus on developing individual human capital • Focus on empowering professional capital 	
	<p>Strategy Leadership strategic action orientation for school management based on school organizational learning ⁵</p>	<ul style="list-style-type: none"> • Problem identification oriented • Management of existing operational capacity oriented • Monitoring and supportive, being pedagogical action-oriented • Building collaborative culture-oriented • Systemic wide learning-oriented • Pedagogical solutions and pedagogical experiments builder-oriented • Holistic school vision commitment-oriented 	
	<p>Supervision focus Orientation of leadership supervision activity of teachers</p>	<ul style="list-style-type: none"> • Centralize, defining orientations for educational action • Decentralize, valuing participation of the community in decision-making and organizational autonomy • Conservative focused on presentism and short term-oriented • Reformist focus on innovation and innovative behaviour and is future-oriented • Disciplinary knowledge-oriented, investing mainly in the curricular disciplinary approach • Interdisciplinary knowledge-oriented, investing in integrated knowledge and methods from different subjects as part of the teaching-learning process • Eudaimonic, inducing self-realization and well-being, and trust among teachers • Collegial, fostering collective reflection and cooperation, as well as shared, diffusion, and circulation of professional capital • Vision-oriented, fostering organizational consciousness through a shared holistic vision and mission • Transformational, oriented to the operationalization of transformational generative school grammar • Iterative, oriented to systemic and internalized mutual accountability 	
Professional capital	Decisional capital	<p>Vision and focus ⁶ Sets the direction for education due to the school's self-knowledge process</p>	<ul style="list-style-type: none"> • Focus on results assessment • Focus on institutional learning, results, and teaching-learning school practices • Focus on institutional goals assessment • Focus on the identification of weaknesses and strongness • Focus on empowering pedagogical action through in-force school resources management • Focused and oriented by external evaluation referents • Focused and oriented by internal evaluation referents aligned with the school mission • Focused and oriented for school transformation and innovation
		<p>Procedural principles Characteristics of the process conducted by internal school evaluation ⁷</p>	<ul style="list-style-type: none"> • Autonomous and independent • Transparency and responsive • Systemic and focused on organizational cohesion • Normalizing and focusing on organizational unity
		<p>Meaningfulness Value and significance of data produced by internal school evaluation ⁸</p>	<ul style="list-style-type: none"> • Tool for performance description • Tool for performance explanation • Tool for compliance regulation • Tool for emancipation regulation

Social Capital	<p>Responsiveness Regarding the nature of the reaction adopted by the internal school evaluation</p>	<ul style="list-style-type: none"> • Passive, delaying action and non-empowering • Reactive, being iterative, and analytical • Proactive, being intentional, and reflexive • Agency-centred, being comprehensive, empowering, and creative
	<p>Professional practices Nature and the way how teachers' work is conducted ⁹</p>	<ul style="list-style-type: none"> • Collegiality • Forced or apparent collegiality • Balkanization • Superficial collaboration • Professional isolation and individualism
	<p>School Climate ¹⁰ for transformation Work environment oriented to school transformation</p>	<ul style="list-style-type: none"> • Shared school vision and mission • Confidence and well-being climate • Focus on innovation • Focus on presentism • Bureaucratic load at work • Action in communities of practices • Exploitation of organizational flexibility and autonomy • Collective sense of experimentation • Use of a generative and transformative school grammar • Opportunity to reflect
Individual Human Capital	<p>Individual behaviour Actions and responses of teachers due to internal and external forces ¹¹</p>	<ul style="list-style-type: none"> • Motivation for teaching • Passion for teaching • Sense of mission • Criticism and reflexiveness • Flexibility and adaptability • Resilience • School identity assumption • Collaboration and cooperation • Sharing skills • Conservatism
	<p>Innovative behaviour ¹² Perceptions and feelings about the application of new methods, strategies, and solutions to the educational process</p>	<ul style="list-style-type: none"> • Impulse to experimentation • Wish for novelty • Creative/inventive • Innovativeness • Adherent to innovation • Risk-taking • Professional divergent thinking • Self-confidence • Favourable self-concept
	<p>Individual morale Well-being feelings of teachers in the work context ¹³</p>	<ul style="list-style-type: none"> • Recognition by leaders • Recognition by peers • Satisfaction with co-workers • Incentive to innovate • Sense of belonging • Intellectual stimulation • Lack of hope
	<p>Working posture Ability to drive self-professional capital factors</p>	<ul style="list-style-type: none"> • Self-questioning attitude • Professional autonomy • Organizational involvement • Self-efficacy perception • Ability to conduct self-learning • Perception of school vision and mission • Wish for professional growth • Positive self-assessment • Satisfaction with teaching experiences

Source: ¹(Demirtas and Karaca, 2020); ²(Tyunnikov, 2017); ³(Lee, Nie and Bai, 2020); ⁴(Andrews and Conway, 2020); ⁵(Zhao and de Pablos, 2009); ⁶(Fullan, Rincón-Gallardo and Hargreaves, 2015); ⁷(Maroy and Dupriez, 2000); ⁸(Leithwood and Earl, 2000); ⁹(Henriques *et al.*, 2020); ¹⁰(Wang, 2019); ¹¹(Goodson, 2000); ¹²(Rogers, 2003); ¹³(Shirley, Hargreaves and Washington-Wangia, 2020).

Artigo 3. The Role of External Evaluation Control Mechanisms and the Missing Loop of Innovation

Artigo elaborado em coautoria com José Alves e Diana Soares e submetido à revista *Journal of Pedagogical Research* e aceite para publicação. As referências foram redigidas segundo as normas da APA – 7.^a edição.

Graphic Abstract



Abstract

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

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 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. Theoretical frameworks / Theoretical Background information

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 system 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 & 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, Nilsen, Scherer, 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, Nilsen, & Scherer, 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 promoters 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.

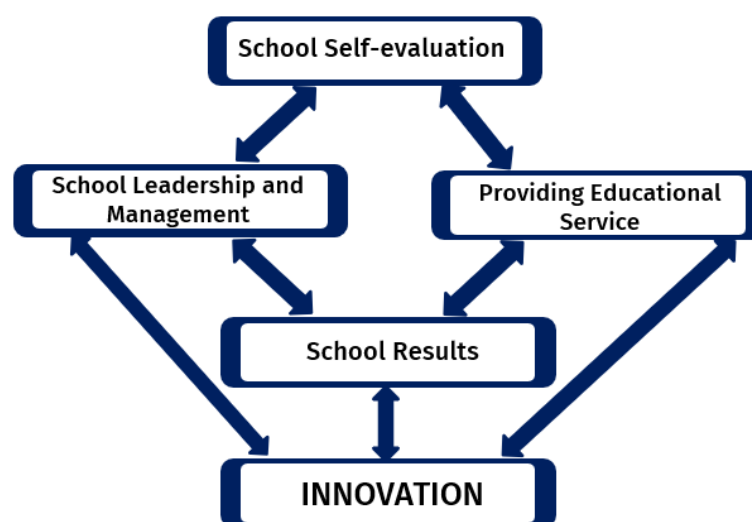
3.1. Sample and data collection

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.

Figure 1.

Hypothetised research model



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 $H_0: \theta=1$, 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 $\alpha=.05$.

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%)				

NG – Non-grouping school

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 $H(n=60)=14.565$, $p<.05$.

Table 2.

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

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

IQQ – interquartile range

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	
	H	p	H	p	H	p	H	p
Kruskal-Wallis								
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 (North / Centre / South)	6.096	.047	5.239	.073	14.565	.001	5.984	.050
Mann-Whitney	U	p			U	p	U	U
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

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= $0.05/3=0.0167$). According to Table 3, there are statistically significant differences in evaluation: (i) between north and centre concerning the self-evaluation domain with $U(n=60)=108.500$, $p<0.0167$; (ii) according to providing educative service domain, between north and centre with $U(n=60)=93.000$, $p<0.0167$, and the centre and south with $U(n=60)=79.000$, $p<0.0167$.

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%).

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%.

Table 4.

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

Domains	Latent construct	Number of Reports			Frequency	Example
		North	Centre	South		
Self-evaluation	<i>Consistency</i>	19	13	19	85.0%	Consistency of the self-evaluation process; is oriented toward identifying strategic domains and building improvement plans.
	<i>Strategic vision</i>	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.
	<i>Reflection practices</i>	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.
	<i>Innovation-oriented</i>	1	---	---	1.7%	Studying emerging themes per year (curriculum development, behaviour and indiscipline, inclusive school and institutional relations) contributes to organisational improvement.
	<i>Participated process</i>	5	6	3	23.3%	All groups of the educational community are involved in the self-evaluation process.
Leadership and management	<i>Shared and mobilising leadership</i>	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.
	<i>Strategic vision</i>	14	8	7	48.3%	Clear and coherent goals are directed at developing competencies of the Students' Profile and guiding the action of professionals.
	<i>Vision of innovation</i>	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.
	<i>Organisational engagement climate</i>	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.
	<i>Partnership network</i>	15	10	14	65.0%	Projects and local, national and international activities are developed, consistently and consolidated, with a recognised impact on learning quality.
	<i>Focus on teachers' training</i>	3	2	3	13.3%	Scope of human resources training dynamics, positively impacting professional development and educational service quality.
	<i>Resources management</i>	2	4	5	18.3%	Careful management of human resources ensures the proper functioning of services and promotes collaborative practices among teachers.
	<i>Climate for student learning</i>	4	3	3	16.7%	Concerted actions of teachers and staff result in a quiet, safe, ecological, and socially welcoming school environment for students.
	<i>Communication</i>	---	4	---	6.7%	Internal and external information circulates with celerity, effectiveness, and accuracy, respecting ethical principles.

Providing educative service	<i>Inclusive school</i>	12	3	13	46.7%	Intercultural diversity is an opportunity for learning due to the development of a policy of respect for difference.
	<i>Curricular horizontal articulation</i>	2	2	---	6.7%	Implementing pedagogical teams by grade of schooling allows shared work that sustains horizontal curricular articulation.
	<i>Teaching and learning active methodologies</i>	9	10	13	53.3%	Active methodologies that focus students' work on the proposed tasks contribute to classroom environments conducive to learning.
	<i>Innovative and stimulating climate</i>	5	---	3	13.3%	Educational approaches to curricular and pedagogical innovation involve students in activities that articulate knowledge and develop creativity and critical thinking.
	<i>Citizenship school culture</i>	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.
	<i>Student's educational paths</i>	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.
	<i>Teachers' collaborative work</i>	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.
	<i>Students' formative assessment</i>	---	1	---	1.7%	Teachers implement different assessment modalities and use diverse instruments for each course's purposes and contexts.
	<i>Teachers practice supervision</i>	---	---	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	<i>Academic results</i>	15	14	4	55.0%	Academic results evidencing sustainable work for the quality of learning and educational success.
	<i>Encouraging participation in school life</i>	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.
	<i>Inclusive school</i>	12	7	4	38.3%	An integrative and inclusive educational action reduces failing causes due to unjustified absences and indiscipline.
	<i>Recognition of merit</i>	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.
	<i>School opening to the community</i>	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)

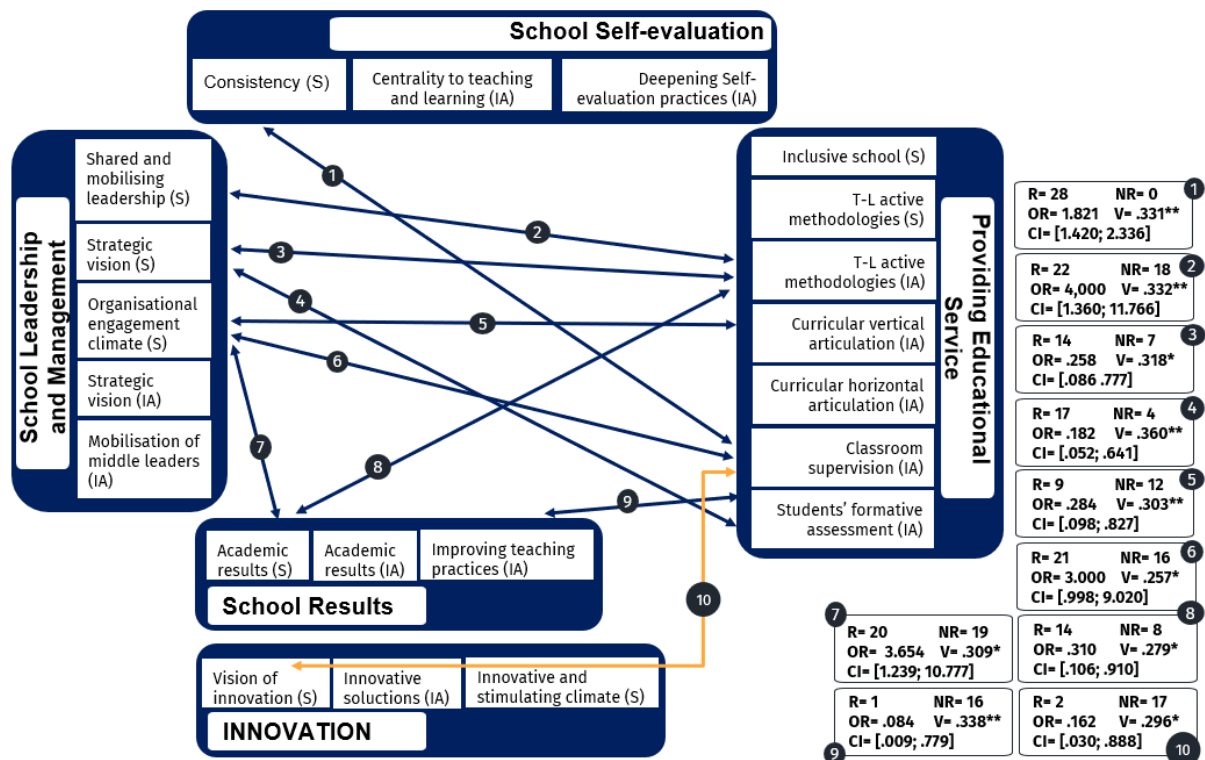
Domains	Latent construct	Number of Reports			Frequency	Example
		North	Centre	South		
Self-evaluation	<i>Centrality to the teaching and learning process</i>	16	6	7	48.3%	Implementing a consistent and systematic self-evaluation process focused on teaching and learning that contributes to the student's success and sustains organisational growth.
	<i>Improving reflection practices</i>	4	5	3	20,0%	Improve internal reflection mechanisms on self-evaluation results with a view to organisational development.
	<i>Deepening self-evaluation practices</i>	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.
	<i>Deepening community participation</i>	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	<i>School vision</i>	2	---	1	5.0%	Reconfigure the educational project, giving it a strategic, contextualised, and more identity character of the school cluster.
	<i>Strategic vision</i>	12	10	9	51.6%	Reconfigure the educational project, identifying the guiding principles of the action and the hierarchical and temporalis goals.
	<i>Mobilisation of middle leaders</i>	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.
	<i>School culture</i>	1	3	3	11.7%	Deepen the sense of belonging to the school cluster against individualised views.
	<i>Supervising teachers' practices</i>	1	---	1	3.3%	Trigger mechanisms for regular monitoring of the teaching practices.
	<i>Improving intervision practices</i>	2	---	---	3.3%	Initiate mechanisms for regularly monitoring teaching practices in collaborative and professional development work.
	<i>Resources management</i>	5	1	2	13.3%	Manage existing material resources to integrate them into teaching and learning and promote more active methodologies.
	<i>Innovative solutions</i>	6	---	1	11.7%	School structures reflect and debate the quality of innovative practices introduced and their impact on improving learning.
	<i>Improving teachers' participation</i>	2	---	2	6.7%	Promote the participation of the educational community by investing daily in motivation and appreciation actions.
	<i>Intencional training plans</i>	5	4	6	25.0%	Develop a training plan appropriate to the needs of the teaching and non-teaching staff.
<i>Improving students' and parents' participation</i>	2	2	2	10.0%	Strengthen the participation of students in organisational and pedagogical decisions to develop a critical spirit and capacity for initiative.	

	<i>Communication</i>	3	4	3	16.7%	Assure more agile and effective internal and external communication processes to increase school community participation.
Providing Educative Service	<i>Vertical curriculum articulation</i>	12	5	12	48.3%	Deepen the vertical articulation in planning and knowledge construction to impact the teaching and learning process.
	<i>Active teaching methodologies</i>	10	7	15	53.3%	To consolidate strategies for developing teamwork, regular experimental work, problem-solving, and critical spirit.
	<i>Promoting innovative teaching practices</i>	3	---	1	6.7%	Intensify the development of strategies promoting educational success and encouraging pedagogical innovation.
	<i>Investing in formative assessment practices</i>	12	11	15	63.3%	To generalise formative assessment practices, gauge measurement criteria and evaluation instruments, and define performance profiles.
	<i>Articulation between strategic documents</i>	2	---	1	5.0%	Deepen the articulation between the activities proposed in the Annual Plan of Activities and curriculum development planning.
	<i>Classroom supervision</i>	14	13	10	61.7%	Strengthen mechanisms of monitoring, regulation, or supervision of pedagogical practices in the classroom, among peers, as a form of self-regulation and professional development.
	<i>Horizontal curricular articulation</i>	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.
	<i>Inclusion</i>	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	<i>Students' participation in school life</i>	5	3	6	23.3%	Promote effective and regular participation of students in school life, particularly in exercising active and responsible citizenship.
	<i>Inclusive education</i>	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.
	<i>Improving students results</i>	15	3	3	35.0%	Promote pedagogical/curricular actions that have visible effects on the external evaluation results.
	<i>Improving teaching practices</i>	2	3	1	10.0%	Increase the effectiveness of educational and school practices to sustain improvement of learning and student outcomes.
	<i>Monitoring the school path</i>	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.
	<i>School merit incentive</i>	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.
	<i>Discipline</i>	1	3	5	15.0%	Optimise indiscipline preventive measures in the classroom so that all students have conditions conducive to learning.
	<i>Deepening reflection</i>	---	---	9	15.0%	Deepen the analysis and reflection on students' academic results, considering the data provided by the central administration to implement improvement actions.

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 $\alpha=95\%$; *V* Cramer's V with a significance * $p<.05$, ** $p<.01$.
T-L teaching and learning; S strength; IA improvement area.

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 ($OR=.258$, $\alpha=.05$); (ii) the need for better students' formative assessment ($OR=.182$; $\alpha=.05$).

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

The variables, students' formative assessment and improving teaching practices, corresponding to improvement areas identified by the Inspectorate, are associated by an OR of $.084$ ($\alpha=.05$). 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 ($OR= 3.654$; $\alpha=.05$). Despite this intelligible relationship, others appear controversial. A consistent self-evaluation in schools was positively associated with classroom supervision ($OR=1.821$; $\alpha=.05$), 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 ($OR=4.000$; $\alpha=.05$). 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 ($\alpha=.05$). 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 ($\alpha=.05$).

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 and 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 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 reflection among teachers. This absence of correlations raises the question of whether schools are developing a self-evaluation process to support leaders and teachers in a decision-making process concerning better student learning 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) inconsistencies, 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 and negative association between the need of 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, Nilsen, Scherer, 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 Brunson's' (2006) vision, operate according to the neo-institutionalist thesis and processes of institutional legitimation.

5.3. 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.

4. 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 the 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 peripheral 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.

Statements: 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). <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. <https://doi.org/10.15345/iojes.2020.03.014>
- 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* (4ª). 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*, 0123456789. <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. <http://dx.doi.org/10.15517/aie.v15i2.18960>
- Dimmock, C. (2011). *Leadership, Capacity Building and School Improvement Concepts, themes and impact* (1st ed.). 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*, 1–8. <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* (No. 015). <http://eprints.ncrm.ac.uk/842/>
- Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education*, 2(1). <https://doi.org/10.1080/2331186X.2015.1018698>
- Fink, D. (2010). *The Succession Challenge - Building and Sustaining Leadership Capacity through Succession Management*. SAGE Publications. <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 Analysis Archives*, 23(15), 1–18.
<http://dx.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). <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*. NY: 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/eeerj.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). *Políticas, dinâmicas e perfis dos agrupamentos de escolas em Portugal*. 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. <https://www.jstor.org/stable/42748322>
- 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, Growth and Well-Being*. <https://doi.org/http://dx.doi.org/10.1787/9789264239814-en>
- OECD. (2019). *OECD Future of Education and Skills 2030 - OECD Learning Compass: a Series of Concept Notes*. 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*. 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 (6ª)*. 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. <https://www.ceeol.com/search/article-detail?id=857814>
- 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 : *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), 276–279. <https://www.atlantispress.com/article/125933799.pdf>
- 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. <https://www.jstor.org/stable/26973760>
- 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. In UNESCO.
- Vandeyar, S. (2017). The teacher as an agent of meaningful educational change. *Kuram ve Uygulamada Egitim Bilimleri*, 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), 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*. 160.
- 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-ocurrences		Odds Ratio	Confidence interval		Cramer's V
	R	NR		LL	UL	
<i>Self-evaluation x Leadership and Management</i>						
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
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
<i>Self-evaluation x Providing Educative Service</i>						
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
<i>Leadership and Management x Providing Educative Service</i>						
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**
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						
Inclusive 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
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≤.1, **p≤.05, ***p≤.01 (two-tailed)

Appendix 2.

Odds ratio results regarding innovation

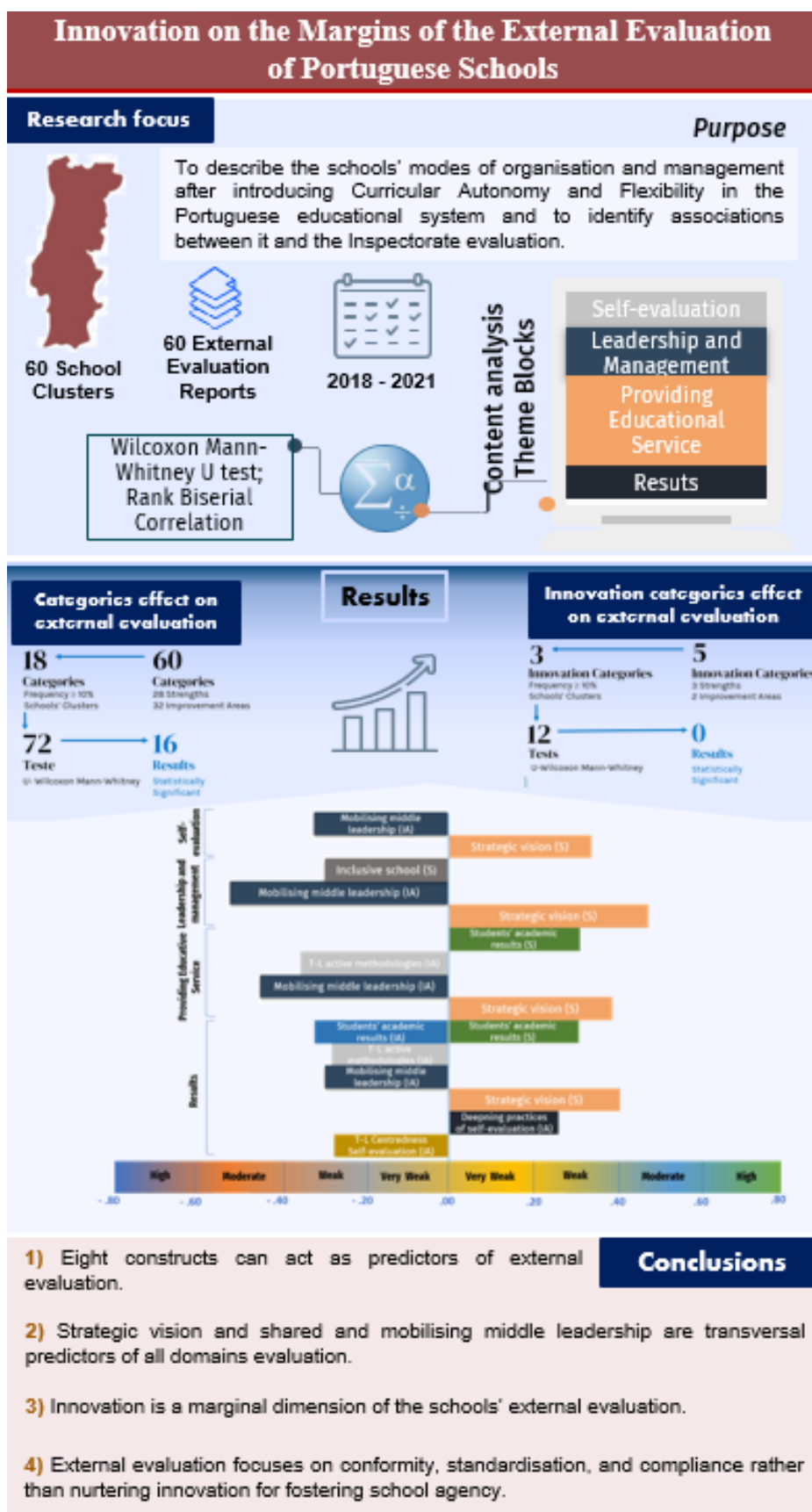
	No. of Co-ocurrencies		Odds Ratio	Confidence Interval		Cramer's V
	R	NR		LL	UL	
<i>Vision of innovation (S)</i>						
Shared and mobilising leadership (S)	4	25	.926	.209	4.104	.013
Climate of organisational involvement (S)	2	26	.333	.061	1.807	.170
Strategic vision (S)	5	23	1.322	.286	6.119	.046
Strategic 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
<i>Innovative Solutions (IA)</i>						
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
<i>Innovative and stimulating climate (S)</i>						
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≤.1, **p≤.05, ***p≤.01 (two-tailed)

Artigo 4. Innovation on the Margins of the External Evaluation of Portuguese Schools

Artigo elaborado em coautoria com José Alves e Diana Soares e submetido à revista *International Journal of Innovation and Learning*. As referências foram redigidas segundo as normas de Harvard.

Graphic Abstract



Abstract

Accountability is a tool to support school cultures focused on continuous improvement and promoting education quality. This article presents a study developed in Portugal regarding the schools' external evaluation operated between 2018 and 2021. The study, supported by a documentary analysis of 60 external evaluation reports, combines qualitative and quantitative methods to understand whether there is an effect between the strengths and improvement areas and the evaluation assigned by the Inspectorate. The results suggest that a robust strategic vision and mobilising leadership are transversal predictors of all the schools' evaluation domains. Other predictors are academic outcomes, teaching and learning-focused self-assessment, deepening self-assessment practices, active teaching and learning methodologies, and commitment to inclusion. Some correlations presented problematic levels of consistency. No relationships were found between school evaluation and the factors regarding innovation. Thus, innovation appears as a marginal dimension of the school's reality with no relevant impact on the external review.

Keywords: External evaluation; innovation; school improvement; accountability; leadership; school autonomy; school self-evaluation; trust evaluation; mobilising middle leadership; school vision

1. Introduction

All over Europe, changes in educational systems regarding decentralisation emerged twenty years ago to deliver autonomy to schools. This transnational policy convergence advised greater autonomy for the schools and performance-based accountability systems to provide control through goal setting, evaluation, and steering (OECD, 2020a). Autonomy appeared as a solution to improve the school's responsiveness to society and produce more inclusive educational systems. Likewise, strengthened accountability is assumed to enhance education quality and promote school development (Donaldson, 2013; OECD, 2015). Even though the reinforcement in administrative decentralisation and schools' autonomy, the association between bottom-up initiatives and schools' performativity and quality is not impressive (Hargreaves and Ainscow, 2015; Barroso, 2018). Additionally, Verger (2019) enumerated a broad range of problems regarding the educational systems, including the lack of transparency in public administration, its low overall performance, equity issues, learning gaps, and the lack of teachers' engagement.

Neoliberalism ideologies and globalisation influence educational systems and demand for schools as organic systems able to create and recreate systemic transformation strategies and responsiveness to social change. School cultures focused on accountability, and innovation became tools for continuous improvement. Moreover, the leadership's tutelage is crucial in disrupting and providing alternatives regarding systemic priorities due to teaching and learning (Keddie 2015) and school responsiveness. The school transformation depends on leadership to promote innovative ideas and good practices (Sotiriou *et al.*, 2016), a climate supportive of teachers' professional learning (Walder, 2017; Nóvoa, 2019; Xiong, 2021), work motivation

(Hargreaves, 2019; Fuad, Musa and Hashim, 2022), intrinsic collaboration (Shirley, Hargreaves and Washington-Wangia, 2020), wish for experimentation and comprehensive communication to ensure sharing, diffusion, and engagement (Kaewsaeng-on *et al.*, 2022).

This article presents empirical research concerning the Portuguese school inspective action developed between 2018 and 2021. In this period, an educational reform was introduced in Portugal, and autonomy, curricular flexibility, and innovation forged new forms of school organisation and management. Through the eyes of the inspection activity, this research intends to describe these new modes of organisation of Portuguese schools. It looks for comprehending associations between the school's external evaluation substance and the school's practices. The article is oriented by the following research questions: *What are the schools' organisational, pedagogical, and cultural attributes that determined external evaluation (Inspectorate's perception of the schools' quality)? Which indicators - aspects of the school organisation and practices - emerge as predictors of each domain evaluated by the Inspectorate? What is the importance given to innovation in the schools' external evaluation?*

2. Theoretical frameworks

2.1. Autonomy hand in hand with accountability

Transnational ideologies urge governments to invest in balanced processes of decentralisation/re-regulation and autonomy/accountability. "PISA results suggest that, when autonomy and accountability are intelligently combined, they tend to be associated with better student performance" (OECD, 2011, p.1). Hence, educational policies and national reforms normalised the *modus operandi* of *autonomy hand in hand with accountability*. In practice, the "governments (in their role as principals) are expected to give more autonomy to schools (the agents) in organisational, budgetary, or curricular terms," and the schools (the teachers) become accountable "via external assessments and accountability measures" (Verger *et al.*, 2019, p.220). Barroso (2018), regarding the 'new public managerialism' and neo-liberalistic regulation, refers to four levels of educational systems regulation: transnational, allocated to the international programs of students' assessment and processes of control results-focused; national, responsible for the procedures control; municipal, labouring the administrative and financial autonomy; schools, assembled by the curricular and pedagogical autonomy.

The centralisation and the tendency to follow bureaucratic rules limit the capacity of schools to address their immediate goals and changes (Kılıçoğlu and Kılıçoğlu, 2021). Thus, despite the growing ideology of autonomy for education, "deregulation emphasising increased local autonomy seems to accommodate mechanisms which, paradoxically, tend to increase central control," and "schools and professionals are becoming more accountable for providing education and achieving results" (Helgøy, Homme and Gewirtz, 2007). Accountability policies generate mechanisms of institutional re-regulation after decentralisation and deregulation. A post-

bureaucratic state reassumes control through digital platforms and devices aiming for uniformity, standardization, objectivity, measurement, and surveillance, resulting in hyper-rationalization (Lima, 2021).

Principals' autonomy in Portugal is limited and one of the lowest in the (OECD, 2018). Portuguese schools operate in collegial bodies and are ruled by a "type of leadership still excessively focused on bureaucratic aspects, and equivalent - and scarce -, levels of autonomy" (Tintore et al., 2022, p.14). In 2018, the education competencies transference to the municipalities began, and reform to concede curricular flexibility and autonomy for the schools occurred. This autonomy is limited once the state exercises control of the leading national curriculum through 'essential learnings' and a national student profile. Re-regulation is also exercised through national tests and schools' rankings, mechanisms of digital control, and external evaluations. Like in Europe, where the bureaucratic, professional model has developed into hybrid schemes (Maroy, 2009; Bellei and Munoz, 2021), re-regulation assumed both aspects of Portugal's quasi-market and evaluative state model.

The accountability of the school principals, limited schools' and teachers' autonomy, and hierarchical and bureaucratic education system can be precursory of organisational hypocrisy (Kılıçoğlu and Kılıçoğlu, 2021). Hence, internal accountability should precede external accountability if lasting improvement in student achievement is the goal (Hargreaves and Fullan, 2012; Fullan, Rincón-Gallardo and Hargreaves, 2015). Harvesting the schools' success requires building a collaborative culture that combines individual responsibility, collective expectations, and corrective actions highlighted by internal accountability. Schools' self-evaluation can act as the plumb line of the system that seeks a balance between accountability and autonomy within the teaching and learning process and school responsiveness to educational challenges. Self-evaluation allows either an increased level of freedom for teachers and schools to implement their development or an increased level of responsibility for their judgments on the quality of teaching and learning (Brady, 2019). Self-evaluation is a social force for promoting collective responsibility. Accountability must emphasise building more inclusive, equitable, and good-quality education systems and practices instead of blaming individuals (UNESCO, 2017). Schools should be encouraged to self-evaluate to complement the external evaluation and develop targeted school improvement plans (Brown et al., 2018; Simeonova et al., 2020).

2.2. Innovation hand in hand with teachers and school leaders

The worldwide need for a more responsive school to societal changes demands schools as places where everyone should be considered a learner and where interactive, mutually supportive relationships help learners progress. The collective quest for sustainable and inclusive human and social development justifies the growing call for inclusive and accountable educational policies (Walters and Watters, 2017). Ensuring inclusive, equitable, good-quality education is a collective enterprise in which all actors make a concerted effort to meet responsibilities (UNESCO,

2017, p.6-7). Successful schools will be places where people want to work, realise good ideas, and collaborate to spur innovation and sustain the drive to innovate (Schleicher, 2018).

Mincu (2022) defends that any cultural change imposed from above or abroad may fail if the centralised system and school actors are not allowed to engage in a cultural exercise of adaptation adequately supported. The same author adds that, without leadership, individual teachers may act as a loosely connected group without the vision and motivation to produce change. A new component of the professional identity emphasises the perception of teachers' role as pedagogical innovators, that is, the need for skills and competencies to manage innovations and change processes (Avidov-Ungar and Forkosh-Baruch, 2018). Teachers must be challenged to face technological innovations and new media, promote classroom-based research to help them personalise learning experiences, and deal with increasing diversity (Schleicher, 2018) to support a more inclusive and democratic school.

The work of the principal is far too overwhelming in the face of the demands required to cultivate a school willing to adjust to prepare students for their futures (O'Shea, 2021). Leadership appears as the ability to mobilise and inspire purposeful and interdependent action within the school through a shared vision. Aligned school visions empower the whole organisation and assure its responsiveness and continuous adaptation. The literature vastly documents the connection between empowering leadership and innovative behaviour due to the effects on teacher psychological empowerment (Zhu et al., 2019).

Innovation is crucial for school transformation and, according to Fuad et al. (2022), is the support given to teachers from the government, the community, peers, and leaders that allows innovation. The same authors defend that school innovation-oriented cultures depend on individual personality, interaction, collaboration and teamwork, support, and teacher leadership. Distributed leadership is crucial for school transformation because it impacts organisational commitment (Devos, Tuytens and Hulpia, 2014); teachers' efficacy due to job satisfaction and a trust culture (Atik and Celik, 2020); collective and collaborative processes of knowledge sharing (Fuad, Musa and Hashim, 2022), decision making, and the trial and refinement of practices (Brown et al., 2020). Chen et al. (2016) and Bak et al. (2022) found associations between transformational leadership and organisational innovation or innovative work behaviour. Innovation-oriented organisations depend on increasing intellectual capital through leadership strategy (Sujudi, Komariah and Indonesia, 2020). Additionally, innovative behaviour and inquiry habits of mind depend on the quality of relationships between the school leaders and teachers (Vermeulen, Kreijns and Evers, 2020) and the school climates (Wang, 2019). Teachers' professional practices may be improved by encouraging teacher leadership and collaboration (Pan and Chen, 2021) because knowledge exchange enables collective creativity for innovative impulses (Müller, 2021). Therefore, leadership is crucial for inducing and diffusing innovation within an organisation and, according to Mincu (2022), is the starting point for the school's transformation.

3. Methodology

This study followed a multi-stage methodology in which preliminary qualitative research supported the quantitative approach (Edwards, 2010). The documental *corpus* under analysis included 60 Portuguese school clusters' external evaluation reports produced by the Inspectorate services. These reports were elaborated between 2018 and 2021 according to a framework developed for the third cycle of external evaluation that includes four domains: school' self-evaluation, leadership and management, providing educative service, and results. The Portuguese Ministerial Platform of Basic and Secondary Education Statistics made the data available. The sample assumed a saturated sampling procedure, considering all the external evaluation activity provided in the referenced period. It included every public school's cluster or not grouped schools and excluded reports from the pilot phase of this new cycle of external evaluation and professional, artistic, and private schools. The study considers the following hypotheses regarding the Inspectorate intervention:

Hypothesis 1: There are causal relations between the strengths identified and each external evaluation domain.

Hypothesis 2: There are causal relations between the improvement areas identified and each external evaluation domain.

Hypothesis 3: Innovation is crucial in the schools' external evaluation process.

3.1. Data collection

The cross-sectional study has underlain an *ex post facto* plan and a descriptive and causal-comparative method. We intend to describe the improvement areas and strengths observed by the Inspectorate that report Portuguese schools' action and performance. Then, these data were mobilised to a causal-comparative analysis to understand causal-effect associations between the improvement areas or strengths observed and the evaluation provided by the Inspectorate.

The data obtained restrictedly arise from the executive summary of the reports concerning improvement areas and strengths observed by the Inspectorate. The content analysis used an open and flexible referential for data reduction purposes with four theme blocks: self-evaluation, leadership and management, providing educative service, and results. The categories concerning each theme block were not predefined. They emerged from the systematic content analysis and regarded the criteria of mutual exclusion, homogeneity, exhaustivity, pertinency, objectivity, and fidelity (Bardin, 2009). The exploratory process of data enumeration considered (i) the presence or absence of the references, (ii) direction, considered favourable when referring to strength and unfavourable when representing an improvement area. Each category identified was considered a construct and was converted to a qualitative dichotomic variable used in the quantitative study of the hypotheses.

3.2. Measurements and Data Analysis

Firstly, data from the external evaluation reports regarding the global qualitative appreciation made by the Inspectorate were statistically described through frequency, median and interquartile range.

Secondly, the Wilcoxon Mann-Whitney U test for two unrelated samples was applied to understand if there is a statistically significant effect of the observation of a construct - a strength or an improvement area - on the qualitative appreciation of the domain provided by the Inspectorate. The null hypothesis tested was H_0 : the two populations (schools with observed / non-observed construct) do not differ on the qualitative appreciation made by the Inspectorate. This analysis considered constructs tabulated in the external evaluation reports with minimal frequencies of 10%. This analysis was complemented with a correlational study. The rank biserial correlation provided correlation values between the dichotomous and ordinal variables, statistically significant according to the Mann-Whitney U test, to realise the strength of the association and its direction.

4. Results

4.1. Schools' organisation and practices

Table 1 describes the sample regarding schools' external evaluation provided by the Portuguese Inspectorate. Among the 60 schools and school clusters studied leadership and management was the most favourable external evaluation domain, with 31 appreciations of very good and 25 of good (N=60; Med=4). Conversely, the self-evaluation domain evidenced the lowest appreciation, with 32 good schools followed by 16 sufficient schools (N=60; Med=3). Most schools exhibit good evaluations regarding the educative service provided and school results domains, respectively, 43 (N=60, Med=3) and 46 (N=60, Med=3).

The schools' external evaluation reports analysis concerning strengths and improvement areas are presented in Figures 1 and 2. Regarding the strengths' self-evaluation domain, consistency is the most valuable parameter, with a frequency of 51. Conversely, the improvement areas with higher scores of frequencies were deepening self-evaluation practices (34 references) and centrality to the teaching and learning practices (29 references). Reflection practices (around 20%) and a school community participated process (25%) appear with approximate prevalence regarding strengths and improvement areas. A dichotomisation of the Portuguese schools seems to exist regarding their position concerning reflection and participation in self-evaluation. According to the Inspectorate, school self-evaluation must be improved and tuned to provide higher support in decision-making and foster quality. A greater emphasis is being placed on the self-evaluation process's role in providing quality education, which appears as an intrinsic part of a school's development plan (Brown et al., 2018; Fullan et al., 2015).

Table 1.*External evaluation of schools by domain (N=60)*

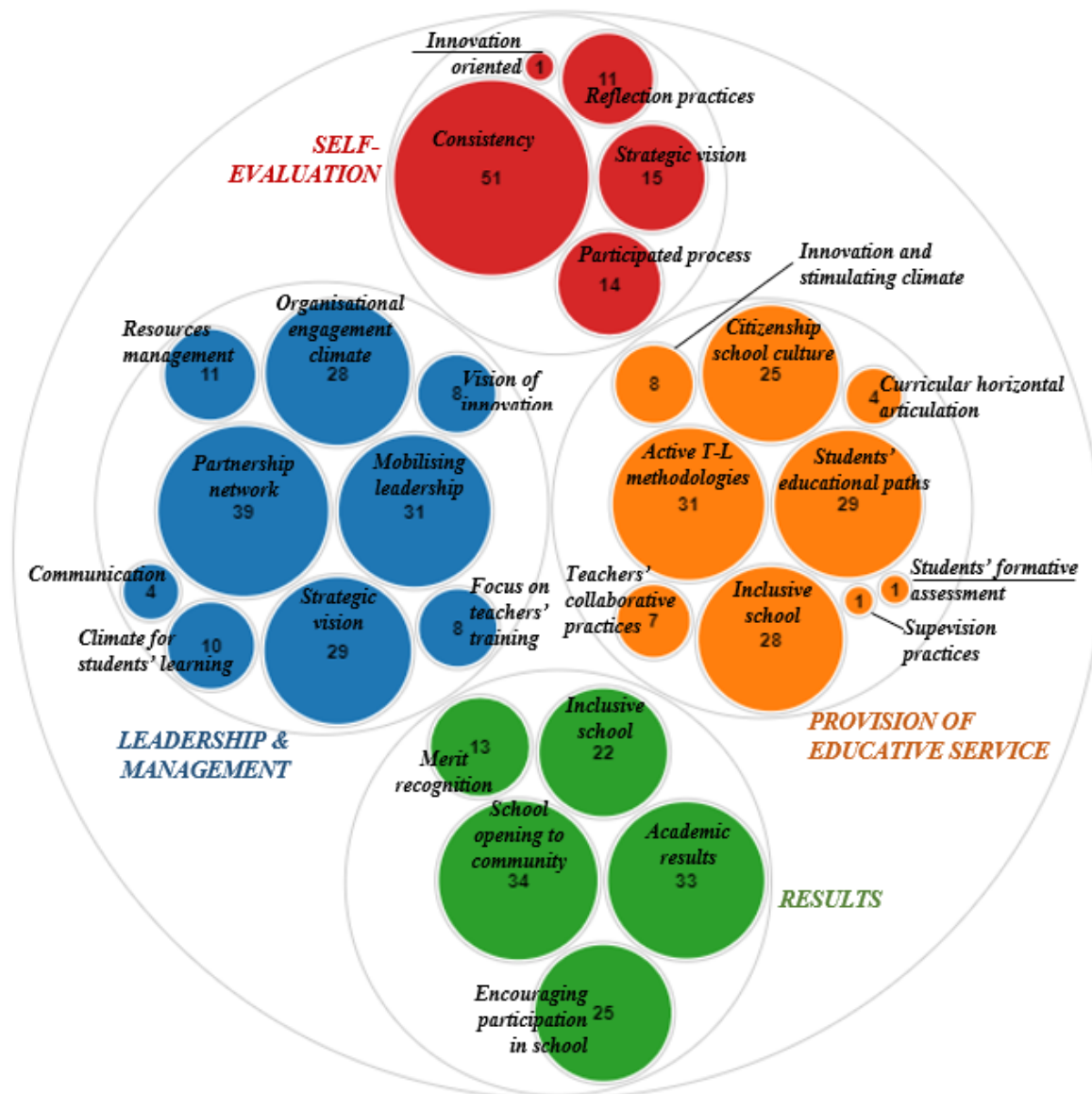
External Evaluation Domains	Appreciation	Frequency	Median	IQQ
Self-evaluation	Insufficient	2 (3.3%)	3	1
	Sufficient	16 (26.7%)		
	Good	32 (53.3%)		
	Very Good	10 (16.7%)		
Leadership and Management	Insufficient	1 (1.6%)	4	1
	Sufficient	3 (5.0%)		
	Good	25 (41.7%)		
	Very Good	31 (51.7%)		
Providing Educational Service	Insufficient	---	3	0
	Sufficient	4 (6.6%)		
	Good	43 (71.7%)		
	Very Good	13 (21.7%)		
Results	Insufficient	---	3	0
	Sufficient	5 (8.3%)		
	Good	46 (76.7%)		
	Very Good	9 (15.0%)		

IQQ – Interquartile range

Regarding the leadership and management domain, the prevailing strengths observed in schools were partnership networks with institutions from the community (39 references), shared and mobilising leadership (31 references), strategic vision (29 references), and organisational involvement climate (28 references). Focus on the teachers' training and communication within the school are punctually considered strengths and cited as needing improvement in 15 and 10 schools, respectively. Still, concerning improvement areas, the strategic vision (31 references) is considered critical in more than half of the schools. However, supervision and intervision practices and improving teachers, students, and parents' participation in the school are hardly referred to. In the eyes of the Inspectorate, a school culture (7 references) or a school vision (3 references) are not critical in most Portuguese schools. The Inspectorate findings align with seven key elements that promote students' academic achievement in the literature: (i) distributed leadership (Leithwood *et al.*, 2004; Hargreaves, 2007; Khalifa, Gooden and Davis, 2016); (ii) strategic vision (Morrison, 2005; Ho and Lee, 2016); (iii) organisational involvement climate (Day, 2017; Yuan, Nguyen and Vu, 2018); (iv) communication (Juwono and Harly, 2017); (v) focus teachers' capacity building and school capacity (De Matthews, 2015; Park and Ham, 2016; Yakavets, Frost and Khoroshash, 2017; Bellibaş, Gümüş and Kılınç, 2020); (vi) community connections (Portz, 2021); (vii) common school culture and school vision (Khalifa, Gooden and Davis, 2016; Day, 2017; Gil, Rodrigo-Moya and Morcillo-Bellido, 2018; Yuan, Nguyen and Vu, 2018; Bellibaş, Gümüş and Kılınç, 2020; Sujudi, Komariah and Indonesia, 2020). In Portuguese schools, the main problematic key factors are strategic vision and mobilising middle leadership.

Figure 1.

Distribution and frequency of schools' strengths by evaluation domain (N=60)

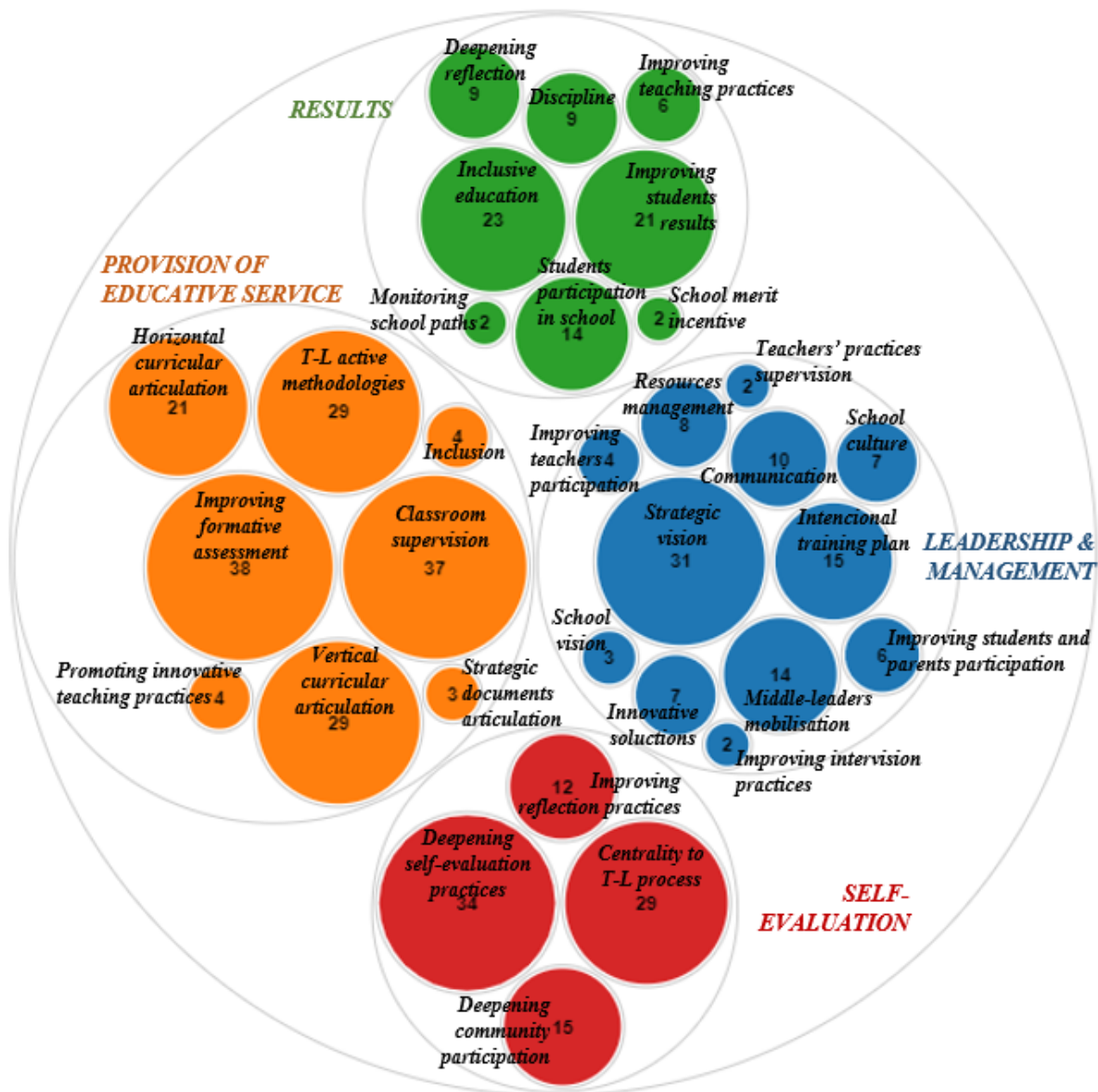


Regarding the domain of providing educative service, the most observed strengths in schools were active teaching and learning methodologies (31 references), monitoring of students' educational paths (29 references), commitment to an inclusive school (28 references), and a citizenship school culture (25 references). In contrast, students' formative assessment, teachers' supervision practices, horizontal curricular articulation, and teachers' collaboration practices, only pointily, are considered as a school's strength. Concerning improvement areas, the most observed schools' practices were investing in students' formative assessment (38 references), the need for classroom supervision practices (37 references), the need for active approaches to the teaching and learning process (29 references), and the need for vertical (29 references) and horizontal (21 references) curricular articulation. On the other hand, the articulation between schools' strategic documents and care for inclusive environments are practices restricted to a small number of schools. The external evaluation orientations in at least half of the schools

demand interventions regarding integrative approaches involving organisational, pedagogical, and cultural aspects. The schools' organisational changes should be oriented by a "well-established and articulated institutional mission" (Augustine-Shaw et al., 2017, p.26). The changes require strong school leaders to articulate a more cohesive vision that supports developing and sustaining culturally responsive teaching (Khalifa, Gooden and Davis, 2016).

Figure 2.

Distribution and frequency of improvement areas by external evaluation domain (N=60)



Finally, concerning the results' domain, the school opening to the community (34 references), academic results (33 references), encouraging school participation (25 references), and fostering an inclusive school (22 references) represent the overall strengths profile of the Portuguese schools. The improvement areas with higher frequencies were providing an inclusive education (23 references) and improving students' results (21 references). Problems regarding monitoring

students' school paths, merit incentives, and improving teaching practices are scarce. These findings show that schools are moving at different velocities to face contextual problems regarding students' performance and inclusive education.

Regarding innovation, the schools' indicators provided by external evaluation represent only 3.0% of total observations, 3.3% (17 references) correspond to strengths, and 2.5% (11 references) are improvement areas. The strengths identified correspond to the existence of innovation-oriented self-evaluation (1 reference), leadership vision of innovation (8 references), and innovative and stimulating climate (8 references). The minor orientations for schools' change action refer to innovative solutions (7 references) and promoting innovative practices (4 references). Hence, the Portuguese Inspectorate appears as an agent that operates at the conformity level of action, relegating innovation to a secondary role. In this alignment, Madeira and Duarte (2018) reinforce the need for an inspection oriented to innovation and change that assumes a transparent, dialogic, flexible, and adaptive feature and focuses on the teacher role, the guarantor of innovation. Donaldson (2013) argues that "inspection can be seen as an inhibitor of innovation, giving approval to what it values and taking responsibility away from the school" (p.5).

4.2. Predictors of Schools' External Evaluation

Table 2 presents the results of the Mann-Whitney U test applied to examine hypotheses 1 to 3 that a causal relationship exists between the reported strengths and improvement areas and the appreciation provided to each domain of schools' evaluation by the Inspectorate. This analysis compared schools with the tabulated items or variables (fig. 2 and 3) with the ones for which the Inspectorate did not report it. Of 72 tests performed, only 16 became statistically significant (table 2). Additionally, none of the 12 analyses referring to the effect of innovation on schools' external evaluation was statistically significant (table 3). The short observations of the Inspectorate and the lack of influence on the appreciation of schools point to a faded potential for influence schools concerning innovation. Hence, hypothesis 3 is not supported by data. An essential role of an external review is the renewal of the school's action. The educational culture requires high quality, continuous improvement, and innovation (Donaldson, 2013). It is crucial to catalyse teachers' aptitude for innovation related to innovative activity in reflective-evaluative terms (Tyunnikov, 2017). The innovative process should address systemic approaches to change in teachers' practice (Avidov-Ungar and Forkosh-Baruch, 2018). Thus, quality needs to be construed as responsibility (Mufic, 2022) and demands information and outcomes to support leaders' skilful and reliable work in constructive leadership (Zamir, 2019).

Table 2.

Results of the Mann-Whitney U test for causal relationships between the research variables and the Inspectorate evaluation

	External Evaluation Domains							
	Self-evaluation		Leadership and Management		Providing Educative Service		Results	
	U	p	U	p	U	p	U	p
• Self-evaluation consistency (S)	172.500	.194	227.000	.954	209.500	.599	216.000	.705
• Teaching and learning-centredness self-evaluation (IA)	403.500	.454	392.000	.339	847.000	.482	779.500*	.035
• Deepening practices of self-evaluation (IA)	419.000	.705	413.000	.626	385.500	.285	341.000*	.041
• Shared and mobilising leadership (S)	403.500	.454	421.000	.635	440.000	.859	448.500	.984
• Organisational involvement climate (S)	342.000	.084	336.000	.062	345.000	.054	390.000	.245
• Strategic Vision (S)	306.000*	.025	229.000***	<.001	287.000**	.003	288.000**	.002
• Mobilisation of middle leaders (IA)	188.000**	.003	134.000***	<.001	186.000***	<.001	243.500*	.014
• Strategic Vision (IA)	405.000	.464	365.000	.157	412.500	.482	372.500	.121
• Inclusive school (S)	383.000	.289	308.000*	.020	363.500	.112	425.500	.652
• Teaching and learning active methodologies (S)	407.000	.504	436.000	.841	415.000	.535	445.000	.952
• Teaching and learning active methodologies (IA)	429.000	.757	350.000	.102	294.000**	.004	339.000*	.029
• Curricular vertical articulation (IA)	403.500	.454	392.000	.339	384.000	.219	423.000	.596
• Curricular horizontal articulation (IA)	400.500	.878	362.000	.407	319.500	.077	344.000	.169
• Classroom supervision (IA)	414.500	.854	339.000	.139	387.000	.458	414.500	.821
• Student formative assessment practices (IA)	340.500	.239	301.000	.058	336.000	.149	367.000	.373
• Academic results improvement (S)	397.500	.432	373.000	.225	309.500**	.010	317.000**	.010
• Academic results improvement (IA)	391.500	.759	404.000	.924	352.000	.258	293.000*	.015
• Classroom practices improvement (IA)	141.000	.569	159.000	.934	133.000	.365	144.500	.559

*p<.05; **p<.01; ***p<.001

S – strength; IA – improvement area

Concerning self-evaluation, only two variables significantly influence external evaluation appreciation: strategic vision ($U=306.000$, $p=.025$) and mobilising middle leadership ($U=306.000$, $p=.025$). Once both constructs were addressed in the leadership and management domain, they represent indirect effects. The rank-biserial correlation identified a significant relationship between both variables (table 4). The correlation concerning strategic vision, a strength, is positive but weak, $r_{rb}(60)=.305$, $p=.018$ (Bartz, 1999). The correlation regarding the mobilisation of middle leadership, an improvement area, is negative, as expected, and weak, $r_{rb}(60)=-.377$, $p=.003$.

None of the constructs identified by the Inspectorate regarding the domain of self-evaluation evidence a significant direct effect on the domains' global appreciation. This lack of influence may produce diminished meaningfulness of feedback and may decrease receptiveness to the "formative feedback that schools need to improve their practices" (OECD, 2020, p.4). For school evaluation to be practical, schools must adopt a responsible agency and support action on their judgments about quality (McNamara & O'Hara, 2008). Confusing, false, or unreliable evaluations can produce non-credibility and generate a pointless evaluation (Zamir, 2019).

Table 3.

Results of the Mann-Whitney test for causal relationships between the variables related to innovation and the Inspectorate evaluation

	External Evaluation Domains							
	Self-evaluation		Leadership and Management		Providing Educative Service		Results	
	<i>U</i>	<i>p</i>	<i>U</i>	<i>p</i>	<i>U</i>	<i>p</i>	<i>U</i>	<i>p</i>
• <i>Vision of innovation (S)</i>	192.000	.702	184.000	.557	200.000	.825	196.500	.735
• <i>Innovative solutions (IA)</i>	177.500	.839	173.000	.746	135.000	.140	148.500	.242
• <i>Innovative and stimulating climate (S)</i>	204.000	.924	148.000	.142	200.000	.825	169.000	.251

S – strength; IA – improvement area

Table 4.

Results of the Rank-biserial correlation for the model research variables

	Self-evaluation		Leadership and management		Providing Educative Service		Results	
	<i>r_{rb}</i>	<i>p</i>	<i>r_{rb}</i>	<i>P</i>	<i>r_{rb}</i>	<i>p</i>	<i>r_{rb}</i>	<i>p</i>
<i>Teaching-learning centredness self-evaluation (IA)</i>							-.274*	.034
<i>Deepening practices of self-evaluation (IA)</i>							.266*	.040
<i>Strategic vision (S)</i>	.305*	.018	.467**	<.001	.389**	.002	.403**	.001
<i>Mobilising Middle leadership (IA)</i>	-.377**	.003	-.569**	<.001	-.472**	<.001	-.320*	.013
<i>Inclusive school (S)</i>			-.257*	.048				
<i>Teaching-learning active methodologies (IA)</i>					-.379**	.003	-.285*	.027
<i>Students' academic results (S)</i>					.331**	.010	.336**	.009
<i>Students' academic results (IA)</i>							-.321*	.012

*p<.05; **p<.01; ***p<.001

S – strength; IA – improvement area

The leadership and management domain registered three statistically significant associations regarding an effect on external evaluation schools' appreciation, namely: (i) strategic leadership vision, a strength that represents a direct, positive, and moderate effect (U=229.000, p<.001;

$r_{rb}=.467$, $p<.001$); (ii) mobilising middle leaders, an improvement area, which evidence a direct, negative, and moderate effect ($U=134.000$, $p<.001$; $r_{rb}=-.569$, $p<.001$); (iii) compromise with building an inclusive school, a strength, which expressed an indirect, negative, and weak effect ($U=308.000$, $p<.020$; $r_{rb}=-.257$, $p=.048$). This last construct represents a controversial correlation, considering it is a strength and the direction obtained. However, the controversy is attenuated once the construct of inclusive school corresponds to an item belonging to a different domain (providing educative service). Still, it concerns a dimension crucial for promoting a more democratic and responsive school, a premise highlighted by the educational Portuguese political orientation. The former constructs, strategic vision and mobilising leadership are determinants of school effectiveness and improvement (Pina, Cabral and Alves, 2015; Chen *et al.*, 2016; Hitt and Tucker, 2016; Sujudi, Komariah and Indonesia, 2020; Anselmus Dami *et al.*, 2022; Rechsteiner *et al.*, 2022; Villamor *et al.*, 2022). This influence on the school quality justifies the moderate relationship of the constructs with the Inspectorate appreciation.

Four significant correlations were identified regarding the domain of providing educative service. The construct teaching and learning active methodologies evidence a direct and weak influence on the Inspectorate evaluation ($U=294.000$, $p=.004$), but negative because it is an improvement area ($r_{rb}=-.379$, $p=.003$). Indirect, positive, and weak effects were established, involving the strategic leadership vision ($U=287.000$, $p=.003$; $r_{rb}=.389$, $p=.002$) and students' academic results ($U=309.500$, $p=.010$; $r_{rb}=.331$, $p=.010$), both tabulated in external evaluation reports as strengths. Additionally, an indirect, negative, and moderate effect on Inspectorate appreciation was registered regarding the improvement area, mobilising middle leaders ($U=186.000$, $p<.001$; $r_{rb}=-.472$, $p<.001$). Therefore, the domain providing educative service appears marked by a triangle of interdomain cross-correlations involving teaching practices related to active methodologies, leaders' strategic vision and mobilisation, and students' academic results. This articulated perspective of an agentic organisation is aligned with Hanberger *et al.* (2016) viewpoint, who state that "school development conceived as improved teaching and school culture [on par with leadership] appears as a more valid representation of school development" (p.362). This representation can be used as mainstream feedback scrambling to be projected into the everyday lives of schools.

The external evaluation of the schools' results domain evidences a causal association with seven constructs. Students' academic results aligned with national standards, either observed as a strength and as an improvement area, represent direct and weak effects, respectively, with a positive ($U=317.000$, $p=.010$; $r_{rb}=.336$, $p=.009$) and negative ($U=293.000$, $p=.015$; $r_{rb}=-.321$, $p=.012$) direction. The strength strategic vision registered an indirect, positive, and moderate association with the appreciation conceded to the results' domain by the Inspectorate ($U=288.000$, $p=.002$; $r_{rb}=.403$, $p=.001$). Finally, representing indirect and weak effects regarding improvement areas, we signal the constructs: teaching and learning-centredness school self-evaluation ($U=779.500$, $p=.035$; $r_{rb}=-.274$, $p=.034$); deepening self-evaluation practices ($U=341.000$, $p=.041$; $r_{rb}=.226$, $p=.040$); mobilising middle leaders ($U=243.500$, $p=.014$; $r_{rb}=-.320$, $p=.013$); teaching and learning active methodologies ($U=339.000$; $p=.029$; $r_{rb}=-.285$, $p=.027$).

Theoretically, the direction of the construct deepening self-evaluation practices represents an inconsistent correlation with the Inspectorate appreciation once it is positive and still an area of improvement.

Hence, mobilising leadership, school vision, and teaching and learning active methodologies appear as constructs that can predict external evaluations regarding providing educative services and school results domains. It addresses two logics of action. The former regards school organisation and leadership practices which, when they assume a transformational orientation, are learning-oriented and distributed evidence potential to impact the school performance (Chen *et al.*, 2016; Yuan, Nguyen and Vu, 2018; Zheng, Yin and Liu, 2019; Pan and Chen, 2021). The other transfers the onus of the student's success and the school performance to the teacher, corresponding to a growing realisation that the teacher is the key innovation gatekeeper, demanding inspectorates to adopt approaches that will relate more directly to the classroom (Donaldson, 2013).

5. Discussion

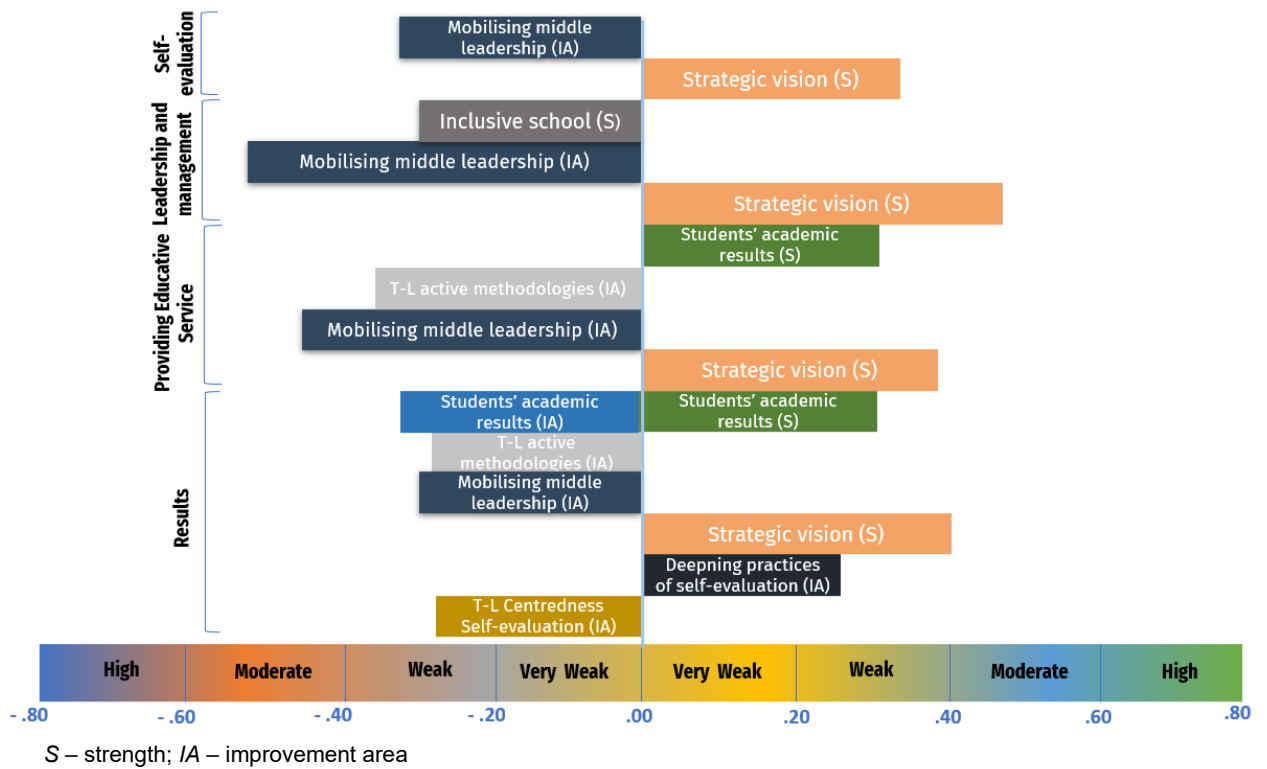
The ultimate intended function of evaluation is to support the school's development (Hanberger *et al.*, 2016), and an "evaluative culture in an organisation is an unconditional requirement for quality assurance in education" (Zamir, 2019, p. 409). Accountability policies should support "school leaders in their daily decisions to initiate and manage school improvement by making sense of policies related to curriculum and pedagogy, data monitoring, resource allocation, and performance management" (Constantinides, 2022, p.176). According to assumptions of the 'polymeric model' of school evaluation introduced by Zamir (2019), "the credible and non-credible evaluator's continuum sets up opposite poles of desirable to undesirable functioning" within the schools. Therefore, coherence, reliable, and trustful external evaluations are prerequisites. This study shed some light on the consistency and reliability of the schools' external evaluation apparatus regarding the strengths and improvement areas and then identified the related predictors.

Figure 3 summarises the global' portrait' of Portuguese schools, which were the object of the external evaluation during the third cycle of the schools' evaluation, perceived by the Inspectorate. Then, the validity of hypotheses 1 and 2 is restricted to ten constructs, representing direct and indirect effects and two controversial correlations. The findings indicate that a solid strategic vision and a weak mobilisation of middle leaders are predictors in evaluating all four domains defined for the schools' evaluation: school self-evaluation, leadership and management, providing educative service, and results. These results align with those obtained by Espuny *et al.* (2020) regarding the Portuguese educational system, resembling the principal's problems in finding influential middle leaders. The findings suggest that principals should invest in defining a compelling vision for the school and harvesting a shared, distributive, and mobilising middle leadership that may catalyse the school's strategic project. Transformational leadership describes

the vision and mission and conveys how to achieve these goals through consistent symbolic actions and words that conform with the vision (Yuan et al., 2018). Distributed leadership and a compelling vision that produces teachers’ engagement are conducive to a more positive school environment that supports equity and inclusion (De Matthews, 2015), justifying the transversal impact in the four domains of external evaluation. Thus, solid, vision-focused leadership provides motivation and orientation to meet organisational goals. School principals should try to prosecute articulating a vision, fostering the acceptance of the group goals, and creating high-performance expectations (Leithwood *et al.*, 2004) to take action to enhance the students’ and the schools’ performance, which also fosters a performance-oriented school culture (Hanberger *et al.*, 2016).

Figure 3.

Global portrait of Portuguese schools’ evaluation predictors (p<.05)



Results and providing educative service are external evaluation domains that directly express education quality, which has been drifting from focusing mainly on results to a whole school system evaluation. Several predictors were identified regarding the domain of the result: teaching-learning centredness self-evaluation, deepening self-evaluation practices, teaching and learning active methodologies, all improvement areas, and academic results, either a strength or an improvement area. All these predictors directly reflect the classroom and the teaching and learning process. These findings suggest that a strategy for developing social capital must be sustained in “building individual and collective efficacy and creating links of lateral accountability that push and pull team members to get better at their practice” (Fullan et al., 2015, p.8). Two

predictors identified in our study support this perspective: teaching and learning active methodologies and academic results. Concerning the external evaluation domain of leadership and management, the variable compromise with building an inclusive school is the only predictor identified. The domain school self-evaluation could not be related to any explicatory variable. Variables related to the innovation also could not be related to the evaluations provided by the Inspectorate. Hence, in Portugal, the function of inspections identified at the Starter Paper on Inspection and Innovation produced in the Bratislava meeting, 'preserver/creator of the space for innovation' (Donaldson, 2013), appears erased.

The credible evaluations also provide an opportunity to offer feedback to improve the schools' performance (Zamir, 2019) and orientation for regulation and building improvement plans. The diminished considerations regarding innovation cannot fulfil the regulation purposes: to foster innovative environments associated with more frequent teacher collaboration and exchange (Blömeke *et al.*, 2021), interaction and involvement (Nemeržitski *et al.*, 2013), and the generation of learning environments (Gil, Rodrigo-Moya and Morcillo-Bellido, 2018); to highlight the pivotal role of principal empowering leadership in fostering teacher innovative behaviour (Gkorezis, 2016). Portugal's educational policies subscribe to transnational narratives on innovation, and the Portuguese Inspectorate, since 2018, has been using a framework with four descriptors concerning innovation. Two causes can be advocated: difficulties in identifying it and reuniting evidence on schools' innovation. Just like in other educational systems, in Portugal, the focus seems to be on uniformity and standardisation (and ultimately, leading to compliance) rather than fostering innovation and giving attention to local contexts based on the assumed agency of teachers and school partners (Cochran-Smith, 2021).

Regarding self-evaluation, the absence of predictors that can explain external evaluation direction, even though the small dispersion of indicators observed between schools – five strengths and four improvement areas – can generate incomprehension among the school community. False, confusing, and unreliable evaluations are three-flawed frames that can lead to misevaluation and mistrust in the system (Zamir, 2019). The importance of external evaluation in producing a constructive impact on schools' action reorientation, especially in self-evaluation, the mechanism of internal and continuous regulation, can become confused. Schools' internal evaluation has been identified in the literature as an endeavour for schools' quality and improvement (Albuquerque *et al.*, 2020; Brown *et al.*, 2018; Cochran-Smith, 2021; Fullan *et al.*, 2015; OECD, 2020b; Zamir, 2019).

5.1. Limitations and future research

This study reflects the perception of the Inspectorate, which was not crossed with the schools' self-evaluation alignment, a crucial dimension of schools' evaluation. Additionally, the study is restricted to the inspectorate executive summary. Future research should go deeper and include the perspective of school self-evaluation and the perceptions of the school staff towards the

feedback provided by the Inspectorate. This interconnected approach might enrich the research about the Portuguese schools' effective regulation processes and the innovation rule in school transformation.

This research detected predictive effects of constructs regarding strength and improvement areas. Still, it lacks an analysis of the combined impact of these constructs in the evaluation provided by the Inspectorate. Hence, this study appears as a starting point for deeper approaches in line or widening the scope of it.

6. Conclusions

School regulatory processes concerning external evaluation and self-evaluation can bear an evaluative culture that may support schools' higher responsiveness to societal challenges, improve students learning, promote inclusion, foster high performance, and assure continuous improvement. An evaluative culture that results in effective and impactful evaluation will flourish if it is trustful and bumps with constructive leadership and organisational and regulatory mechanisms (Zamir, 2019). This study can provide general assumptions regarding the contribution of external evaluation to the Portuguese educational system regulation. Four key elements characterise the organisations concerning the school practices perceived by the Inspectorate.

First, several key elements may be associated with each domain to characterise the organisations concerning the school practices. Regarding self-evaluation, Portuguese schools exhibit consistent practices but need to develop a strategic vision, deepen evaluation practices, and give the teaching and learning process centrality. Leadership and management is the most robust domain, being characterised by three key elements: shared and mobilising leadership, organisational engagement climate, and partnership networks. The strategic vision is a strength in some schools but problematic in others. The mobilisation of middle leaders arises as a feature that must be improved. Concerning providing educative service domain: citizenship is a strength; nurturing an inclusive school and teaching and learning active methodologies denounces ambivalence; students' formative assessment, curricular horizontal and vertical articulation, and classroom supervision prevail as improvement areas. Concerning the domain of the results, schools' opening to the community is often a strength. Still, academic results and promoting an inclusive school are ambivalent features of the schools. Paradoxical features demarcate the Inspectorate's discourse. Despite leadership being a strength, the middle leadership evidence weaknesses. Regardless of the leadership merit, it does not positively impact the completeness of the school's self-evaluation process and, in half of the cases, the teachers' practices and the student's academic results. These controversial aspects of the external evaluation call into question the added value of the leadership or its focus and the very role of the external evaluation. Inspectorate control may be assuming a legitimising purpose in the Portuguese educational system in a process stated by Barroso (2022) as a needed fiction.

Second, innovation appears as a marginal dimension of the school's reality without impacting its evaluation. In Portugal, the external evaluation focuses on uniformity, standardisation, and compliance rather than nurturing innovation as a tool for schools' contextual problem resolution and fostering teachers' curricular agency.

Third, concerning the school's external evaluation, we have identified eight main predictors of its global appreciation, even though other subsidiary constructs may contribute when considering each specific school context individually. The findings suggest that strategic vision and a fragile shared and mobilising leadership are predictors of all four domains – self-evaluation, leadership and management, providing educative service, and results. Students' academic results and the need for a teaching and learning-centredness self-evaluation, deepening practices of self-evaluation, and teaching and learning active methodologies are predictors of results. The need to improve teaching and learning active methodologies and academic results predict external evaluation grades concerning the providing educative service domain. At last, commitment to building an inclusive school influences leadership and management Inspectorate appreciation. No predictors for features regarding self-evaluation and innovation were observed. In the eyes of the Inspectorate, Portuguese schools value inclusion and citizenship approaches to respond to students' diversity, even though schools must deepen teaching and learning active methodologies and reconfigure the middle leadership. To support the school transformation, middle leadership needs to evolve and become more structured, active, constructive, reflexive, creative, and empowering, provide for capacity building and embrace innovation.

The evidence gathered in this study is aligned with Helgoy (2007), who stated that the authorities' lack of effort in building schools' capacity and interest in using local freedom suggests the reform may be essentially symbolic and may also explain why some schools avoided implementing the experiment. This study enriches the literature regarding the difficulties of the Inspectorate in regulating schools' innovation. It provides an orientation to policymakers, inspectors, and schools regarding the problem of building more impactful accountability, a social force for sustained improvement.

References

- Albuquerque, P. D., Ferreira, A. G. and Barreira, C. M. F. (2020) 'Interdependência entre domínios na avaliação externa para a melhoria dos "resultados" em duas organizações escolares', *Revista Brasileira de Educação*, 25, pp. 1–24. doi: 10.1590/s1413-24782020250022.
- Anselmus Dami, Z. et al. (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). doi: 10.1080/2331186X.2022.2064407.

- Atik, S. and 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), pp. 177–193. doi: 10.15345/iojes.2020.03.014.
- Augustine-Shaw, D., Hachiya, R. F. and Miller, T. N. (2017) *Leadership for change, Quandaries of School Leadership: Voices from Principals in the Field*. doi: 10.1007/978-3-319-59120-9_12.
- Avidov-Ungar, O. and Forkosh-Baruch, A. (2018) 'Professional identity of teacher educators in the digital era in light of demands of pedagogical innovation', *Teaching and Teacher Education*, 73, pp. 183–191. doi: 10.1016/j.tate.2018.03.017.
- Bak, H. U., Jin, M. H. and McDonald, B. D. (2022) 'Unpacking the Transformational Leadership-Innovative Work Behavior Relationship: The Mediating Role of Psychological Capital', *Public Performance and Management Review*, 45(1), pp. 80–105. doi: 10.1080/15309576.2021.1939737.
- Bardin, L. (2009) *Análise de conteúdo*. 4a. Lisboa: 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), pp. 1075–1097. doi: 10.1590/es0101-73302018214219.
- Barroso, J. (2022) *Administração e política educacional. um percurso de investigação*. Lisboa: Instituto de Educação da Universidade de Lisboa.
- Bartz, A. E. (1999) *Basic Statistical Concepts*. Upper Saddle River, NJ: Prentice-Hall.
- Bellei, C. and 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*, (0123456789). doi: 10.1007/s10833-021-09435-1.
- Bellibaş, M. Ş., Gümüş, S. and Kılınç, A. Ç. (2020) 'Principals supporting teacher leadership: The effects of learning-centred leadership on teacher leadership practices with the mediating role of teacher agency', *European Journal of Education*, 55(2), pp. 200–216. doi: 10.1111/ejed.12387.
- Blömeke, S. et al. (2021) 'Supplemental Material for School Innovativeness Is Associated With Enhanced Teacher Collaboration, Innovative Classroom Practices, and Job Satisfaction', *Journal of Educational Psychology*. doi: 10.1037/edu0000668.supp.
- Brady, A. M. (2019) 'Anxiety of performativity and anxiety of performance: self-evaluation as bad faith', *Oxford Review of Education*, 45(5), pp. 605–618. doi: 10.1080/03054985.2018.1556626.
- Brown, C., MacGregor, S. and 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, p. 103101. doi: 10.1016/j.tate.2020.103101.
- Brown, M. et al. (2018) 'Integrated co-professional evaluation? Converging approaches to school evaluation across frontiers', *Australian Journal of Teacher Education*, 43(12), pp. 76–90. doi: 10.14221/ajte.2018v43n12.6.
- Chen, L. et al. (2016) 'Transformational leadership, social capital and organisational innovation', *Leadership and Organization Development Journal*, 37(7), pp. 843–859. doi: 10.1108/LODJ-07-2015-0157.
- Cochran-Smith, M. (2021) 'Rethinking teacher education: The trouble with accountability', *Oxford Review of Education*, 47(1), pp. 8–24. doi: 10.1080/03054985.2020.1842181.
- Constantinides, M. (2022) 'High-stakes accountability policies and local adaptation: exploring how school principals respond to multiple policy demands', *School Leadership and Management*, 42(2), pp. 170–187. doi: 10.1080/13632434.2021.2016687.
- Day, C. (2017) 'Leadership as a Way', *Profesorado*, 21(2), pp. 21–26. doi: 10.1007/978-981-10-3549-4_7.
- Devos, G., Tuytens, M. and Hulpia, H. (2014) 'Teachers' organisational commitment: Examining the mediating effects of distributed leadership', *American Journal of Education*, 120(2), pp. 205–231. doi: 10.1086/674370.
- Donaldson, G. (2013) 'Starter Paper on Inspection and Innovation', in *Starter Paper on Inspection*

- and Innovation. Bratislava, SICI Workshop, pp. 1–8. Available at: <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. 015. Available at: <http://eprints.ncrm.ac.uk/842/>.
- Fuad, D. R. S. M., Musa, K. and Hashim, Z. (2022) 'Innovation culture in education: A systematic review of the literature', *Management in Education*, 36(3), pp. 135–149. doi: 10.1177/0892020620959760.
- Fullan, M., Rincón-Gallardo, S. and Hargreaves, A. (2015) 'Professional capital as accountability', *Educational Policy Analysis Archives*, 23(15), pp. 1–18. Available at: <http://dx.doi.org/10.14507/epaa.v23.1998>.
- Gil, A. J., Rodrigo-Moya, B. and Morcillo-Bellido, J. (2018) 'The effect of leadership in the development of innovation capacity: A learning organisation perspective', *Leadership and Organization Development Journal*, 39(6), pp. 694–711. doi: 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), pp. 1030–1044. doi: 10.1108/IJEM-08-2015-0113.
- Hanberger, A. et al. (2016) 'School evaluation in Sweden in a local perspective: A synthesis', *Education Inquiry*, 7(3). doi: 10.3402/edui.v7.30115.
- Hargreaves, A. (2007) 'EBSCOhost: Sustainable Leadership and Development in Education: creating the future, c...', 42(2). Available at: <http://web.ebscohost.com.ezproxy.apollolibrary.com/ehost/detail?vid=5&hid=123&sid=5ff4bd16-e7cd-4f4f-b069-b5fba0c63d99@sessionmgr110&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ==#db=a9h&AN=25149963>.
- Hargreaves, A. (2019) 'Teacher collaboration: 30 years of research on its nature, forms, limitations and effects', *Teachers and Teaching: Theory and Practice*, 25(5), pp. 603–621. doi: 10.1080/13540602.2019.1639499.
- Hargreaves, A. and Ainscow, M. (2015) 'The top and bottom of leadership and change', *Phi Delta Kappan*, 97(3), pp. 42–48. doi: 10.1177/0031721715614828.
- Hargreaves, A. and Fullan, M. (2012) *Professional Capital: Transforming Teaching in Every School*. New York: NY: Teachers College Press.
- Helgøy, I., Homme, A. and Gewirtz, S. (2007) 'Local autonomy or state control? Exploring the effects of new forms of regulation in education', *European Educational Research Journal*, 6(3), pp. 198–202. doi: 10.2304/eej.2007.6.3.198.
- Hitt, D. H. and Tucker, P. D. (2016) 'Systematic Review of Key Leader Practices Found to Influence Student Achievement: A Unified Framework', *Review of Educational Research*, 86(2), pp. 531–569. doi: 10.3102/0034654315614911.
- Ho, D. and Lee, M. (2016) 'Capacity building for school development: current problems and future challenges', *School Leadership and Management*, 36(5), pp. 493–507. doi: 10.1080/13632434.2016.1247040.
- Juwono, I. D. and Harly, T. H. (2017) 'Leadership Succession Impact on School Culture: A Case Study at a Faith Based Secondary School in Indonesia', *International Journal of Information and Education Technology*, 7(3), pp. 184–189. doi: 10.18178/ijiet.2017.7.3.863.
- Kaewsang-on, R. et al. (2022) 'A three wave longitudinal study of school innovation climate and entrepreneurship teachers' acceptance to technology: Moderating role of knowledge sharing and knowledge hiding', *Frontiers in Psychology*, 13(October), pp. 1–15. doi: 10.3389/fpsyg.2022.1028219.
- Khalifa, M. A., Gooden, M. A. and Davis, J. E. (2016) 'Culturally Responsive School Leadership: A Synthesis of the Literature', *Review of Educational Research*, 86(4), pp. 1272–1311. doi: 10.3102/0034654316630383.
- Kılıçoğlu, G. and Kılıçoğlu, D. Y. (2021) 'Understanding organisational hypocrisy in schools: the relationships between organisational legitimacy, ethical leadership, organisational hypocrisy and work-related outcomes', *International Journal of Leadership in Education*, 24(1), pp. 24–

56. doi: 10.1080/13603124.2019.1623924.
- Leithwood, K. et al. (2004) 'How leadership influences student learning. Review of research', The Wallace Foundation. doi: <https://hdl.handle.net/11299/2035>.
- Lima, L. C. (2021) 'Education management machines: Digital domination and augmented bureaucracy', *Educacao e Sociedade*, 42, pp. 1–16. doi: 10.1590/ES.249276.
- Madeira, J. and Duarte, J. (2018) 'Inspection and innovation: A new relationship with schools?', *Revista Lusofona de Educacao*, 42(42), pp. 45–58. doi: 10.24140/issn.1645-7250.rle42.03.
- Maroy, C. (2009) 'Convergences and hybridisation of educational policies around "post-bureaucratic" models of regulation', *Compare*, 39(1), pp. 71–84. doi: 10.1080/03057920801903472.
- De Matthews, D. (2015) 'Clearing a Path for Inclusion Distributing Leadership in a High Performing Elementary School', *Journal of School Leadership*, 25(November 2015), pp. 1000–1039.
- McNamara, G. and 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), pp. 173–179. doi: 10.1016/j.stueduc.2008.08.001.
- Mincu, M. (2022) 'Why is school leadership key to transforming education? Structural and cultural assumptions for quality education in diverse contexts', *Prospects*, 52(3–4), pp. 231–242. doi: 10.1007/s11125-022-09625-6.
- Morrison, K. (2005) 'Structuration theory, habitus and complexity theory: Elective affinities or old wine in new bottles?', *British Journal of Sociology of Education*, 26(3), pp. 311–326. doi: 10.1080/01425690500128809.
- Mufic, J. (2022) 'Discursive Effects of "Quality" Talk During a Quality Audit in Swedish Municipal Adult Education', *Scandinavian Journal of Educational Research*. doi: 10.1080/00313831.2022.2042844.
- Müller, J. W. (2021) 'Education and inspirational intuition - Drivers of innovation', *Heliyon*, 7(9), p. e07923. doi: 10.1016/j.heliyon.2021.e07923.
- Nemeržitski, S. et al. (2013) 'Constructing model of teachers innovative behaviour in school environment', *Teachers and Teaching: Theory and Practice*, 19(4), pp. 398–418. doi: 10.1080/13540602.2013.770230.
- Nóvoa, A. (2019) 'Teachers and their education at a time of school metamorphosis', *Educacao and Realidade*, 44(3), pp. 1–15. doi: 10.1590/2175-623684910.
- O'Shea, C. (2021) 'Distributed leadership and innovative teaching practices', *International Journal of Educational Research Open*, 2(November), p. 100088. doi: 10.1016/j.ijedro.2021.100088.
- OECD (2011) *In Focus, PISA in focus*, no. 9. School autonomy and accountability: Are they related to student performance? Paris. doi: <https://doi.org/10.1787/5k9h362kcx9w-en>.
- OECD (2015) *The Innovation Imperative Contributing to Productivity, Growth and Well-Being*. Paris. doi: <https://doi.org/10.1787/9789264239814-en>.
- OECD (2018) *Education at a glance 2018: OECD indicators*. doi: <https://doi.org/10.1787/eag-2018-en>.
- OECD (2020a) *Back to the Future of Education - Four OECD Scenarios for Schooling*, Pmla. Paris: OECD Publishing. doi: <https://doi.org/10.1787/178ef527-en>.
- OECD (2020b) 'Developing a school evaluation framework to drive school improvement', *OECD Education Policy Perspectives*, No.26(26).
- Pan, H. L. W. and Chen, W. Y. (2021) 'How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path', *Educational Management Administration and Leadership*, 49(3), pp. 454–470. doi: 10.1177/1741143220913553.
- Park, J. H. and 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), pp. 450–469. doi: 10.1080/02188791.2014.961895.
- Pina, R., Cabral, I. and Alves, J. M. (2015) 'Principal's Leadership on Students' outcomes', *Procedia - Social and Behavioral Sciences*, 197(February), pp. 949–954. doi: 10.1016/j.sbspro.2015.07.279.

- Portz, J. (2021) “Next-Generation” Accountability? Evidence From Three School Districts’, *Urban Education*, 56(8), pp. 1297–1327. doi: 10.1177/0042085917741727.
- Rechsteiner, B. et al. (2022) ‘Teachers involved in school improvement: Analysing mediating mechanisms of teachers’ boundary-crossing activities between leadership perception and teacher involvement’, *Teaching and Teacher Education*, 116, p. 103774. doi: 10.1016/j.tate.2022.103774.
- Shirley, D., Hargreaves, A. and Washington-Wangia, S. (2020) ‘The sustainability and unsustainability of teachers’ and leaders’ well-being’, *Teaching and Teacher Education*, 92. doi: 10.1016/j.tate.2019.102987.
- Simeonova, R. et al. (2020) ‘A Continuum of Approaches to School Inspections: Cases from Europe’, *Pedagogy*, 92(4), pp. 487–507. Available at: <https://www.ceeol.com/search/article-detail?id=857814>.
- Sotiriou, S. et al. (2016) ‘Introducing Large-Scale Innovation in Schools’, *Journal of Science Education and Technology*, 25(4), pp. 541–549. doi: 10.1007/s10956-016-9611-y.
- Sujudi, N., Komariah, A. and Indonesia, U. P. (2020) ‘Leadership Characteristics Era Disruption’, *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), pp. 276–279. Available at: <https://www.atlantispress.com/article/125933799.pdf>.
- Tintoré, M. et al. (2022) ‘Management model, leadership and autonomy in Portuguese and Spanish public schools: A comparative analysis’, *Cogent Education*, 9(1). doi: 10.1080/2331186X.2022.2105553.
- Tyunnikov, Y. S. (2017) ‘Classification of innovation objectives set for continuing professional teacher development’, *European Journal of Contemporary Education*, 6(1), pp. 167–181. doi: 10.13187/ejced.2017.1.167.
- UNESCO (2017) *Accountability in Education, meeting our commitment. Global Education Monitoring Report*, UNESCO. Paris.
- Verger, A., Fontdevila, C. and Parcerisa, L. (2019) ‘Constructing School Autonomy with Accountability as a Global Policy Model: A Focus on OECD’s Governance Mechanisms’, *Global Histories of Education*, pp. 219–243. doi: 10.1007/978-3-030-33799-5_11.
- Vermeulen, M., Kreijns, K. and Evers, A. T. (2020) ‘Transformational leadership, leader–member exchange and school learning climate: Impact on teachers’ innovative behaviour in the Netherlands’, *Educational Management Administration and Leadership*, 48(5), pp. 1–20. doi: 10.1177/1741143220932582.
- Villamor, M. R. et al. (2022) ‘A Meta-Synthesis on School Leadership Succession : Groundwork For Effective Transition’, 8(5), pp. 61–72. doi: 10.5281/zenodo.6544657.
- Walder, A. M. (2017) ‘Pedagogical Innovation in Canadian higher education: Professors’ perspectives on its effects on teaching and learning’, *Studies in Educational Evaluation*, 54, pp. 71–82. doi: 10.1016/j.stueduc.2016.11.001.
- Walters, S. and Watters, K. (2017) *Towards a global common good ?*, *Adult Education Quarterly*. Available at: <http://www.unesco.org/fileadmin/MULTIMEDIA/FIELD/Cairo/images/RethinkingEducation.pdf>.
- Wang, S. (2019) ‘School heads’ transformational leadership and students’ modernity: the multiple mediating effects of school climates’, *Asia Pacific Education Review*, 20(3), pp. 329–341. doi: 10.1007/s12564-019-09575-3.
- Xiong, W. (2021) ‘Identities and education: comparative perspectives in times of crisis’, *Educational Review*. doi: 10.1080/00131911.2021.1957252.
- Yakovets, N., Frost, D. and Khoroshash, A. (2017) ‘School leadership and capacity building in Kazakhstan’, *International Journal of Leadership in Education*, 20(3), pp. 345–370. doi: 10.1080/13603124.2015.1066869.
- Yuan, L., Nguyen, T. T. N. and Vu, M. C. (2018) ‘Transformational leadership and its impact on performance: The role of psychological capital and collectivism’, *ACM International Conference Proceeding Series*, pp. 18–27. doi: 10.1145/3180374.3181325.
- Zamir, S. (2019) ‘The polymeric model of school evaluation in the era of accountability’, *Quality*

- Assurance in Education, 27(4), pp. 401–411. doi: 10.1108/QAE-06-2018-0070.
- Zheng, X., Yin, H. and 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), pp. 509–518. doi: 10.1007/s40299-019-00451-7.
- Zhu, J., Yao, J. and Zhang, L. (2019) 'Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety', *Asia Pacific Education Review*, 20(4), pp. 657–671. doi: 10.1007/s12564-019-09584-2.

Artigo 5. Pseudomorphosis of Schools' Systems and the Fiction of its Regulatory Processes: a Study of Educational Narratives

Artigo elaborado em coautoria com José Alves e Diana Soares e submetido à revista *Journal of Pedagogical Research*. As referências foram redigidas segundo as normas da APA – 7.^a edição

Graphic Abstract



Abstract

The inconsistencies between agents of the educational system, where it reigns tensions and disjointed mechanisms that express failures of multidisciplinary action, make schools behave like pseudomorphic systems. This article examines interactions between autonomy and control, resorting to a qualitative study with a quantitative approach to schools' strategic documents and inspectorate reports using NVivo. It provides a multiperspective cross-analysis of school narratives regarding (i) principals' vision, (ii) school strategic orientation, and (iii) internal and external evaluation reports.

This article exposes how schools demand an organised, intentional, and planned way of using self-knowledge to enhance teaching and learning. It uncovers that innovation is an undervalued facet in the school organisation and a marginal element of the school evaluation. Additionally, it reveals system inconsistencies regarding external evaluation and school organisation. The difficulty of school change asserts that educational systems need to deepen interconnections to prevent schools from keeping a traditional functional structure masked by modern educational discourses, meaning pseudomorphic guidance.

Keywords: Accountability; innovation; decisional capital; organisational capital; transformational capital

1. Introduction

The sustainability of competitive economies challenges governments and schools to concentrate on developing competencies and lifelong learning to ensure a response to high-demanding societal problems. Creating human capital means constituting skills as a capacity to act in situations rather than stockpile knowledge (Paltrinieri, 2017). In the more successful systems, there is a greater emphasis on building the individual and especially the collective capacity of educators to increase performance, using internal and external accountability (Fullan et al., 2015). However, evidence of whether and which accountability practices affect equity and performance in academic achievement has been challenging to isolate and establish (Torres, 2021). Combining control- and improvement-oriented evaluation systems may promote school development and enhance education quality (Hanberger et al., 2016). The importance of a supportive school evaluation and innovation is highlighted by the European Inspectorate (Donaldson, 2013; Simeonova et al., 2020) and by scholars (Brown et al., 2018; Hanberger et al., 2016; Küçükbere & Balkar, 2021; Kurum & Cinkir, 2019; McNamara & O'Hara, 2008; Monarca & Fernández-González, 2016). Pursuing a culture of permanent improvement is about knowing which factors induce teachers' innovative behaviour to support the school's transformation. "Innovation is not a single act in the sense that you do it and then it is done, but instead better viewed as a process of supporting teachers' learning that needs to be monitored, analysed and revised" (Maass et al., 2019, p.304).

Considering that schools are passing through organisational adjustments, altering teachers' ways of working with each other and students, and experiencing changes in school grammar, it is crucial to understand the role of the school vision and evaluation in school improvement. This paper presents comparative empirical research concerning nine Portuguese school clusters' narratives and the Inspectorate accounts. Misaligned perceptions may produce vertical fragmentation, with a potential impact on the way the schools function. The study explores interconnections between autonomy and control, innovation, and school transformation by examining a three-dimensional analytical construct translated in the following research questions:

- The *modus faciendi* of autonomy - *How is school autonomy/agency exercised in schools?*
- The *modus faciendi* of control – *How is autonomy regulated? How do the agents of control - external evaluation and self-evaluation - exercise their agency?*
- The combined *modus faciendi* of autonomy and control for school transformation - *Is the autonomy/control exercised to induce innovation and school transformation? What are the drivers and obstacles to school innovation perceived in educational narratives?*

2. Theoretical Framework

Improving the school organisation to transform teachers' practices and promote better learning is the primary responsibility of the educational systems and the teaching profession. Neoliberalism and dynamics focus on sustainable economic growth demand for a more responsive school. Hence, comparability became a tool for political persuasion and criteria for conceiving judgment about the quality and efficacy of the schools and even educational systems in different countries (Barroso, 2018). During the last two decades, accountability has become a powerful policy tool for improving education (Cochran-Smith, 2021) in contexts of state decentralisation, managerialism, and increasing autonomy. In times of demand for a responsive school, discussing a 'new accountability' for the schools, a supportive and desirable to whole the school community accountability, and a 'new leadership' to play in such accountable systems is imperious.

2.1. A 'new' supportive and welcome accountability

Accountability is understood as responsibility (Fullan et al., 2015) and an intelligent professional mechanism (Cochran-Smith, 2021; Lillejord, 2020), respectively, because it should support students' learning and generate intelligible knowledge to improve the schools' purposes. Regulation appears as a core process for improving schools. Thus, the post-bureaucratic model established led to mechanisms of posterior control that combined transnational educational

systems evaluation, national students' assessments, inspections' action, and school self-evaluation. However, the virtue or vice of any accountability scheme, initiative, or system depends on the more comprehensive policy and political agendas it is attached to, how it is used, and the goals, values, and purposes it serves (Cochran-Smith, 2021).

Internal accountability should precede external accountability (Hargreaves & Fullan, 2012), and policymakers should prioritise creating internal accountability because it is more effective in achieving greater overall accountability (Fullan, 2015). Portz (2021) considers that educational accountability is in transition once: goals are shifting from a relatively narrow focus on academic achievement to broader conceptions of students' learning that include the attendant environment; metrics are going from standardised tests to multiple metrics that capture a more comprehensive understanding of students' learning; consequences are moving from sanctions tied to performance to include support for continuous schools' improvement. This perspective of supportive external accountability and a more robust self-evaluation are sustained by studies that enounce positive or negative impacts due to external evaluation. These controversial effects are well described in the literature, namely: promotion of practices focused on quantitative results such as teaching to the test (Dahler-larsen, 2014); teachers' anxiety due to difficulty of control pupils' results (Hutt & Lewis, 2021); frustration due to fixation on poor results and problems (Schillemans & Bovens, 2011); a culture of silence and stress that reduces the time available for reflection, and erodes creativity, and work satisfaction due to strong audit culture of evaluation (Hanberger et al., 2016); feelings of mistrust are impoverishing the teaching profession and damaging teacher motivation by questioned their professional competence and authority (Hanberger et al., 2016); little or no value in helping teachers improve their practice (Hanberger et al., 2016); eroding an authentic and organic commitment to professional responsibility (Matteucci et al., 2017); principals perceptions of the results generate performativity-focused effects that constrains and inhibits professional practice (Walker & Ko, 2011); reduce trust, inhibit discussion of difficulties, and diminish honest self-evaluation (Hopkins et al., 2016). Additionally, Ehren and Visscher (2006) report the lack of congruence between the inspectorates' goals and schools' goals, signalling several effects: (i) 'tunnel vision' due to emphasis on quantified phenomena; (ii) 'myopia' related to the pursuit of short-term targets at the expense of long-term objectives; (iii) 'measure fixation' due to emphasising measures of success rather than the underlying objectives; (iv) 'ossification' related with the rigid use of a framework for inspection.

Controversially, McCrone et al. (2009) found a positive impact on the student's performance, quantifying a statistically significant effect of ten per cent improvement one year after the inspection and significantly higher two years after. Also, Ehren and Visscher (2006) report that ten per cent of schools can change independently, but the other 90 per cent need some support or external impulse to change. Thus, "the most effective way to evaluate the teaching practice is to use a balanced approach of external inspection and internal review" (Brady, 2019, p.605). A 'multiple lens' viewpoint that includes the school's self-evaluation findings complementary to the external evaluation (Hopkins et al., 2016) conduces into a desirable balance between control and autonomy. The Association of National and Regional Inspectorates of Education in Europe, in

Bratislava Memo (Donaldson, 2013), established that the balance between school self-evaluation and external evaluation is central to triggering school improvement. Giving autonomy to the schools to evaluate their performance against standards or criteria defined by the inspectorates allows leaders and teachers to set targets for their progress (Simeonova et al., 2020). Therefore, the school transformation appears as an equation between organisational capital and decisional capital empowered by school knowledge proceeding from internal and external accountability.

2.2. A 'new' leadership to play in an accountable system

If human development is the core of schools' action, meaning teachers' responsiveness to each student's learning needs, accountability is a tool to build an inclusive school. For Lillejord (2020), accountability should be about how teachers and school administrators collaboratively analyse results with the ambition to improve their practice and students' educational outcomes. The same author adds that school leaders, administrators, and teachers need two competencies: (i) knowing how to interpret data and (ii) understanding how to integrate the system-generated information into practice. Therefore, the demand for a "new leadership" is characterised by the following components: "experts in context", "engaging in joint determination throughout the process", establishing a "culture of accountability", and becoming a "system player" (Fullan, 2020b, p.140). However, schools face conflicting demands and contradictory pressures. Brunsson (2006) states that antagonistic or ambiguous perspectives manifest as disconnections and weakly articulated systems. The school may appear as organised anarchy and as an "irrational organisation that deals with the relationship between decisions, uncertainty, and action", where "conflicting ideas and demands shall be represented" and "can be met by hypocrisy" (Brunsson, 2014, pp.142-144). Barzanó (2009), in a comparative study involving Italian, English, and Portuguese principals, signals that principals face in isolation the pressure of the contradictions and ambiguities among the political framework and assume themselves as crucial actors in the process of accountability for the school improvement.

To deal with the system disconnections and develop and sustain an organic culture, the school leaders must consider the "relevant available data an ally in the decision-making process rather than something to be feared or used to compare individuals and their achievements in critical and punitive ways" (Ezzani, 2015, p.18). Likewise, leadership goes beyond the narrow vision of the principal regarding administrative management (González-Falcón et al., 2020). The involvement of middle leaders and the community, driven shared clear vision in the school, promotion of trust within the school, inspiring teachers, and focus on teaching and learning allied to the use of information and school knowledge is conducive to effective leadership and quality of education (Andrews & Conway, 2020; Ezzani, 2015; González-Falcón et al., 2020; Rechsteiner et al., 2022; Tayag & Ayuyao, 2020; Xhomara, 2018). A new leadership arises from providing the whole community with opportunities to be more active in applying innovation and brokering strategies to build competencies for continuous improvement.

3. Methodology

This study was developed in Portugal after introducing a large-scale reform in the educational system in 2018, under the principle of granting every school curricular autonomy and flexibility. It included organised school clusters created by the Government that were evaluated in the third cycle of the schools' evaluation by the Inspectorate services. The research excluded schools from the pilot phase of the third cycle of external evaluation and professional, artistic, and private schools, focusing on the prevailing schools of Portuguese educational tissue. Hence, assuming a universe of 60 school clusters or groups (SG) from the whole country, we conducted an in-depth analysis of a *corpus* of documents from 9 groups (SG14, SG24, SG26, SG212, SG218, SG221, SG32, SG315, SG319). These schools, formally constituted clusters between 2012 and 2013, were accounted for by Inspectorate services between January and April 2020. The documental *corpus* included External Evaluation Reports (EER), Self-evaluation Schools Reports (SSR), Principal's Intervention Projects (PIP), and School Educational Projects (SEP). The last two documents were selected for the study because they established the whole school orientation. The SSRs analysed were produced one year after the inspection process to perceive the changes induced in the schools. The availability of SGs to freely make documents available for the study was a criterion for defining the sample (table 1). The school performance was established using data from 2018 and 2019: alignment of internal grades with national exams, fail and dropout rate, asymmetries between students, exam grades, and results of students with the Government social support.

Table 1.

School clusters characteristics

	SG14	SG24	SG26	SG212	SG218	SG221	SG32	SG315	SG319
N.º of Schools	19	13	7	7	18	6	7	7	4
Performance ^a	High	High	Medium	High	Low	Medium	Medium	Medium	Low
Socioeconomic Context ^a	Low	Low	Very Low	Medium	High	Medium	Medium	Medium	Very Low
Pre-inspection documents	SEP	SEP	SEP PIP	PIP	SEP	--	SEP PIP	PIP	SEP PIP
<i>External evaluation</i>									
• Self-evaluation	S	G	VG	G	G	G	G	VG	S
• Leadership & management	G	VG	VG	G	VG	VG	G	VG	VG
• Provision of educational service	G	VG	VG	VG	VG	G	G	VG	G
• Results	G	VG	G	VG	G	G	G	G	G

Note. S – Sufficient; G – Good; VG – Very Good; ^a Portuguese Ministerial Platform of Statistics of Basic and Secondary Education and External Evaluation Reports.

Table 2 presents the theoretical framework conceived to analyse the *corpus* documental. The thematical blocks of decisional, organisational, and transformational capital are justified once the three constructs comprise a myriad of factors and causal interactions that characterise the school systems. These constructs guide a computer-assisted qualitative data analysis using NVivo (version 1.6.1). Table 3 describes the methodological key stages applied in the research. During the second phase of the research process, the floating reading of two SSRs advises us that these documents were technical narratives of account provision and seemed potential and mainly analysed with the category of decisional capital. Hence, we designed a specific and subordinate analysis framework (Table 2) to comprehend the focus and the global line of action of the process of the school's self-evaluation.

Table 2.

Framework for documental analysis

Theme Block 1. School knowledge	
<ul style="list-style-type: none"> • PIP, SEP, and EER 1.1. Comprehensive self-evaluation practices 1.2. Support self-evaluation practices 1.3. Self-evaluation innovation-oriented 1.4. Culture of evaluation 1.5. Results-centred self-evaluation 	<ul style="list-style-type: none"> • SSR A. Comprehensive and supportive self-evaluation B. Self-evaluation participated process C. Self-evaluation vision and mission
Theme Block 2. Organisational Capital	Theme Block 3. Transformational Capital
<ul style="list-style-type: none"> 2.1. School vision 2.2. Definition of school strategic action <ul style="list-style-type: none"> 2.2.1. Supported by school knowledge 2.2.2. Oriented by promoting and conditioning factors 2.3. Innovation strategy <ul style="list-style-type: none"> 2.3.1. For organisational innovation 2.3.2. Culture of pedagogical innovation 2.4. School as a learning institution <ul style="list-style-type: none"> 2.4.1. Mechanisms of organisational learning 2.4.2. Teachers' sharing practices 2.4.3. Formal training 2.5. Institutional articulation <ul style="list-style-type: none"> 2.5.1. Institutional articulation practices 2.5.2. Shared management 2.5.3. Culture of Commitment 2.6. Innovation vision <ul style="list-style-type: none"> 2.6.1. Technological innovation 2.6.2. Pedagogical innovation 2.6.3. Cultural and organisational innovation 	<ul style="list-style-type: none"> 3.1. Teachers' collaborative work <ul style="list-style-type: none"> 3.1.1. Development of collective capacity 3.1.2. Promotion of teachers' agency 3.2. Classroom practices <ul style="list-style-type: none"> 3.2.1. Active methodologies and school grammar 3.2.2. Student centredness 3.3. Supervision of teachers' work 3.4. Innovation school climate 3.5. Innovative behaviour

Table 3.

Methodological key stages of the research process

Phase 1. Data Collection	Gathering a documental <i>corpus</i> from the SG fit in the sample: 9 EER; 9 PIP; 9 SEP; 9SSR.
Phase 2. Preliminary data analysis	Floating reading of documents and triangulation with theoretical background information to stabilise a framework to analyse the documental <i>corpus</i> .
Phase 3 Organising, managing, mapping, and interpreting data with NVivo	<p><i>Collections and sets</i></p> <ul style="list-style-type: none"> • Organising nine sets of documents, one per group of schools. • The NVivo project included three parent nodes: decisional, organisational, and transformational capital. <p><i>Cases</i></p> <ul style="list-style-type: none"> • Each document constituted a unit of analysis. A case node was created for each document and linked with SG's profiling information. <p><i>Classifications, attributes, and values</i></p> <ul style="list-style-type: none"> • The documents were classified by the attributes: performance (low, medium or high); socioeconomic context (very low, low, medium or high); the size of the group (large or small number of schools); external evaluation appreciation (insufficient, sufficient, good or very good). <p><i>Codes</i></p> <ul style="list-style-type: none"> • The documents were coded to capture units of meaning according to categories and subcategories of analyses. • Each reference unit was also coded according to sentiment (negative or positive). <p><i>Queries and data visualisation</i></p> <ul style="list-style-type: none"> • The following queries were conducted to comprehend data: <ul style="list-style-type: none"> - Frequency of words related to pedagogical innovation (innovation, improvement, transformation, change, culture, involvement, implication, motivation, participation, and commitment). - References frequency by code (categories and subcategories). <p><i>Maps, charts, and diagrams</i></p> <ul style="list-style-type: none"> • Data were explored through: <ul style="list-style-type: none"> - Hierarchy graphs of codes that display the number of references by code. - Cluster analysis was used as an integrative approach for comparing the similarity between documents or SGs using the Jaccard coefficient. It considered the codification and sentiments.

4. Results and Discussion

4.1. Global Analysis of Educational Narratives

The documental analysis concerning words linked to pedagogical innovation led to the results in Table 4. It illustrates globally the speech alignment of each SG with building a culture of innovation that may lead to transformation. Additionally, it allows us to perceive the importance of innovation as a tool for school improvement. The content analysis of the narratives is summarized in Figure 1 and detailed in Appendix 1. The purpose was to gather specific information to characterise the schools' orientation concerning decisional, organisational, and

transformational capital. Regarding the frequency of words and the content coded, we proceed to an integrative approach for comparing the similarity between SGs and between documents from the same SG (PIP and SEP). The Jaccard coefficient of similarity was used as a metric to analyse the consistency and coherency of the educational orientation defined in each SG (table 5).

Table 4.

Results of frequency of words in documental corpus regarding innovation

	School Cultures	Mission-oriented Attitude	Innovation	School Improvement	School Transformation	Total
SG14	--; 4; 6	14; 16; 18	2; 22; 9	19; 27; 5	1; 11; 2	36; 80; 40
SG212	--; 4; 7	8; 19; 14	--; --; --	23; 53; --	--; --; 2	31; 76; 23
SG218	2; 2; --	10; 7; 17	2; 1; 6	25; 10; 12	--; --; 2	39; 20; 37
SG221	2; 1; 26	15; 20; 36	1; 2; 2	18; 13; 38	--; 4; 1	37; 40; 103
SG24	--; 1; 10	15; 10; 15	--; --; 3	22; 3; 3	--; --; 1	37; 14; 42
SG26	--; 35; 29	7; 65; 57	--; 26; 15	21; 77; 67	--; 18; 5	28; 221; 173
SG315	1; 13; 8	16; 18; 14	3; 2; 2	19; 3; 6	--; 2; 2	39; 38; 32
SG319	1; 10; 9	7; 26; 33	1; 4; 1	18; 20; 14	--; 2; --	27; 62; 57
SG32	2; 4; 13;	11; 4; 9	--; 1; 2	21; 10; 19	2; 2; 1	36; 21; 44
Total	191	501	107	576	58	1383
(documents)	(22)	(27)	(19)	(26)	(16)	(27)

Note. The sets of three numbers refer to the frequency of words in EER, PIP and SEP.

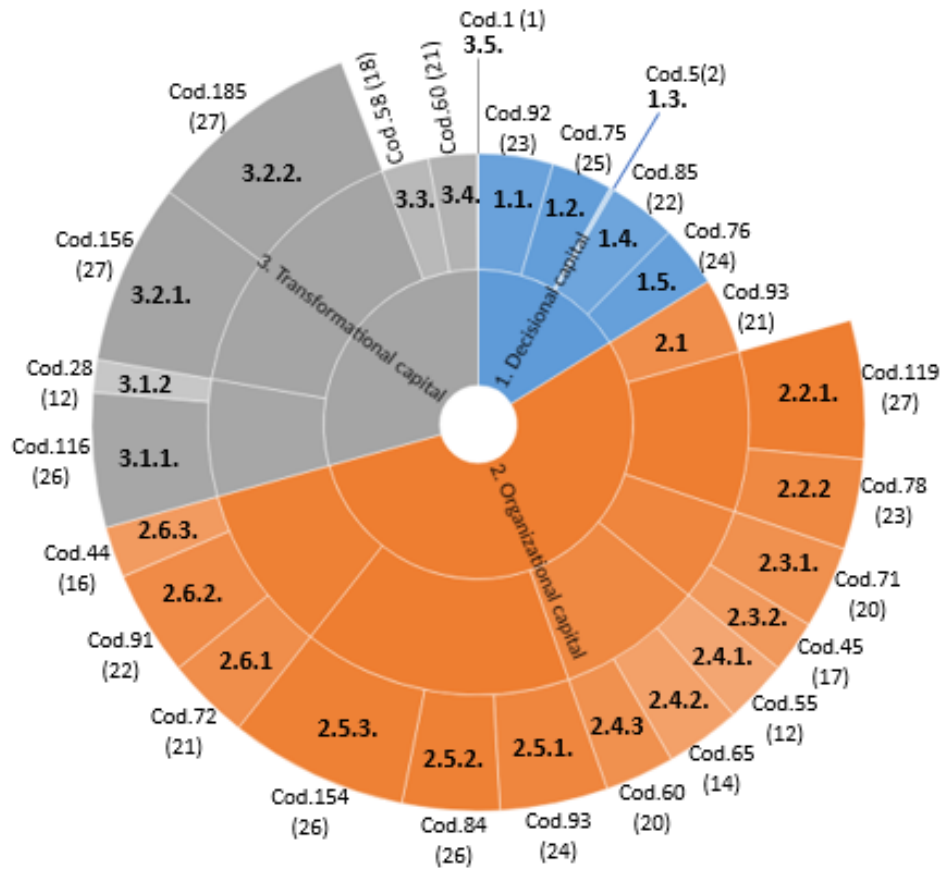
The word frequency analysis of the narratives reveals an evident concern with the school improvement and the community's sense of mission (table 4). In the opposite direction, the school transformation and innovation have the lowest level of referencing. The external evaluation framework includes four indicators related to pedagogical and curricular innovation. However, four in nine reports did not reference it, and the reports from the other five SGs are scarce in references, between one and three. Additionally, school transformation appears only in two reports (SG14 and SG32).

Similarly, due to innovation or school transformation, PIP or SEP narratives are short in references. Only two SGs have a rich and clear orientation due to innovation and school transformation. In SG26, both structural documents (PIP and SEP) were produced before the inspection process, even though they evidence richness of speech innovation-orientated. Despite the unfavourable socioeconomic context (table 1), SG26 seems to be overcome through the inspiring vision and proactive school culture, as the following extract demonstrates.

"To assure continuity and stability to innovations, they must be addressed to the entire organisation, thinking of it as the true unit of change, and not through small isolated and disconnected actions, limited to a reduced scope and 'affecting' only a part." (PIP-SG26)

Figure 1.

Hierarchic graph of codes and respective coding frequency



Note. The size of areas is proportional to the number of references identified per code, corresponding to the number that follows 'Cod.'. The codes refer to categories and subcategories of analysis numbered in Table 2. The number of documents coded in the subcategory is in parentheses.

Table 5.

Similarity, by codes and words, between the PIP and SEP

Jaccard Coefficient	SG26	SG221	SG315	SG24	SG32	SG319	SG218	SG14	SG212
Similarity of codes	.839	.800	.679	.667	.640	.594	.556	.483	.435
Similarity of words	.571	.248	.323	.194	.213	.300	.209	.292	.250

Structural documents from SG26 are the ones that exhibit the higher Jaccards' coefficient of similarity of words (.571) and even higher, considering the units of meaning (.839). These results suggest a high level of organisational articulation focused on a clear vision for the school. Additionally, the higher register of words corroborates the importance given to a "mission-oriented attitude", "school culture", and "school improvement". The PIP of SG14, produced after the Inspectorate action, also shows concern with innovation and school transformation (22 and 11

references). Conversely, the SEP built before inspection action denotes less prevalence of the words innovation and school transformation, respectively, with 9 and 2 occurrences (table 4). A less favourable external evaluation and the proposals in the report seem to lead to a rethinking process and a change in the school orientation, including a higher commitment and concern for innovation. The similarity between PIP and SEP of SG14, considering words and the coded units of meaning, is low (Jaccards' coefficient of .292 and .483, respectively – table 5). The coexistence of these disconnected visions for the school may induce incongruencies in the teachers' practices. According to Kalman et al. (2017), a positive culture is shaped where a clear vision, mission, and values greatly influence the teachers.

The similarity between words analysed in eight of the nine SGs is low, swinging between .194 and .323 of the Jaccards' coefficient (table 5). This tendency happens either the PIP and SEP conception is posterior to the inspectorate process, or one document is prior, and the other is post-inspection. This small articulation between structural SGs' documents is probably, in part, due to semantics once the Jaccards' coefficient concerning the similarity of codes is higher, varying between .435 and .839. Low similarities of units of meaning and even smaller regarding words suggest disconnections in school narratives. In these schools, it might be challenging to nurture an aligned vision. Without a shared holistic and clear vision, the school will be handled in a vacuum rather than leading the organisation in a clear, desirable direction (Mogren et al., 2019).

There is no clear pattern among the school's socioeconomic context variables or differences in performance and external evaluation that seems to explain the coding similarities between documents. However, two clusters, SG26 and SG221, exhibit a high level of similarity in coding, respectively, .800 and .839, which suggests more articulation in designing the school action. Both have medium performances and a small number of schools, but they differ in context. Conversely, the SG14 and SG212 show the smaller Jaccards' coefficient of similarity concerning meaning-coded units, inferior to .500. However, both SGs exhibit high-performance rates and very different external evaluations.

The comprehensive analysis of the 27 documents allows us to identify the general and prevailing concept of the schools' organisational and pedagogical orientation. Documents that intentionally define the educational orientation of the school and external evaluation that supports schools' activity and improvement should hold the perspective of organisational and pedagogical innovation. Most of the documents analysed do not value this perspective of innovation referred to by Tyunnikov (2017) as the practice of the innovative transformation of the pedagogical system.

The school culture is vital in how school leaders create capacity-building conditions and conduct structural changes that enable reforms and support innovations (Yakavets et al., 2017). Thus, school culture is crucial to ensure transformative social change and the reconfiguration of practices (Domanski et al., 2020). Even though the importance granted to the role of school culture for organisational learning and improvement (Baydar & Cetin, 2021; Mogren et al., 2019; Villamor et al., 2022), the construct is absent or residual in the inspection narrative. On the contrary, school culture is referred to in all school documents. It is mentioned with two

connotations, one related to professional cultures and the common one as a vision for the educational service provided by the school. The latest is expressed as a desiderate for (i) an inclusive culture; (ii) a humanistic-based culture that prepares the youngest to live in a globalised world and for lifelong learning. It appears linked to the notions of promoting a collaborative culture, a culture of school evaluation and improvement, a culture based on the mission and vision of the SEP, and a culture based on a trustful environment.

Improving a school culture of building bridges among colleagues and a culture that promotes the teachers' participation in school can make teachers gradually accept more responsibility not only for their professional development but also for the school's improvement (Rechsteiner et al., 2022). This is challenging to the whole school institution and especially to leaders who must have the sensibility and responsibility to promote a trustful environment (Vermeulen et al., 2020) and inspiring leadership that might lead to teacher innovation, teacher empowerment, and team psychological safety (Zhu et al., 2019). Teachers are crucial for educational change by actively shaping the school's mission (Rechsteiner et al., 2022). The mission-oriented attitude and school improvement are highlighted both in inspectorate and school narratives, reporting that

"Leadership is essential for the proper functioning of the SG, as it influences and guides the community towards the achievement of organisational objectives, being inseparable from the clear definition of the mission and strategic principles appropriate to the creation of a climate of cooperation that fosters the sense of belonging and commitment." (PIP-SG212)

School improvement is the term consistently with a higher frequency of references in reports produced by the Inspectorate. Hence, it strengthened the idea of the importance proposed by Constantinides (2022) of accountability as part of a system-level professional expectation, enabling a culture of continuous improvement and shared responsibility for the outcomes across schools.

4.2. In-deep Analysis of Educational Narratives

To understand the articulation amongst structural schools' documents, schools' context, and external evaluation, we focus on the specific content of the documental *corpus* (Fig. 1; Table 4; Appendix 1). Considering capital as a broad term for characterising schools' values at different system levels of the organisation, through its analysis and the idiosyncratic features of the nine SGs, we intend to understand how autonomy and control are used to induce innovation and transformation of the schools.

4.2.1. Decisional Capital

Decisional capital is the learned art of making good decisions not just about day-to-day classroom interactions but about the direction of the school, the district, and even national policy (Luger, 2011). Hence, decisional capital is about developing expertise over time (Fullan et al., 2015). Decisional capital is sustained through internal and external accountability. Still, according to Fullan (2020a), the core question is on the schools' ability to use evidence and data to undertake actions to improve learning. Most SGs evidence an incipient self-evaluation lacking scope, especially concerning the teaching-learning process and classroom practices. Simultaneously, the school narratives and practices expressed a lack of consistency, like in SG14, where external evaluation seems to have triggered the intention of changing.

"The SG understands self-evaluation as a learning process at the service of organisational development, the professional development of its employees, and the consolidation and enrichment of the educational community to improve its educational processes and results." (SEP-SG14, built before the inspectorate action)

"The SG has not currently implemented any whole self-evaluation model but had an external evaluation process in the last year. It is necessary to build a self-evaluation model adequately articulated with the external evaluation model and consider it the starting point for a continuous improvement process." (PIP-SG14, produced after the inspectorate action)

On the contrary, only one SG explicitly values a culture of evaluation as a pillar for improvement and expresses integrated global self-evaluation practices in their structural documents, as the following statement shows.

"The diagnosis has been gradually constructed and reconstructed, supported by the self-evaluation processes, that already take several years of implementation. Self-regulation practices are consolidated [and] a self-regulatory model is implemented using a team of external consultants (a critical friend) to support the self-evaluation team and audit the entire process. (...) It is vital to consolidate and evaluate the decisions and choices to achieve greater organisational efficiency." (PIP-SG26).

Despite the Portuguese legal determination to implement a school's self-evaluation process since 2002, the narratives show that it does not shape entirely shared and participated practices by the community in some schools. Generally, all SGs invest in analysing students' academic results. Still, according to inspectors, they are scarce in providing organisational interventions or improving plans with impact, monitoring classroom practices, and fostering reflections on the

outcomes.

"The information produced was disseminated through the organs and structures of pedagogical coordination, lacking wider dissemination and reflection." (EER-SG319)

"Data collection has a wide scope, but the domains and variables considered in the self-evaluation are too generic, making it difficult to collect relevant information for identifying improvement areas of the teaching and learning process." (EER-SG218)

Schools are exhibiting signals of an understanding of the completeness between internal and external evaluation and their importance in school improvement,

"A school focused on the constant search for quality has reflective thinking and pursuits for continuous improvement and quality through evaluation. (...) The combination of external evaluation with self-evaluation is a powerful instrument, generating information on the functioning and performance, and identifying the strengths and weaknesses of the trajectory followed." (PIP-SG319)

or being pressed to accept it without understanding the process or the outcomes produced by the external evaluation

"Our SG has received an external evaluation which, although not portraying, in our view, the true reality and value of the high quality and innovative practices of this SG. However, it compels us to elaborate an improvement plan." (RAA-SG14)

The self-evaluation domain exhibits the lowest appreciation undertaken by the Inspectorate. Several PIPs refer to it as a dimension that demands attention. The Inspectorate evaluated with the standard "very good" only two SGs. The first one, SG26, has adopted a self-evaluation following the Common Assessment Framework. The second, SG315 has implemented procedures systematically and continuously according to a strategy of improvement, namely: (i) the teaching and learning process constitutes the core procedure; (ii) accounting internal and external results; (iii) gave rise to an accurate knowledge of the schools' dynamics; (iv) was a shared and participated process in the community; (v) used a strategy of diffusion and reflection among school structures. However, there are inconsistencies in the external evaluation reports. The first one involves SG32 evaluated with "good", even though the EER mirror the description of SG315:

"The self-evaluation team has developed systematic and comprehensive work. The self-evaluation practices have been implemented continuously and systematically, being part of a strategy to improve the teaching and learning processes, allowing a good knowledge

of the schools' dynamics and the evolution of performance. The auscultation of the community, through satisfaction questionnaires and robust analysis of the collected data, allowed an adequate diagnosis that was the basis for defining the current educational project, adjusted to the needs of the schools. We also highlight the systemic procedures for monitoring and evaluating the activities' annual plan, the educational project, and the communication and reflection strategy. There is a clear articulation of the evaluation within the different educational structures and working groups regarding activities and projects in progress. The self-evaluation procedures have triggered responses to the weaknesses by creating a multiannual improvement plan." (EER-SG32)

Another contradiction in the Inspectorate narratives occurs between SG14 and SG212, respectively evaluated with "sufficient" and "good". However, the analysis written in the reports arouses ambivalence in the evaluation:

"In some areas, the self-evaluation process is not carried out systematically and focuses more on results than the teaching and learning process. The analysis is sustained on data collected directly from documents, and there is an inconsistent articulation with other evaluation processes. (...) The plan drawn up for 2019-2020 is more comprehensive and aims to focus on teaching and learning. The data collection process is comprehensive, integrating all dimensions of the educational project. However, it presents scope for improvement in how results are treated, analysed, and monitored. Self-evaluation practices have impacted the school's performance, significantly contributing to the definition of strategies reinforcing the students' inclusion. However, they have been conditioned by the absence of an improvement plan that supports internal decisions and sustained development." (EER-SG212)

"The self-evaluation team analyses the student's academic and social results and conceives procedures for promoting success, understanding their impact, and providing for redefinition. The SG denotes accuracy in the data analysis, including regularly monitoring student outcomes, projects, measures, and activities. Based on the external evaluation framework, the strategic self-evaluation plan focuses on the teaching and learning process, provides for reformulating and optimising practices and results, and affords reflection among the educational community. However, no regular, well-planned self-evaluation cycles provided rigorous knowledge of the impact of the measures

adopted and sustained an integral improvement strategy." (EER-SG14).

In the face of the results, most Portuguese schools studied lack autonomy and consistency concerning control and regulation. Self-evaluation is a process that needs to grow and go deeper in the whole school organisation to provide schools with more robust decisional capital. The school transformation depends on the school's self-evaluation becoming credible regarding improvement and accountability (Brown et al., 2018). Conversely, external evaluation exhibits inconsistencies and may become misunderstood by the schools, impairing its impact.

4.2.2. Organisational Capital

Organisational capital is considered leadership for capacity building for transformation (Dimmock, 2011; Yakavets et al., 2017) and the purview of leaders to devise new and more effective forms of school organisation, enabling responsiveness and change. A shared vision is a capacity to hold a common picture of the desired future (Baydar & Cetin, 2021). Building a shared and inspiring vision boosts unity and integration into educational action, pointing out a direction and motivating middle leaders, teachers, and the whole community. Principals understand that promoting a shared vision is a means to build individual and social capital. All school documents identify a vision for the school, including the teaching and learning process and citizenship education (fig.1). All SGs refers to a humanistic and inclusive vision of education committed to developing the student profile that assembles the present Portuguese educational policy. SG14, SG26, SG218, and SG221 also refer to innovation as a part of the vision subscribed for schools:

"I present a continuity project, a commitment to the consolidation of good practices, the improvement of procedures and practices, and the search for innovative solutions that respond to the demands and trends of current education policies. The schools are given new challenges which force them to seek new solutions, reinvent themselves, and be creative, [...] without forgetting that teachers will be the biggest drivers of change and the expected students' success." (PIP-SG221)

The school vision is a minor important aspect for the Inspectorate once the narratives only show three references. On the other hand, principals highlight the importance of generating a common vision. According to the school principal of SG319, *"vision is the unit on a path to achieve success in the school"* once it empowers teachers and leaders, enhances teacher professionalism, and promotes the school's capacity for change (Ho & Lee, 2016).

The category school strategic action appears in all analysed documents, and once again, those from SG26 exhibit a higher level of reference. The speech of the Inspectorate emphasises (i) the lack of centrality to the teaching and learning process, (ii) the focus of some schools mainly

on results, (iii) the nonexistence of improvement plans that boost procedures for success and sustained development, (iv) the lack of impact of school self-evaluation or regular cycles of self-evaluation, (v) the short articulation, and coherence between school structural documents, (vi) the principal leadership skills and attributes for leadership, (vii) the short of communication and information diffusion, (viii) the need for deepening reflection among teachers and organisational self-regulatory mechanisms, (ix) the need of a regular redesign of teaching practices including formative assessment, (x) the need for measurable goals for monitoring purposes.

The school narratives express the need (i) to consolidate a culture of self-evaluation, (ii) for proactive and autonomous middle leadership, (iii) to develop regular practices of analysis of school outcomes, (iv) for improvement plans, implying the middle leaders and departments, (v) for a more participated school self-evaluation, (vi) to reshape the teaching and learning process, (vii) for a culture of evaluation focus on the analysis of internal and external outcomes, (viii) to implement active methodologies of teaching that respond to the student's diversity, (ix) to change school grammar to make a more inclusive school, (x) to create tools for monitoring and evaluating management and leadership, (xi) to reflect on the strategic vision for the school.

The narratives reveal the richness of strategic proposals for improving and changing schools. Scholars defend cooperative approaches, including flexible government orientations easily implemented by the schools (Straub & Vilsmaier, 2020) once they are operationalisable in context and according to the specificities of the organisation. However, considering that the adopted innovation has been superficial and without changes in teaching practices (Pacheco, 2019, p.132), the transformation will have to come from (i) changes in school culture (Fullan, 2007), (ii) transformation of school grammar (Alves & Cabral, 2021; Fullan, 2020a; Machado, 2018), (iii) transformation of teachers' beliefs and personal missions (Goodson, 2014), (iv) making use of schools professional capital (Fullan et al., 2015), (v) transforming leadership considering its influence in school climate, teachers learning, and innovative teacher behaviour (Pan & Chen, 2021; Shirley et al., 2020; Tayag & Ayuyao, 2020).

The innovation strategy is analysed according to the practices of promoting innovative organisational solutions for the teaching and learning process and a culture of promotion, support, and diffusion of pedagogical experiences. Regarding the sustainability of the school transformation, the former is almost absent in the inspectorate speech and is punctually considered in the schools' narratives. The school documents show superficial concerns with the promotion and diffusion practices seeming more circumstantial observations and expected discursive considerations. SG26 is an exception, being aware that the failure of diffusion processes is due to organisational features. The principal identifies this problem as a "*way made of small steps that must get a corpus on the organisational reflection, starting with the looking for a direction*" and depicts the problem of the failure of innovations and the obstacles to innovation.

"Interventions must be operated by addressing the whole organisation intended as the unit of change to assure that innovations have continuity and stability. Small, isolated,

and disconnected actions should be avoided, limited to a reduced scope, and 'affecting' only a part. The failure of these innovations seems to depend mainly on organisational variables, such as planning, decision-making, conflict resolution, compliance with guidelines, commitment to the organisation, work methodology, collaboration, leadership, and participation." (PIP-SG26)

The principal of the SG221 points out several obstacles aligned with the difficulty of conducting school transformations and diffuse innovations. These weaknesses included (i) inactivity among teachers, (ii) resistance to change, (iii) little availability to share pedagogical practices, (iv) resistance to pedagogical supervision, (v) number of students per class, and (vi) overload of teachers' schedules.

School learning orientation is generally considered in Inspectorate and schools' narratives under the perspective of training plans that contribute to teachers' professional development. Promoting organisational learning through teachers' teamwork and active strategies of sharing experiences between teachers appears in EERs concerning only three and two SGs, respectively. Concerning the schools' narratives, the same constructs are considered in at least one of the structural documents of all SGs. However, the importance of teamwork and teachers' sharing practices are only consistently and deeply referenced by SG26 and SG221. Some schools identified difficulties in promoting individual and social capital, referring to the geographical dispersion of the SG, the complexity of management of teachers' schedules, teachers' resistance to changes, and superficial teamwork.

Collaborative work among teachers, work in practical learning communities, and sharing experiences are considered opportunities to build personal and interpersonal capacity that increases professional capital and improves teaching and learning (Rechsteiner et al., 2022; Yakavets et al., 2017). "Collaboration focused on the improvement of teaching and learning is one of the highest-yielding strategies to boost student, school, and system performance" (Fullan et al., 2015, p.8). Collaboration is also a determinant for improving school innovativeness (Blömeke et al., 2021; French et al., 2022; Straub & Vilsmaier, 2020) and helping teachers respond to educational change (Seabra et al., 2022). Despite teachers' collaboration being understood by principals as a critical element for generating a school culture and improving individual and social capital, they deal with difficulties in enabling it. A study by Lee et al. (2020) found direct relations between perceived principals' learning support and organisational commitment and change-oriented work behaviour. Nurturing a culture of school commitment is referred to in 26 documents representing 154 units of meaning (fig. 1). Both school and Inspectorate narratives express the importance of consolidating interventions supported by trust, proximity, and motivational processes. These attitudes are crucial for mobilising the schools' actors to fulfil educational objectives and goals. However, the consciousness and reflection processes are residual about the difficulty of achieving this desideratum. The problem is critically expressed only by two school principals:

"Consolidating a group's culture is still challenging for all its members. Despite the efforts of top and middle leaders to streamline internal communication, engage people in schools' achievements, stimulate proximity contact, and support decision-making, this is the most justified challenge to continue betting. Indeed, organisational culture and the sense of belonging are far from consolidated." (PIP-SG26)

The category of institutional articulation allows us to analyse how the schools implement and foster articulation practices, the existence of participated and shared management practices, and a school culture of commitment to institutional improvement. Generally, there is an evident concern with this theme. Institutional articulation is considered in terms of (i) curricular horizontal and vertical articulation, (ii) communication to improve dynamism and concertation among departments, (iii) planning and implementation of interdisciplinary teaching and learning activities, (iv) articulation between different schools from the group, (v) articulation between psychology, social services, therapeutics, and teachers to assure equity and adequacy of responses to learning difficulties, (vi) identifying constraints and design improvement plans in pluralistic approaches, (vii) building annual plans of activities, (viii) articulation among structural documents, (ix) planning and developing school projects. Despite several authors warning about a democratic participation erosion in Portuguese law (Lima, 2021) and school life (Neto & Cabral, 2021), the prerogative to operate those features expressed in the school narratives is participation, sharing, decentralization, and distributed leadership.

Schools' vision of innovation is a category created to comprehend how innovation is integrated into the transformational processes at three levels. The first one is technological innovation, a first-order obstacle that conditioned pedagogical innovation and all systemic approaches thought and planned at the organisational level. The references to technological innovation in EERs are brief, reporting only to three SGs. Conversely, it is a theme more consensual in schools' documents, and the narratives drift from satisfactory to lack of (i) digital resources, including classroom labs, (ii) access to digital resources by all students, (iii) teachers' digital literacy or digital empowerment for technological transformation, (iv) communication for information diffusion and teamwork, and (v) operationalisation of digital platforms to support teachers' teamwork and the interaction with students. The speech is about the capacity-building of teachers, meaning developing individual, social, leadership, and organisational capital. The subject of pedagogical innovation is cited in EER as needing schools' attention or generalisation and rarely as a synergic interaction between pedagogical innovation and organisational orientation towards innovation:

"Dynamic leaders develop and encourage strategies to promote challenging learning environments. The teachers evidence an action strongly oriented to overcome students' difficulties and to create dynamic classroom environments favourable to learning." (EER-SG26).

A vision of innovation as a systemic process that is thought and planned at the organisational level appears short-range and shallow. However, in pursuing a culture of innovation, schools' narratives refer to (i) collaborative work, (ii) the deepening of supervision practices, (iii) the mobilisation of middle leadership, (iv) the deepening of reflection on classroom practices, curriculum development, and the school organisation, (v) the need for classroom changes and teaching methods' innovation, (vi) the need for teachers' training, and (vii) the importance of the investigation, experimentation, and questioning.

4.2.3. Transformational Capital

Transformational capital is a systemic, sustainable, and driven mission process that happens in schools, leading to its transformation. It is how professional capital and organisational capital are used to transform the teaching and learning process. School transformational capital is shaped by a collaborative work culture that sustains individual and social capital development. The documental analysis of the teachers' collaborative work category reveals that teachers' isolation practices or superficial collaboration are a reality.

"There are no structured and formal mechanisms of collaborative work among teachers or self-regulation of school practice, but a departmental initiative promoting pedagogical supervision is planned." (EER-SG14)

"Despite the collaborative work among teachers, it still focuses on long-term planning and constructing materials and evaluation instruments. Hence, it is not effective regarding the sequentiality of learning and interdisciplinary learning." (EER-SG221)

Even when collaborative work exists in schools, it mainly shapes teachers' sharing of pedagogical materials. Conceiving pedagogical materials and implementing classroom activities together are scarce. Autonomy and curricular flexibility is an organisational solution legislated by the Portuguese Government for promoting curricular articulation. Hence, it is generally emphasised in the narratives of all SGs and by the Inspectorate. Additionally, the school narratives evidence that the principals are struggling to improve cultures of collaboration and with the resolution of organisational solutions that may act as drivers for teamwork among teachers:

"The geographical dispersion of the SG hinders the coordination of activities and collaborative work among teachers." (PIP-SG26)

"The common work time defined in the weekly schedules of teachers and middle leaders did not produce the expected results." (PIP-SG32)

Furthermore, SEP, which aims to define the school orientation, merely institutes or validates superficial teamwork or solutions for increment collaborative work. When put into practice, this may arise into imposed collegiality even though the existence of one-off attempts to change school grammar and induce collaborative work. The problem of systematicity, generalisation, and sustainability of collaborative teachers' practices is documented:

"Collaborative work among teachers, without defined schedules, assumes relevance in planning activities, elaborating evaluation instruments and pedagogical materials, and defining strategies to promote school success. However, these practices lack systematicity among teaching groups." (EER-SG212).

Classroom practices reveal a rich speech concerning pedagogical action focused on active methodologies, curricular articulation practices, changes in school grammar, and student-centredness. All 27 documents refer to it, representing the category with a higher frequency of references (fig. 1). The school narratives express the intention of changing from a paradigm centred exclusively on knowledge to another that values the development of competencies. They also align with a more inclusive school and value creativity, criticism, communication skills, collaboration, citizenship, diversification of teaching practices, and digitalisation.

The category supervision of teachers' practices focuses on regulatory mechanisms of teachers' work by middle leaders and colleagues. This construct is absent in the principals' narratives from SG212, SG24, SG315, and SG319. It is also nonexistent in the SG14, SG212, SG218, SG221, and SG32 educational projects. The remaining documents point out (i) to regulation dynamised by middle leaders through the fulfilment of teaching and learning plans, reflection on students' assessments and, more rarely, on classroom practices, (ii) to the absence or insipient mechanism of collaborative observation of classes between teachers. The principal from SG221 refers to the resistance of teachers to supervision processes. An exception to this portrait is the SG26, where a supervision process emerged as a consolidation area identified in the SEP, recognised by the Inspectorate as a good practice.

Finally, innovative behaviour is not a construct valued in the narratives analysed, existing a single reference to it in a context that also considers school climate.

"If the teacher feels fulfilled, he believes that it is worth continuing [and] develops diverse, more innovative, and creative strategies to instil in students a passion for learning and the discovery of knowledge – he dares and dreams, he makes dare and dream." (PIP-SG319)

An open climate is supportive, fosters innovations and creativity and is the most likely to bring about organisational change (Pathak & Mishra, 2019). Hence, the existence of a school environment that encourages learning and potentiates innovation is recognised through (i) valuing

merit and effort, (ii) providing motivation, (iii) valuing and diffusing new practices and experiences, (iv) acting with tolerance for solving conflicts, (v) nurturing open-mind for establishing consensus, (vi) nurturing trust, (vii) boosting participation, (viii) keeping a challenging environment, and (ix) assuring inspiring leadership.

4.3. Cluster Analysis of the Educational Narratives

An integrative cross-analysis was driven by themed blocks concerning codes (fig.2) and led to the determination of similarities between the SGs, resorting to Jaccard's coefficient (figs. 3 to 5).

Globally, the documents' qualitative analysis reveals that SG26 is (i) more structured, (ii) exhibits intentionality, (iii) identifies the strengths and weaknesses, (iv) establishes an orientation for the community, (v) expresses an action-oriented to build a school culture, and (vi) assures high articulation between the PIP and the SEP. SG26 exhibits the most unfavourable context but a favourable external evaluation and a medium performance (table 1). Additionally, SG26 presents higher decisional, organisational, and transformational capital levels (fig. 2). This evidence of good use of autonomy may justify the group's performance. Taking SG26 as a basis for comparing and considering Jaccards' coefficient as a metric, the cluster analysis of PIP reveals that the similarity between SG26 and SG14 is .90 (fig. 3). This high similarity value is due to the registers of analogous coding categories in both documents with slight frequency variations (Appendix 1). SG221 diverge from these two SGs because the PIP does not consider teachers' training for improving professionalism, cultural and organisational innovation, and the promotion of teachers' agency. The divergence increases with SG315, which omits supervision processes of teachers' work, and SG319, which does not consider teachers' training. SG212 is the most divergent group of schools in the cluster once the PIP additionally does not refer to the school as a learning institution. The set constituted by SG32, SG24, and SG218 shows higher similarity among them than the other clusters. PIPs from these schools lack orientation on organisational learning mechanisms, sharing practices among teachers, planning for teachers' training, a vision of innovation as a systemic process in the organisation, a strategy for social capital development, and an innovative school climate.

The PIP provides an orientation for the school's action and a strategic record for building a culture that may support and lead to an improving school. PIP's purpose is to expose the principals' vision for the school cluster and to guide the community on a mission, acting as a unifier of wills. Several PIPs lack scope, enounce weakly articulated action and global desideratum, and may lead to insufficient use of school autonomy.

Figure 2.

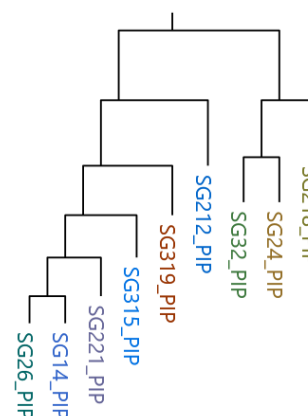
Cross-analysis of coding results of decisional, organisational and transformational capitals



Figure 3.

Cluster analysis of PIP according to the Jaccard coefficient

	SG 14	SG 24	SG 26	SG 212	SG 218	SG 221	SG 32	SG 315	SG 319
SG14	-								
SG24	.66	-							
SG26	.90	.68	-						
SG212	.48	.52	.50	-					
SG218	.57	.56	.53	.42	-				
SG221	.80	.59	.77	.46	.61	-			
SG32	.62	.70	.64	.55	.58	.67	-		
SG315	.79	.57	.76	.50	.43	.72	.54	-	
SG319	.71	.61	.73	.48	.52	.65	.52	.69	-



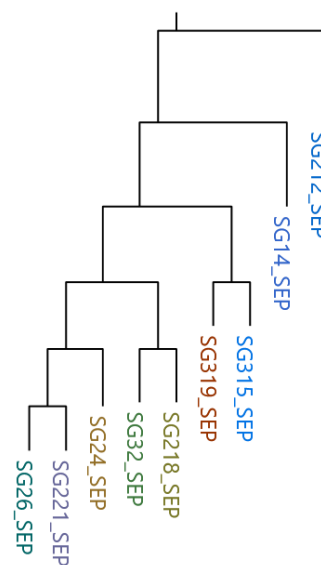
The similarity between SEP of the nine SGs, considering Jaccard's coefficient, reveals three main clusters of schools (fig. 4). The first one includes SG26, SG221, and SG24, with a coefficient of similarity of .87 and .77 associated with the branches. Dissimilarity is due to variations in coding frequencies and, at SG24, to the absence of references about supervision of teachers' work and profiling a culture of evaluation. The second cluster includes SG32 and SG218, which share a school orientation that does not consider factors like the promotion of teacher's agency, action-oriented towards social capital development, a clear commitment with a culture of evaluation, and organisational learning mechanisms. The third cluster includes SG315 and SG319, which evidence a high similarity with each other. The divergences with the other clusters concern aspects related mainly to organisational capital. SG14 and SG212 appear isolated due to several gaps in decisional, organisational, and transformational capital. Despite the disarticulation observed in both school clusters, they evidence high performance and evaluations assigned by the Inspectorate of "good" and "very good" concerning results (table 1).

The orientation provided by the school documents is not the only factor contributing to school success and well-providing school service. The data suggest that PIP and SEP articulation leads to a higher capability to deal with less favourable contexts. However, the facts gathered exhibit contradictions: only SG218 and SG319 evidence low performance but favourable and unfavourable school contexts, respectively; SG212 has a medium context but is a high-performance SG.

Figure 4.

Cluster analysis of SEP according to the Jaccard coefficient

	SG 14	SG 24	SG 26	SG 212	SG 218	SG 221	SG 32	SG 315	SG 319
SG14	-								
SG24	.54	-							
SG26	.45	.77	-						
SG212	.38	.54	.55	-					
SG218	.52	.71	.71	.58	-				
SG221	.48	.77	.87	.59	.76	-			
SG32	.48	.68	.68	.48	.73	.72	-		
SG315	.46	.71	.71	.52	.64	.70	.61	-	
SG319	.46	.70	.80	.52	.63	.74	.66	.81	-



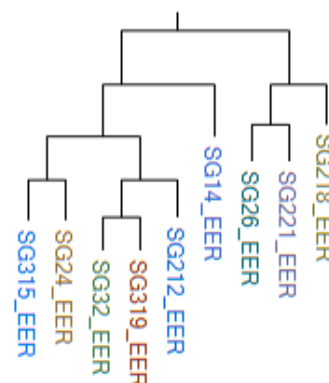
The similarity between EERs of the nine SGs, according to Jaccards' coefficient, reveals three clusters. The cluster formed by SG26 and SG221, with a similarity of .81 (fig. 5), is analogous to data obtained with PIP and SEP. Besides small divergences related to coding frequencies, the Inspectorate does not make observations on the following aspects of the organisational capital: culture of pedagogical innovation, school as a learning institution, and technological innovation. Additionally, the Inspectorate does not present considerations concerning SG26 on institutional articulation practices, promotion of teachers' agency, and action-oriented toward social capital development. The external evaluations of both institutions differed considerably (table 1).

The second cluster includes SG315 and SG24, which share a Jaccards' coefficient of similarity of .77 and have in common the lack of observations due to supervision of teachers' work and school vision. The third cluster combines SG32, SG319, and SG212 due to Jaccards' coefficient drifting between .80 and .85. The similarity between these organisations follows mainly the absence of considerations on the school vision, teachers' sharing practices of pedagogical experiences for assuring knowledge diffusion, technological innovation, and actions oriented toward social capital development.

Figure 5.

Cluster analysis of EER according to the Jaccard coefficient

	SG 14	SG 24	SG 26	SG 212	SG 218	SG 221	SG 32	SG 315	SG 319
SG14	-								
SG24	.68	-							
SG26	.70	.68	-						
SG212	.67	.77	.73	-					
SG218	.67	.64	.80	.69	-				
SG221	.62	.66	.81	.70	.77	-			
SG32	.71	.75	.78	.81	.74	.75	-		
SG315	.67	.77	.73	.76	.69	.70	.74	-	
SG319	.64	.81	.77	.80	.73	.74	.85	.73	-



The comparative analysis of figures 3 to 5 expresses differences in clustering the groups of schools. It evidences disharmonies among schools' orientation in structural documents and suggests that the practices observed by the Inspectorate are not aligned with the school's narratives. About the range of variations among documents considering Jaccards' coefficient: EERs display the lowest range, drifting from .62 to .81; PIPs exhibit a variation between .42 to .90; SEPs vary between .38 to .87. These data suggest a mechanism of regulation *a priori* and *a posteriori* of inspection services, variations among the SGs' contexts, and organisational divergences.

The cross-analysis between coding results of decisional, organisational, and transformational capitals and the SGs' characteristics suggests that a higher decisional capital leads to an evident higher organisational capital, and both may also assure a higher transformational capital (fig. 2). We hypothesise that schools with unfavourable contexts tend to develop a higher capital transformational, which is the case of SG26 and SG319 and less expressive within SG14 and SG24. The context appears as a variable that seems to impact the decisional, organisational, and transformational capital. In this study, it is not evident that the size and performance of the groups influence the school capital. So, we hypothesise that the characteristics of the principal and the leadership style may have a higher impact on the school organisation. This hypothesis is supported by other studies that connect leadership style and action with (i) innovative behaviour or innovation (Bak et al., 2022; Chen et al., 2016; Gil et al., 2018; Khaola & Oni, 2020; Vermeulen et al., 2020; Zhu et al., 2019), (ii) teachers' involvement (Rechsteiner et al., 2022), (iii) teachers' learning (Pan & Chen, 2021; Tayag & Ayuyao, 2020; Tian & Zhang, 2020), (iv) capacity building (Sujudi et al., 2020; Yakavets et al., 2017), (v) improvement-oriented school culture (Andrews & Conway, 2020), (vii) impact in performance (Yuan et al., 2018), job satisfaction and teacher empowerment (Atik & Celik, 2020).

4.4. Self-evaluation Reports Analysis

Finally, table 6 presents the content analysis conducted with the SSRs from the nine SGs, focusing on the themed block decisional capital. This analysis is expected to shed some light on the impact of external evaluation on schools one year after being developed.

Table 6.

Results of the content analyses of SSR regarding decisional capital

Subcategory and Focus	SG 14	SG 24	SG 26	SG 212	SG 218	SG 221	SG 32	SG 315	SG 319
<i>Comprehensive and supportive self-evaluation</i>									
Academic results	E	E	E	E	E	E	E	E	E
Classroom	E	NE	E	E	E	E	E	NE	E
SEP Goals	NE	NE	E	E	NE	NE	E	NE	NE
Annual Activity Plan	E	E	E	E	NE	NE	E	NE	E
Leadership action	NE	E	E	E	E	E	E	E	E
Educational structures action	E	E	E	E	E	NE	E	E	E
Teachers' training plan	E	E	E	E	E	E	E	E	E
Teachers' collective practices	NE	NE	E	E	E	E	E	E	E
Discipline	NE	NE	E	E	E	E	E	NE	E
School projects and stakeholders	E	E	E	E	E	E	E	E	E
Learning support processes	E	NE	E	E	NE	E	E	E	E
Inclusion	E	NE	E	NE	E	E	E	E	E
School services	NE	NE	E	E	E	NE	NE	E	NE
<i>Participation in the school self-evaluation process</i>									
Leaders	E	E	E	E	E	NE	E	NE	E
Teachers	E	E	E	E	E	NE	E	NE	E
Auxiliary staff	NE	E	E	E	E	NE	E	NE	E
Students	NE	E	E	E	E	NE	E	NE	E
Parents	NE	E	E	E	E	NE	E	NE	E
<i>Self-evaluation vision and mission</i>									
School self-evaluation strategy	E	E	E	E	E	E	E	E	E
Improving plan	E	E	E	E	E	E	E	E	E
Articulation with external evaluation	E	E	E	NE	NE	E	E	NE	E
The strategy of communication and diffusion	E	E	E	E	E	NE	NE	NE	NE
Innovation-oriented self-evaluation	NE	NE	E	NE	NE	NE	E	NE	NE

Note. E – Evident; NE – Non-Evident

The SSRs show changes aligned with the considerations written in the EERs. All schools have conceived a plan or strategy that orientates the school self-evaluation. However, SG221, SG32, SG315, and SG319 did not formally design a strategy for communication and diffusion of school knowledge provided by the school self-evaluation. It could consubstantiate impoverishment of the decisional capital of the schools and reduce community involvement. The impoverishment may also occur in the schools that did not implement a participated self-evaluation process, namely SG14, SG221, SG315, and SG319.

In six SGs, the SSR also evokes the orientations provided in the EER or external evaluation framework. Generally, all SGs are amplifying the process of monitoring students' results, monitoring the school training plan, evaluating the projects and actions developed with stakeholders, and producing improvement plans. The last was a regular consideration expressed by the Inspectorate because the improvement plans did not exist or lacked impact. The teaching and learning-centredness process of self-evaluation was also often considered an area of improvement in the EER. Schools are making a way to better monitor classroom practices, except SG24 and SG315, and teachers' collaborative practices, except SG14 and SG24.

Leadership and department action constitute areas of self-evaluation in expansion, except for SG14 and SG221, respectively. A comprehensive self-evaluation that considers the school's structural documents is not a shred of evidence in six SGs. The effectiveness of school services, discipline, learning support mechanisms, and inclusion are also items that are not generally considered.

The school self-evaluation is growing at different velocities, becoming a more participated process, and the scope of its action is expanding. Two interrogations rest on this process, first concerning its sustainability and second, the adaptability and flexibility of the strategies designed by the schools to respond to the changes. This interrogation is supported by the fact that only SG26 and SG32 have a self-evaluation strategy that also considers innovation and new organisational and pedagogical experiences taken by the school to promote success and improve learning. This risk of ossification may emerge in the schools studied due to a rigid use of an evaluation framework that condemns innovation and changes to oblivion.

SG14 demonstrate undesirable side effects arising from external evaluation. As the citations above document, the external evaluation was not clearly understood by the school community, including the self-evaluation team. The SSR expresses a balkanized activity involving departments and other schools' structures. The evaluation is made by themselves, without common indicators, referents, or a line for conducting it. The self-evaluation is split, untuned, and lacks consistency among the school structures. However, the school achieves a high performance despite the unfavourable context, the high dispersion, and the number of schools characterising it. These pieces of evidence suggest two of the consequences of Inspectorate in schools identified by Ehren and Visscher (2006): (i) myopia by the pursuit of short-term targets, and (ii) measured fixation due to emphasising results rather than underlying objectives. This situation suggests the importance of supporting continuous school improvement (Portz, 2021) and a multi-lens perspective by balancing external evaluation and schools' self-evaluation (Hopkins et al., 2016).

On the opposite, the analyses of the SSRs confirm an organised and oriented sense of vision and mission in SG26, previously observed in the structural documents and corroborated by the external evaluation. SG26 evidences the leader's high degree of autonomy and clairvoyance for generating a culture of improvement, a mission- and vision-based culture, participation and sharing practices, organisational learning, collaboration culture, and a focus on innovation (table

6). The school agency is operated through a substantial investment in building decisional capital that overflows to organisational and transformational capital (fig. 2). This school appears to be able to change by its means and, according to Ehren and Visscher (2006), is part of a small group that do not need inspections to change.

5. Limitations and Suggestions for Future Research

This study provides directions for policymakers, inspectors, principals, schools' middle leaders, and teachers regarding obstacles in generating organisational interdependency that can diminish the educational service provided by the schools. However, it has some limitations. First, this study was limited to nine non-randomness SGs, so the conclusions are restricted to this context. The study deeply analysed 36 guiding documents but did not include other documents, like annual activities plans or improvement plans. A wide-open analysis of school documents might enrich the research purposes. Due to the sample's dimension, the data obtained did not provide clear relations between the school's features and capital. The results point out tendencies and directions for further investigation. More study is needed to deepen this line of research in a generalisation approach. Additionally, a new line of research emerges regarding whether (i) the leadership style and purview are related to decisional, organisational, and transformational capital and (ii) exists consistency between the school narratives and the school practices.

6. Conclusions

Schools should be places of agency where actions and interventions are collectively and creatively planned and implemented through self-knowledge and intentional and reflective awareness to meet their context. The current study reveals that most of the SGs investigated are pseudomorphic systems once they tend to maintain their original weakly articulated modes of action, even though they evidence a modern speech. Additionally, the self-evaluation process settled one cycle post-external evaluation, despite being improved, reveals (i) weaknesses in developing a widely participated school self-evaluation process, (ii) vulnerabilities in using external and internal evaluation outcomes and diffusion and reflection on those outcomes, (iii) lack of innovation oriented-self-evaluation practices. Hence, without the tools for generating impactful school self-knowledge, there stands the interrogation: if an adequate decisional capital exists or if it is a need fiction leading to a small or no impact on the school transformation. Arrangements sensitive to the context, robust knowledge systems, and constructive accountability (Tintore et al., 2022) are needed to build a more responsive school.

The findings concerning schools' autonomy include (i) lack of articulation due to disconnections between school guiding documents, (ii) insipidness of innovation, innovative behaviour, and climate for innovation, (iii) school cultures aligned with an inclusive and humanist

values, the vision of the SEP, and with collaboration and commitment, (iv) cultures oriented to school evaluation and improvement are weak, (v) self-evaluation appears as an improvement area due to lack of scope at pedagogical and organisational levels, (vi) value teachers learning through training and peer collaboration despite the organisational difficulties to its implementation and the teachers' resistance to it, (vii) awareness of the challenge related to fostering an environment of trust, proximity, and motivation as well as a culture of reflection, (viii) difficulties in improving commitment and fighting teachers' practices of isolation and superficial collaboration, (ix) need to deepen changes in school grammar and pursuit more active, interdisciplinary, and digital supported teaching and learning process, (x) absenteeism, superficial, or disconnected practices of teachers' supervision. Inconsistencies observed suggest that pseudomorphosis is again a school's facet. Divergence in narratives due to the desired school vision and on-the-field organisational disengagements demands a profound transformation of the *modus* of the school operation. The Portuguese educational system faces a transformational process and struggles to embrace the whole school's complexity and build a more organic culture.

The findings concerning the school control reveal that the Inspectorate narratives marginally refer to innovation and school learning orientation. Globally, the main areas of improvement are related to the self-evaluation process and consider (i) the requirement for more comprehensive practices that may support the school's decisions and actions, (ii) the importance of constituting a participated and shared process by all the community, (iii) lack of self-evaluation practices teaching and learning centredness, (iv) the need of developing a school culture of evaluation that invest in improvement plans and diffusion strategies that may induce reflection, commitment, and responsibility. Additionally, the generalisation of teachers' good practices and the need for better processes of teachers' supervision are problematic. Despite the differences between the schools' cultures and dynamics of transformation, schools have become more performance-oriented after external evaluation. Lack of accountability and control is a factor that leads to low-performing schools (Küçükberber & Balkar, 2021). However, the self-evaluation process post-external evaluation still reveals weaknesses regarding (i) the evaluation of goals fulfilment of guiding documents, (ii) the evaluation of school services, (iii) monitoring of discipline, (iv) participation by the community, (iv) the use, diffusion, and reflection of external and internal evaluation data, (v) innovation oriented-self-evaluation practices. The changes observed are related to (i) monitoring classroom practices, teachers' collective practices, and leadership practices; (ii) supportive assessment of the student's learning and mechanisms of inclusion; and (iii) investing in building annual improvement plans. The balance between external and internal accountability is essential for increasing performance (Fullan et al., 2015) and should be about teachers and school administrators collaboratively analysing results and improving practices (Lillejord, 2020). This author defends the need for intelligent accountability that formatively aims for improvement. Still, we found clues pointing out the lack of effective accountability due to inconsistencies between schools, the rejection of school inspection outcomes, and minor involvement of the community. Accountability needs to generate decisional capital that may serve school improvement purposes by reinforcing organisational capital that may lead to a higher transformational capital. We identify that an unfavourable school context tend to lead to a higher decisional capital and concurrently

to higher organisational and transformational capital.

Finally, about how school autonomy and control influence innovation and school transformation, we identified in the narratives factors that, depending on the connotation, may positively or negatively conduce to more organic institutions. The factors include:

- *At the cultural level:* (i) innovation as part of the school vision; (ii) building a school culture and reflection on the strategic vision; (iii) consolidation of a culture of self-evaluation; (iv) promotion of cooperative approaches; (v) fostering teachers' agency in opposition to inactivity and resistance to change, shared pedagogical practices, and pedagogical supervision; (vi) promotion of investigation, experimentation, and questioning; (vii) valuing merit and effort.
- *At the organisational level:* (i) proactive middle leadership; (ii) inspiring, structured, and intentional leadership; (iii) schools' structural documents articulation; (iv) fostering curricular horizontal and vertical articulation; (v) identification of constraints and design of improvement plans in pluralistic approaches; (vi) developing school projects; (vii) strategy for information diffusion; (viii) teachers' training; (ix) valuing and diffusing of new practices and experiences; (x) fostering a trustful climate; (xii) providing motivation and boosting participation; (xiii) keeping a challenging environment; (xiv) identification of strengths and weaknesses; (xv) pursuit of short-term targets.
- *At the technological level:* (i) digital resources; (ii) teachers' digital literacy; (iii) operationalisation of digital platforms to support teachers' teamwork and with students.
- *At the pedagogical level:* (i) reshaping the teaching and learning process through active and interdisciplinary methodologies; (ii) promotion of collaborative work and supervision practices; (iii) reflection on classroom practices and agentic curricular development; (iv) fostering solutions through changes in school grammar.

The school's transformational capital must be nurtured through powerful organisational capital and accountability that fosters solid decisional capital. Through this, schools will be able to develop a growth-enabling innovation narrative that will act as an organic growth strategy in opposition to the pseudomorphic systems – characterised by modern speech but weakly articulated, aligned intentions but fragmented actions, innovation-orientated but with a lack of transformative reality.

Statements and Declarations: The authors have no relevant financial or non-financial interests to disclose. Additionally, the authors have no competing interests to declare relevant to this article's content.

References

- Alves, J. M., & Cabral, I. (2021). No regresso à escola – Reimaginar e praticar uma gramática generativa e transformacional. In J. Matias Alves & I. Cabral (Eds.), *NO REGRESSO À ESCOLA – Reimaginar e praticar uma gramática generativa e transformacional* (pp. 4–20). Faculdade de Educação e Psicologia da UCP. <https://www.researchgate.net/publication/354403069>
- Andrews, D., & Conway, J. M. (2020). Leadership for Ongoing Sustainability of Whole School Improvement. *Leading and Managing*, 26(1), 128–129.
- 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. <https://doi.org/10.15345/iojes.2020.03.014>
- Bak, H. U., Jin, M. H., & McDonald, B. D. (2022). Unpacking the Transformational Leadership-Innovative Work Behavior Relationship: The Mediating Role of Psychological Capital. *Public Performance and Management Review*, 45(1), 80–105. <https://doi.org/10.1080/15309576.2021.1939737>
- Barzanò, G. (2009). *Culturas de liderança e lógicas de responsabilidade* (1ª). Fundação Manuel Leão.
- Baydar, F., & Cetin, M. (2021). The Model of Relationships between Intellectual Capital, Learning Organizations, and Innovation-Oriented Organizational Structures in Educational Organizations. *Eurasian Journal of Educational Research*, 21(94), 265–294. <https://doi.org/10.14689/ejer.2021.94.12>
- 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, 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>
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Brunsson, N. (2014). The Irrational Organization: Irrationality as a Basis for Organizational Action and Change. *M@n@gement*, 17(2), 141. <https://doi.org/10.3917/mana.172.0141>
- 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>
- Cochran-Smith, M. (2021). Rethinking teacher education: The trouble with accountability. *Oxford Review of Education*, 47(1), 8–24. <https://doi.org/10.1080/03054985.2020.1842181>
- Constantinides, M. (2022). High-stakes accountability policies and local adaptation: exploring how school principals respond to multiple policy demands. *School Leadership and Management*, 42(2), 170–187. <https://doi.org/10.1080/13632434.2021.2016687>
- Dahler-larsen, P. (2014). Constitutive effects of performance indicators. *Public Management Review*, 16(7), 969–986.
- Dimmock, C. (2011). *Leadership, Capacity Building and School Improvement Concepts, themes and impact* (1st ed.). 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. *Starter Paper on Inspection and Innovation*, 1–8. <http://www.nmva.smm.lt/wp-content/uploads/2013/06/SICI-Paper-Bratislava-2013-final-version-24-05-Graham-Donaldson.pdf>
- Ehren, M. C. M., & Visscher, A. J. (2006). Towards a theory on the impact of school inspections. *British Journal of Educational Studies*, 54(1), 51–72. <https://doi.org/10.1111/j.1467-8527.2006.00333.x>
- Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education*, 2(1). <https://doi.org/10.1080/2331186X.2015.1018698>
- 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. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- Fullan, M. (2020a). System change in education. *American Journal of Education*, 126(4), 653–663. <https://doi.org/10.1086/709975>
- Fullan, M. (2020b). 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 Analysis Archives*, 23(15), 1–18. <http://dx.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>
- González-Falcón, I., García-Rodríguez, M. P., Gómez-Hurtado, I., & Carrasco-Macías, M. J. (2020). The importance of principal leadership and context for school success: insights from '(in)visible school.' *School Leadership and Management*, 40(4), 248–265. <https://doi.org/10.1080/13632434.2019.1612355>
- Goodson, I. (2014). Context, curriculum and professional knowledge. *History of Education*, 43(6), 768–776. <https://doi.org/10.1080/0046760X.2014.943813>
- 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). <https://doi.org/10.3402/edui.v7.30115>
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital Transforming Teaching in Every School*. NY: Teachers College Press.
- Ho, D., & Lee, M. (2016). Capacity building for school development: current problems and future challenges. *School Leadership and Management*, 36(5), 493–507. <https://doi.org/10.1080/13632434.2016.1247040>
- Hopkins, E., Hendry, H., Garrod, F., McClare, S., Pettit, D., Smith, L., Burrell, H., & Temple, J. (2016). Teachers' views of the impact of school evaluation and external inspection processes. *Improving Schools*, 19(1), 52–61. <https://doi.org/10.1177/1365480215627894>
- Hutt, M., & Lewis, N. (2021). Ready for reform? Narratives of accountability from teachers and education leaders in Wales. *School Leadership and Management*, 41(4–5), 470–487. <https://doi.org/10.1080/13632434.2021.1942823>
- Kalman, M., Summak, M. S., & Cimen, I. (2017). Principal Assignments in Limbo: A Qualitative Study on the Processes and Potential Outcomes of the Recent Principal Assignment Initiative in Turkey. *Educational Process: International Journal*, 6(1), 53–84. <https://doi.org/10.22521/edupij.2017.61.4>
- 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>
- Küçükberber, 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>
- Kurum, G., & Cinkir, S. (2019). An authentic look at evaluation in education: A school self-evaluation1 model supporting school development. In *Eurasian Journal of Educational Research* (Vol. 2019, Issue 83, pp. 253–286). <https://doi.org/10.14689/ejer.2019.83.12>
- Lee, A. N., Nie, Y., & Bai, B. (2020). Perceived principal's learning support and its relationships with psychological needs satisfaction, organisational commitment and change-oriented work behaviour: A Self-Determination Theory's perspective. *Teaching and Teacher Education*, 93, 103076. <https://doi.org/10.1016/j.tate.2020.103076>
- Lillejord, S. (2020). From "unintelligent" to intelligent accountability. *Journal of Educational Change*, 21(1), 1–18. <https://doi.org/10.1007/s10833-020-09379-y>
- Lima, L. C. (2021). Democracy and education: Dewey in times of crisis in democratic education. *Education Policy Analysis Archives*, 29(August - December), 154. <https://doi.org/10.14507/epaa.29.5881>
- Luger, B. (2011). Trustees of Boston University Review Reviewed Work (s): Professional Capital : Transforming Teaching in Every School by ANDY HARGREAVES and MICHAEL FULLAN Review by : BERNARD J . LUGER III Source : The Journal of Education , Vol . 192 , No . 2 / 3 , SCH. *The Journal of Education*, 192(2/3), 16–19.
- Machado, J. (2018). Autonomia, currículo e liderança: na crista da onda de um paradoxo. In C. Palmeirão & J. Matias Alves (Eds.), *Escola e mudança: construindo autonomia, flexibilidade e novas gramáticas de escolarização - os desafios essenciais* (1ª). Universidade Católica Portuguesa.
- Matteucci, M., Guglielmi, D., & Lauermann, F. (2017). Teachers' Sense of Responsibility for Educational Outcomes and its Associations with Teachers' Instructional Approaches and Professional Wellbeing. *Social Psychology of Education*, 2, 275–298. <https://doi.org/https://doi.org/10.1007/s11218-017-9369-y>
- McCrone, T., Coghlan, M., Wade, P., & Rudd, P. (2009). *Evaluation of the impact of Section 5 inspections - Strand 3. Final Report for Ofsted. June.*
- 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>
- Mogren, A., Gericke, N., & Scherp, H. Å. (2019). Whole school approaches to education for sustainable development: a model that links to school improvement. *Environmental Education Research*, 25(4), 508–531. <https://doi.org/10.1080/13504622.2018.1455074>
- Monarca, H., & Fernández-González, N. (2016). El papel de la inspección educativa en los procesos de cambio. *Cadernos de Pesquisa*, 46(159), 212–233. <https://doi.org/10.1590/198053143374>
- Neto, R., & Cabral, I. (2021). *Entre as Palavras e a Ação Concreta. Crônica de uma Gestão Democrática da Organização Escolar.* 1–20.
- Pacheco, J. A. (2019). *Inovar para Mudar a Escola* (1ª). Porto Editora.
- Paltrinieri, L. (2017). Managing Subjectivity: Neoliberalism, Human Capital and Empowerment. *Fudan Journal of the Humanities and Social Sciences*, 10(4), 459–471. <https://doi.org/10.1007/s40647-017-0200-0>
- Pan, H. L. W., & Chen, W. Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration and Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- Pathak, D. P., & Mishra, S. (2019). *Assessment of Organisational Climate through Innovative Behaviour of the teachers.* 11(3). <https://doi.org/10.18311/gjeis/2019>
- Portz, J. (2021). "Next-Generation" Accountability? Evidence From Three School Districts. *Urban Education*, 56(8), 1297–1327. <https://doi.org/10.1177/0042085917741727>
- Rechsteiner, B., Compagnoni, M., Wullschleger, A., Schäfer, L. M., Rickenbacher, A., & Maag Merki, K. (2022). Teachers involved in school improvement: Analyzing mediating mechanisms of teachers' boundary-crossing activities between leadership perception and

- teacher involvement. *Teaching and Teacher Education*, 116, 103774. <https://doi.org/10.1016/j.tate.2022.103774>
- Schillemans, T., & Bovens, M. (2011). The challenge of multiple accountability: does redundancy lead to overload? In M. J. Dubnick & H. G. Frederickson (Eds.), *Accountable Governance. Problems and Promises* (pp. 3–21). Routledge.
- Seabra, F., Henriques, S., Mouraz, A., Abelha, M., & Tavares, A. (2022). Schools' Strengths and Areas for Improvement: Perspectives From External Evaluation Reports. *Frontiers in Education*, 7(April). <https://doi.org/10.3389/feduc.2022.868481>
- Shirley, D., Hargreaves, A., & Washington-Wangia, S. (2020). The sustainability and unsustainability of teachers' and leaders' well-being. *Teaching and Teacher Education*, 92. <https://doi.org/10.1016/j.tate.2019.102987>
- Simeonova, R., Parvanova, Y., Brown, M., & McNamara, G. (2020). A Continuum of Approaches to School Inspections: Cases from Europe. *Pedagogy*, 92(4), 487–507. <https://www.ceeol.com/search/article-detail?id=857814>
- Straub, R., & Vilsmaier, U. (2020). Pathways to educational change revisited—controversies and advances in the German teacher education system. *Teaching and Teacher Education*, 96, 103140. <https://doi.org/10.1016/j.tate.2020.103140>
- Sujudi, N., Komariah, A., & Indonesia, U. P. (2020). Leadership Characteristics Era Disruption : *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), 276–279. <https://www.atlantispress.com/article/125933799.pdf>
- 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>
- 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>
- Tintore, M., Cabral, I., Alves, J. M., & Cunha, R. S. (2022). *Management model, leadership and autonomy in Portuguese and Spanish public schools: A comparative analysis. Cogent Educations*, 9(1), 1-21. <https://doi.org/10.1080/2331186X.2022.2105553>
- 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.
- Tyunnikov, Y. S. (2017). Classification of innovation objectives set for continuing professional teacher development. *European Journal of Contemporary Education*, 6(1), 167–181. <https://doi.org/10.13187/ejced.2017.1.167>
- Vermeulen, M., Kreijns, K., & Evers, A. T. (2020). Transformational leadership, leader–member exchange and school learning climate: Impact on teachers' innovative behaviour in the Netherlands. *Educational Management Administration and Leadership*, 48(5), 1–20. <https://doi.org/10.1177/1741143220932582>
- Villamor, M. R., Pecson, G., Arcilla, L., Bacus, J., Abando, A., Bigcas, B., & Quinco-cadosales, M. N. (2022). *A Meta-Synthesis on School Leadership Succession: Groundwork For Effective Transition*. 8(5), 61–72. <https://doi.org/10.5281/zenodo.6544657>
- Walker, A., & Ko, J. (2011). Principal Leadership in an era of Accountability: A Perspective from the Hong Kong context. *School Leadership and Management*, 31(4), 369–392. <https://doi.org/10.1080/13632434.2011.606269>
- Xhomara, N. (2018). Influence of school leadership style on effective teaching and teacher-student interaction. *Pedagogika*, 132(4), 42–62. <https://doi.org/10.15823/p.2018.132.3>
- 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>
- Yuan, L., Nguyen, T. T. N., & Vu, M. C. (2018). Transformational leadership and its impact on performance: The role of psychological capital and collectivism. *ACM International Conference Proceeding Series*, 18–27. <https://doi.org/10.1145/3180374.3181325>

Zhu, J., Yao, J., & Zhang, L. (2019). Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety. *Asia Pacific Education Review*, 20(4), 657–671. <https://doi.org/10.1007/s12564-019-09584-2>

Appendix 1.

Results of frequency and percentage of occurrence of codes per SG and document

Codes	1	1.1	1.2	1.3	1.4	1.5	2	2.1	2.2.1	2.2.2
SG14	10; 19; 6	--; 1; 2	5; 6; 1	--; --; --	3; 5; --	2; 7; 3	17; 77; 23	--; 12; 6	2; 10; 3	5; 7; --
SG212	13; --; 3	6; --; --	1; --; --	--; --; --	2; --; 1	4; --; 2	17; 24; 18	--; 3; 2	3; 1; 1	2; --; 1
SG18	11; 4; 13	3; 1; 3	3; 1; 2	--; --; --	1; --; 4	4; 2; 4	21; 14; 24	1; 1; 4	4; 1; 1	1; --; 1
SG221	10; 11; 29	1; 1; 9	5; 2; 4	--; --; --	1; 7; 11	3; 1; 5	17; 40; 116	1; 7; 8	1; 7; 4	1; 4; 3
SG24	11; 7; 6	3; 1; 3	2; 2; 2	--; --; --	2; 3; --	4; 1; 1	21; 39; 51	--; 1; 4	5; 4; 1	4; 2; 3
SG26	10; 23; 35	3; 9; 15	2; 5; 8	--; --; 4	1; 6; 6	4; 3; 2	24; 129; 133	1; 5; 7	2; 13; 14	3; 7; 14
SG315	16; 5; 9	3; --; 5	5; 2; 3	---; --; --	4; 2; --	4; 1; 1	18; 36; 38	--; 4; 3	4; 2; 3	2; 2; 5
SG319	8; 12; 28	1; 3; 6	1; 1; 5	--; --; 1	2; 4; 10	4; 4; 6	15; 55; 64	--; 4; 11	5; 6; 7	1; --; 2
SG32	11; 4; 19	2; 2; 9	3; 1; 3	--; --; --	2; 1; 7	4; --; --	27; 30; 43	--; 4; 5	5; 2; 8	1; 2; 5

Codes	2.3.1	2.3.2	2.4.1	2.4.2	2.4.3	2.5.1	2.5.2	2.5.3	2.6.1	2.6.2	2.6.3
SG14	--; 4; 3	--; 3; --	1; 6; --	1; 4; --	1; 1; --	--; 8; 3	1; 4; 1	1; 5; --	1; 8; 3	3; 2; 2	1; 3; 3
SG212	3; 1; --	--; 1; 1	1; --; 1	--; --; 1	1; --; --	3; 8; 4	1; 2; 1	3; 4; 4	--; 3; 2	--; 1; --	--; --; --
SG218	--; 5; --	--; --; 1	--; --; --	--; --; 1	1; 1; 2	2; 1; 4	1; --; 2	4; 2; 5	--; 1; 1	5; 2; 1	2; --; 1
SG221	2; 1; 5	--; 2; 3	--; 2; 14	--; 3; 20	--; --; 16	2; 2; 7	2; 2; 6	4; 3; 21	--; 1; 3	2; 6; 2	2; --; 4
SG24	1; 3; 5	1; 2; 1	--; --; 8	1; --; 5	1; 3; 1	1; 3; 11	2; 5; 4	3; 4; 4	2; 4; 4	--; --; 5	--; --; 1
SG26	3; 14; 7	--; 10; 9	--; 4; 9	--; 2; 8	1; 8; 10	--; 3; 7	4; 8; 3	3; 20; 13	--; 13; 12	7; 7; 14	1; 5; 6
SG315	1; --; --	--; 4; --	--; 3; --	--; 5; 3	1; --; 2	3; 1; 3	1; 3; 3	3; 8; 8	1; 2; 1	--; 2; 7	2; 2; --
SG319	2; --; 5	1; 1; --	--; 4; --	--; --; 8	1; 2; 3	1; 8; 4	1; 11; 7	2; 8; 7	--; 1; 4	1; 8; 6	--; 2; --
SG32	2; 1; 3	3; 1; 1	2; --; --	--; --; 3	2; --; 2	1; 1; --	1; 7; 1	2; 6; 7	--; 3; 2	3; 3; 2	5; --; 4

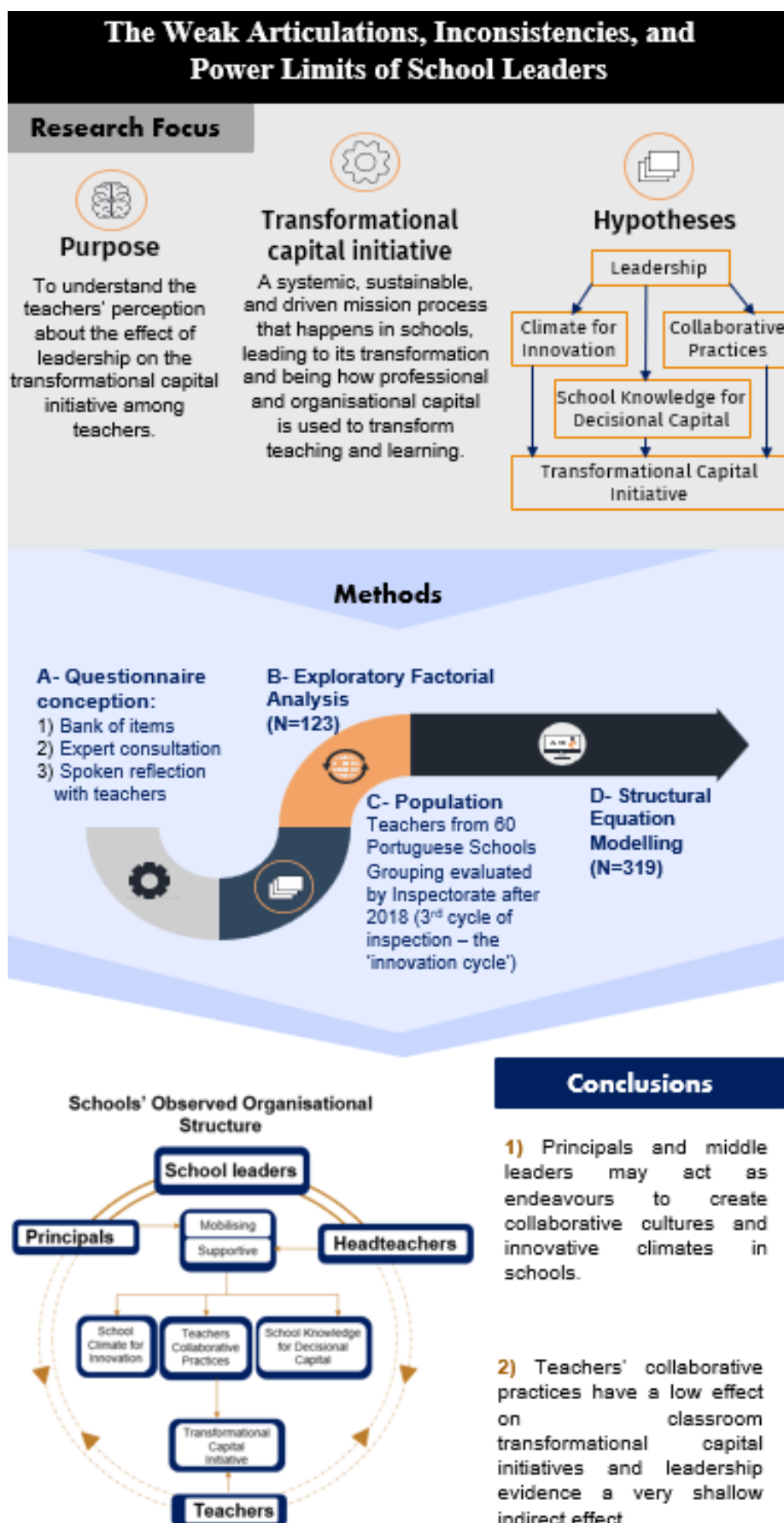
Codes	3	3.1.1	3.1.2	3.2.1	3.2.2	3.3	3.4	3.5	Sentiment (negative)
SG14	17; 52; 5	1; 5; --	--; 4; --	4; 20; 3	8; 13; 2	2; 9; --	2; 1; --	--; --; --	8; 1; --
SG212	22; 12; 15	5; 3; 5	--; 1; --	4; 4; 4	8; 3; 6	2; --; --	3; 1; --	--; --; --	9; --; 1
SG218	13; 10; 14	2; 2; 4	--; --; --	6; 3; 3	4; 3; 5	1; 2; --	--; --; --	--; --; --	7; 3; 1
SG221	16; 12; 35	4; 3; 7	1; --; 2	1; 3; 12	5; 3; 12	4; 2; --	2; 1; 2	--; --; --	13; 6; 9
SG24	18; 18; 32	1; 4; 7	--; 1; 3	7; 8; 9	5; 5; 6	3; --; 3	2; --; 4	--; --; --	10; --; --
SG26	16; 55; 50	1; 12; 7	--; 4; 4	9; 10; 4	3; 13; 19	2; 8; 11	1; 8; 5	--; --; --	6; --; 3
SG315	18; 19; 21	4; 4; 9	--; 2; 1	5; 4; 3	4; 6; 6	2; --; 1	3; 3; 1	--; --; --	4; 1; 4
SG319	14; 30; 54	2; 5; 12	--; 4; 1	4; 8; 9	6; 7; 26	1; --; 2	1; 5; 4	--; 1; --	10; 1; 4
SG32	19; 5; 11	4; 2; 1	--; --; --	5; 1; 3	2; 1; 4	2; 1; 1	6; --; 3	--; --; --	7; --; --

Note. The sets of three numbers refer to the frequency of words in EER, PIP and SEP.

Artigo 6. The Weak Articulations, Inconsistencies, and Power Limits of School Leaders

Artigo elaborado em coautoria com José Alves e Diana Soares e submetido à revista *Research in Educational Administration and Leadership*. As referências foram redigidas segundo as normas da APA – 7.^a edição.

Graphic Abstract



Abstract

School structural empowerment is promoted when an interdependent action of the team of leaders and teachers exists. This quantitative study aimed to understand the teachers' perception of factors that may promote the transformational capital initiative, an indicator of the school's innovation potential. This potential refers to the active teaching and learning classroom methodologies where teachers support the students learning. The study used a survey for gathering data and included an exploratory factor analysis (N=132) and structural equation modelling (N=319). The data suggest that leadership fosters collaborative cultures and innovative climates in schools. However, the school's climate for innovation and knowledge for decisional capital did not impact the classroom's transformational capital. Evidence points out that the teachers' collaborative practices have a low effect on the classroom transformational capital, and leadership has a shallow indirect effect. System disarticulations and lack of intentionality in supporting the teachers' practices may explain these findings. Hence, intentional, focused, supportive interventions involving teachers and leaders are needed to build effective, interdependent learning organisations.

Keywords: Transformational capital; innovation; leadership; decisional capital; teachers' practices

1. Introduction

The success of a school depends on the principals' leadership, namely in their vision and how they create a strategy to perform it. Within school organisations, there is an interest in understanding how the relationship between leaders and teachers fulfils its role of building interdependent organisations that pursue professional development and better practices. Strengthening a shared vision by assuring congruence of the schools' and teachers' vision can produce a positive culture that may inspire the collective within the organisation (Anselmus Dami et al., 2022; Vermeulen et al., 2020; Villamor et al., 2022; Wang, 2019).

Leaders and teachers face demands and struggle with transformational times in a globalised and challenging world. Assuring the schools' responsiveness makes it indispensable to lead within the relentless ubiquity of innovation and reform (Fullan, 2007). 'Schools take time to grapple collectively with how implementation should be achieved, employing iterative waves of effort to deepen understanding and further transform teaching practice' (Tan & Hung, 2020, p.565). Nourish understanding and transforming the teachers' practices depends on the school climate for innovation and learning. It demands a sharing environment grounded in the teachers' collaborative work. The schools' structural empowerment depends on the interdependent action of the team of leaders. Empowering leadership improves the teachers' innovative behaviour (Tan & Hung, 2020) and work engagement (Tian & Zhang, 2020). The enhancements depend on the ability of schools to identify actions that aim to improve outcomes for learners and the overall school's performance (O'Brien et al., 2022). Hence, the leaders must promote the use of knowledge produced by the schools' self-evaluation in a desirable, responsible system. The teachers' resistance to data-driven improvement processes is described in the literature (Wrigley

& Wormwell, 2016); however, there is a gap regarding the effect of teachers' engagement in data-based classroom transformation.

Therefore, this study focused on comprehending the impact of leadership on the teachers' collaborative practices, the school climate for innovation, and the teachers' use of school knowledge to improve their professional capital. On this basis, the purpose is to explore how the school cultures produce the initiative of classroom transformation under the influence of the principals' and middle leaders' leadership.

2. Theoretical framework

High-performing educational systems invest in the strongest principals that encourage teachers to be innovative, improve their performance and that of their colleagues, and pursue professional development that leads to better practices (Schleicher, 2018). It refers to building capital, the metaphor established by Hargreaves and Fullan (2012) for the idea that in teaching, like in the classic economy, if we want a return, we must invest (Hargreaves, 2019). In educational systems, the organisations' micro and mesolevels include several dimensions of capital, namely professional, social, human individual, decisional, organisational, structural, and leadership (Bartee, 2007; Dimmock, 2011; Fullan et al., 2015; Hargreaves, 2019; Hargreaves & Fullan, 2012; Sujudi et al., 2020). Subsidiary to these forms of capital, plural competencies can be articulated regarding the educational actors specifically: knowledge, commitment, experience, professional learning, competence, coaching over time, networks of learning, mutual support, shared professional development, trust, inspiration and motivation, strategy, shared vision, collective engagement, capacity-building, self-efficacy, psychological empowerment, and innovative behaviour (Blömeke et al., 2021; Cao et al., 2020; Córdoba-Pachón et al., 2021; Hargreaves, 2019; Lee et al., 2020; Pan & Chen, 2021; Runhaar et al., 2016; Sotiriou et al., 2016; Tian & Zhang, 2020; Zhu et al., 2019). The intersection between the capital dimensions and the competencies arises into (i) an additional capability, innovation; (ii) a form of active, prospective, adaptative, collective, and sustainable capital, which is transformational capital.

We define innovation as a social, cultural, collective, and individual process that appears as a dynamic, systemic, intentional, and multi-dimensional phenomenon with a transformational focus toward new strategies development or solutions that leverage the educational process and impact all the system elements. The geography of innovation highlights four dimensions: (i) technological innovation, the devices and strengths for the transformation; (ii) cultural innovation, the whole organisation's disposal and opening regarding the transformation; (iii) organisational innovation, the vision and strategy for the transformation; (iv) pedagogical innovation, the teachers' practices and the related teaching and learning process of transformation. Transformational capital is defined as a systemic, sustainable, and driven mission process in schools; it leads to school transformation and corresponds to how professional and organisational capital are used to

transform teaching and learning (Serra et al., 2023). Therefore, we propose a model for studying the initiative of transformational capital among teachers (Fig. 1) and the following hypotheses:

Hypothesis 1: *The schools' leadership vision and strategy for innovation are positively related to the school climate for innovation.*

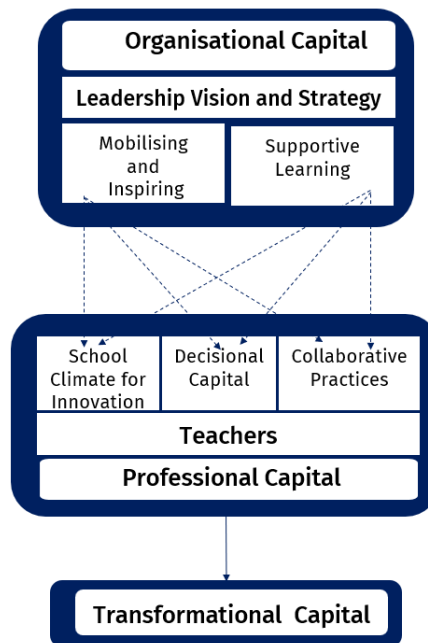
Hypothesis 2: *The schools' leadership vision and strategy for innovation are positively related to teachers' collaborative practices.*

Hypothesis 3: *The school climate for innovation is positively related to transformational capital.*

Hypothesis 4: *Teachers' collaborative practices are positively related to transformational capital.*

Figure 1.

Model for studying transformational capital



2.1. Organisational innovation

Dimmock (2011) defines organisational innovation as the purview of leadership to devise new forms of organisational capital to produce high-leverage teaching and learning strategies, enabling its transformation. It is considered leadership for capacity building for change and includes educational leadership capital and structural capital (Serra et al., 2023). The former corresponds to the social and symbolic capital for leadership used to articulate a clear mission or vision for the school (Bartee, 2007). Conversely, the latest expresses the internal processes and information that belong to the organisation (Yakavets et al., 2017).

According to Schleicher (2018), innovation within schools demands (i) school articulation and aligned visions; (ii) investment in institutional learning and strong networks; (iii) promotion of collaboration cultures; (iv) professional and transparent accountability to enhance a high-trust culture and engagement; (v) distributed leadership; (vi) responsible autonomy and incentives for experimentation and innovation; (vii) space for teachers to take risks; (viii) foster confidence and morale; (ix) pursue professional development to improve teachers' performance and that of their colleagues; (x) engagement of social entrepreneurs. Therefore, the focus on the practices transformation and teachers' empowerment demands a constructive leadership, meaning (i) sharing a vision, strategy, and knowledge (Brown et al., 2020; Sujudi et al., 2020), (ii) harvesting distributed leadership, collaborative cultures, and commitment (Devos et al., 2014; O'Shea, 2021; Pan & Chen, 2021), (iii) promoting innovative behaviour through the job satisfaction, inspired motivation, intellectual stimulation, and psychological empowerment (Vermeulen et al., 2020; Zheng et al., 2019; Zhu et al., 2019). Hence, leadership is crucial to an innovative organisation and, according to Mincu (2022), is the starting point for the school's transformation.

2.2. Cultural innovation

Considering innovation as a designed-based approach for teachers to solve students' learning disabilities, a culture of innovation appears as a tool for more inclusive education. Hence, principals and middle leaders must learn how to develop and foster a school culture of innovation that will maximise instruction, enhance learning, and increase student achievement (Gonzales & Roberts, 2019). Fuad et al. (2022) defined the 'sociocultural innovation features in education as a set of values, beliefs, customs, and behaviour norms that are found in a social group within the surrounding environment' (p.12). The same author used five categories to characterise cultures of innovation: individual personality, interaction, collaboration and teamwork, support, and teachers' leadership. Hence, a culture of innovation points out three vectors for school interventions. First, a student-centred culture where children and youth are the core of the innovative process. Second, teachers are the central figures in the gear that torque the teaching and learning process as seekers, designers, and executors of better pedagogical solutions. Third, leaders are the providers of direct support of the teacher's action and the student's learning process at the resource, intellectual, psychological, organisational, and climate levels (Baydar & Cetin, 2021; Blömek et al., 2021; Fuad et al., 2022; Lee et al., 2020; Shirley et al., 2020; Song et al., 2014). The role of leadership occurs through improving schools' internal processes, motivating teachers, and promoting an innovative culture that will benefit the school as a whole. Much of the effectiveness of the change depends on the quality of the collaboration, and cultural change acts as a prerequisite for an effective structural change (Hargreaves, 2019). Still, the literature widely describes obstacles to innovation cultures. It includes resistance to change, cultures of isolation, contrived collegiality, and systemic disarticulation (Alves & Cabral, 2019; Andrews & Conway, 2020; Hargreaves, 2019; Smith, 2020). Even though some school systems favour a mostly cohesive *ethos*, it is common to find fragmented and inconsistent schools with weak leadership

(Mincu, 2022). The sustainability of the school transformation is directly linked to solid innovation cultures, and, according to Mincu (2022), without leadership, individual teachers may act as a loosely connected group without the vision and motivation to produce change.

2.3. Pedagogical innovation

An inclusive and humanistic idea of education is growing worldwide; therefore, classrooms that respond to diversity and become places where all children can participate and learn are challenging for teachers. Schools call for 'prospective teachers to be confident in drawing from a wide repertoire of innovative pedagogies that are experiential, participatory, image-rich, and enquiry-based' (Schleicher, 2018, p. 83). Walder (2017) defines pedagogical innovation as 'any new teaching practice that differs from the traditional lecture, with the purpose of improving learning' (p.72). According to this author, innovations are related to contexts and strive for positive changes induced by actions that are intentional and precise acts of creation. In parallel, an 'innovative pedagogy is defined as a planned set of educational activities that presents new ideas in a defined context aiming to extensively improve the ability to learn within a situation of interaction' (Avidov-Ungar & Forkosh-Baruch, 2018, p.184). Pedagogical innovations depend on the teacher's professional knowledge and the teachers' beliefs (Taimalu & Luik, 2019). Therefore, human and decisional capital impact pedagogical innovation. Social capital is the third element of professional capital that may be a key for spreading innovation and assuring its sustainability.

Innovative pedagogy aims to generate learning outcomes such as knowledge, skills, and attitudes absorbed during the learning process, making innovation the core phenomenon in education (Konst & Kairisto-Mertanen, 2020). Walder (2014) identified seven distinctive principles related to pedagogical innovation: (i) novelty to encompass and surprise students; (ii) a slightly or radical process of change that implies adaptation; (iii) creative reflection; (iv) application concerning the subject, audience, or technology; (v) improvement for quality and success; (vi) pedagogical and technological innovation interaction; (vii) a relational activity that implies teachers in interaction with students or other teachers.

The literature refers to a wide range of innovative pedagogical techniques. It includes research, case studies, multidisciplinary, curricular flexibility, active learning and teaching methods, versatile and development-oriented assessment, collaborative design thinking, teambuilding, problem-solving, interactive lectures and tutorials, work-based learning, problem-based learning, educational resource-based learning, open and distance learning, and peer mentoring or assessment (Chandra et al., 2020; Konst & Kairisto-Mertanen, 2020; Walder, 2017). Alves & Cabral (2021) also refer to a generative and transformational school grammar operated through learning times outside the commonplace, favouring methodological diversification, school openness, and flexible curricular management. The focus is to increase responsiveness to difficulties and divergent rhythms and styles of learning among students. Pedagogical innovation

requires the reinvention of more impactful teaching practices to support students' learning (Lacroix, 2020).

2.4. Technological innovation

As part of modern societies, technological innovation cannot be separated from the innovative process in any field. In education, technological innovations are instrumental in improving broader pedagogical, organisational, and cultural innovation. Figueiredo (2020) proposes that, instead of building a digital transformation of the school, we should create a cultural transformation supported by technology to become a profound cultural and pedagogical reform.

According to Mioduser et al. (2003), technological innovations occur in a progressive continuum. It starts with assimilation, referring to the introduction phase into the school. It continues with the transition phase by integrating new didactic and organisational solutions alongside the traditional ones into everyday functioning. Then, transformation occurs when substantive changes take place in the school as a whole. Technological innovation is a first-order element for deepening schools' innovation. Its adoption depends on the value attributed to the technologies, the teachers' professional knowledge, and their self-efficacy beliefs for using technology (Taimalu & Luik, 2019). Hence, guidance is needed to support the introduction of technology in schools and impede it from becoming a critical aspect of innovation (Nelson et al., 2019).

3. Methods

3.1. Data source and sample

This study aims to identify the explicative school contextual factors that may influence or promote innovation and improve teaching and learning. It also studies the factors that can increase teachers' professional capital. The study was conducted in Portugal and employed a survey design developed in 2022 in two stages. A preliminary stage included a sample of 123 teachers obtained to support an exploratory factorial analysis (EFA) used to determine the underlying factors for the set of variables included in the survey. A second sample, non-overlapping with the previous one, included 319 teachers proceeding from 23 school clusters (a single principal leads each group of schools). They belong to a population of 60 school clusters evaluated by the Inspectorate in the third evaluation cycle, which started in 2018. The sample included schools whose principals freely agreed to participate in the study. Additionally, all teachers who voluntarily participated in the study gave their informed consent to the confidential use of information for research purposes.

This study occurred in Portugal after introducing a reform aligned with OECD orientations regarding the Future of Education Skills 2030 project (OCDE, 2018). It intends to enhance the schools' curricular autonomy and flexibility during an ongoing decentralisation process to municipalities. Despite this policy orientation, robust mechanisms of re-regulation by the government demark the Portuguese educational system, including standardised national tests, national schools' rankings, inspections and evaluations, and digital governance processes.

3.2. Instrument

According to the survey aims, a written questionnaire was created considering the conception of questions, expert consultation, and spoken group reflection with teachers. The questionnaire applied included 77 items, which intended to measure dimensions regarding the schools' vision (8 items), self-evaluation role in the schools' organisation (10 items), leadership (14 items), and the teachers' professional practices (45 items). Transversally, the dimensions included the teachers' perceptions of ongoing innovation. Transformational capital is a construct used to measure the school's pedagogical transformation strictly at the moment of the implementation of the survey. Considering the character of the variable – temporally circumspection, we assumed that it would be better represented as an Initiative of Transformational Capital (TCI). The variable does not measure the ongoing transformation that may be happening in the schools. The variables were measured using a 4-point Likert scale (1= strongly disagree; 4 strongly agree) or a 5-point scale to gauge the frequency of teachers' practices (1= never; 2= rarely; 3= once a year; 4= once a quarter; 5= several times a quarter). The questionnaire considered “no opinion/not applied” as a possible answer to avoid dropouts. Additionally, the questionnaire included sociodemographic questions for the sample characterisation purposes.

3.3. Data Analysis

The statistical analysis was performed with IBM SPSS Statistics 27.0.1.0 and IBM SPSS AMOS 26.0. Data analysis was accomplished in two steps. First, we conducted an EFA to create a scale with items from the questionnaire that may evidence the essence of the constructs in the study. Then, a Structural Equation Model (SEM) technique was applied for hypothesis testing.

EFA was performed to understand relationships and patterns of the observed variables in the scale and to reduce a large number of variables into a smaller set of composite factors. No missing values and far outliers were present, and we proceeded with EFA, keeping all data gathered from the 123 respondents. The sample size is sufficient for EFA (Zygmont & Smith, 2014). The variables were tested for normality through skewness and kurtosis. In the face of data violation of normality, we performed EFA following the principal axis factoring method. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used to assess the suitability of the data for factor analysis (Zygmont & Smith, 2014). EFA was performed using

the Varimax rotation method and eigenvalues > 1. EFA was repeated until a good fit model was obtained with less than 50% of the non-redundant residuals.

SEM was used to analyse structural relationships underlying the model of study considering, as a starting point, the latent variables arising from EFA. Each variable is a composite construct calculated from the item's average values. SEM analyses used the maximum likelihood fit function as an estimation method. The model was adjusted to ensure data-model fit and still represent the essence of the theoretical model that sustains the analysis. To test how well the SEM model fits the sample data, we considered the Chi-Square, Incremental Fit Index (IFI), Tucker Lewis Index (TLI), Comparative Fit Index (CIF), and Root Mean Error Approximation (RMSEA) (Hooper et al., 2008). Finally, we determined Spearman's' correlation between variables to ensure mild multicollinearity to justify factor extraction (Zygmunt & Smith, 2014) and Cronbach's alpha to measure the data's reliability or internal consistency.

4. Results

4.1. Respondents profile

The study involved 442 Portuguese teachers split into two stages: 123 respondents provided data for EFA and 319 for the SEM analysis. Table 1 presents the respondent profile of both samples, announcing the similarity concerning age (M=51.76 and M=52.09), tenure (M=25.83 and M=25.44), gender, qualifications, and teaching level.

Table 1.

Samples' descriptive statistics

Variable	Sample (N=123) ¹			Sample (N=319) ²		
	Minimum and Maximum	Mean	Standard deviation	Minimum and Maximum	Mean	Standard deviation
Age	24-67	51.76	8.092	24-67	52.09	7.939
Tenure	0-47	25.83	10.750	0-44	25.44	10.704
Frequencies						
Gender	Male	23 (18.7%)		76 (23.8%)		
	Female	100 (81.3%)		243 (76.2%)		
Qualifications	Graduated	67 (54.5%)		214 (67.2%)		
	Post-graduated	14 (11.4%)		32 (10.0%)		
	Master's degree	38 (30.9%)		70 (21.9%)		
	PhD	4 (3.2%)		3 (.9%)		
Teaching level	Primary school	18 (14.6%)		57 (17.8%)		
	Middle school	17 (13.8%)		42 (13.2%)		
	High school	:88 (71.6%)		220 (69.0%)		

¹ used in EFA; ² used in SEM analysis.

4.2. Construct validity

The EFA performed through the principal axis factoring and varimax rotation considered a minimum factor loading criteria of 0.50. The KMO measure of sampling adequacy was 0.833 (Table 2), indicating the middling appropriateness of data for factor analysis (Kaiser & Rice, 1974). The results of Bartlett's Test of sphericity were significant, $X^2(n=123)=2974.043$ and suggest significant correlations between components, suitable for factor analysis (Pestana & Gageiro, 2014). Not all variables were normal, considering skewness and kurtosis for the cut-offs -2 and +2 (George & Mallery, 2003). However, according to Watkins (2018), the possibility of skew affecting EFA is reduced when all variables score in the same direction, which was the case. The results exhibit commonalities of the extraction above 0.50, suggesting that the variance of each variable ensures acceptable levels of explanation (Table 3). Additionally, considering the internal consistency and how closely related items within a factor are, the alphas' coefficient revealed that items from six of the extracted factors were reliable, and one had very good reliability (Cronbach, 1951).

Finally, the factor solution derived from the analysis of the eigenvalues yielded seven factors for the scale, accounting for 60.1% of the variation in the data. Table 3 evidence that the loadings were adequate, drifting between 0.516 and 0.885. Hence, 29 items were loaded and conducive to an appropriate factor analysis solution or model fit and into a plausible underlying theoretical structure for studying the phenomenon in the survey.

Table 2.

Kaiser-Meyer-Olkin's and Bartlett's tests results

KMO Test	Bartlett's Test		
	X^2	df	Sig.
.833	2974.043	666	<.001

4.3. Hypotheses testing

Resorting to SEM analysis, we examine the mediating effects of the school climate for innovation (SCI), school knowledge for decisional capital (SKDC), and teachers' collaborative practices (TCP) on the impact of leadership on classroom transformation. The measurement model was first assessed in terms of its validity and reliability. The SEM's results revealed a good model fit for the data ($X^2(319)=488.952$, $p=.000$; CFI=.926; TLI=.906; IFI=.927; PCMIN/df=2.457; RMSEA=.068) (Hooper et al., 2008). The process of assuring fitness for the model led to the exclusion of the five items with the lower loadings and, consequently, of the factor SKI (Table 3). The alphas' coefficients obtained for the six constructs or composite variables calculated revealed at least good internal consistency or reliability (Table 4).

Table 3.

EFA's results

Factor	Item	Mean	Standard Deviation	Communalities	Factor Loading	Eigenvalue	Cronbach's alpha
1. Mobilising leadership (ML)	It.1	3.21	.842	.656	.608	10.651	.918
	It.2	3.07	.993	.642	.660		
	It.3	3.04	1.059	.594	.681		
	It.4	3.04	.995	.769	.771		
	It.5	3.17	1.069	.718	.793		
	It.6	3.03	1.116	.771	.811		
	It.7	3.07	1.117	.751	.796		
2. School climate for innovation (SCI)	It.8	3.28	.782	.625	.573	3.383	.890
	It.9	3.06	.803	.629	.701		
	It.10	3.05	.991	.513	.551		
	It.11	2.97	.905	.572	.686		
	It.12	2.76	.813	.645	.706		
	It.13	3.24	.790	.705	.760		
3. Transformational capital initiative (TCI)	It.14	4.29	1.407	.518	.694	2.651	.825
	It.15	4.62	1.083	.781	.870		
	It.16	4.50	1.217	.591	.762		
	It.17	4.30	1.267	.649	.772		
4. Teachers' collaborative practices (TCP)	It.18	3.76	1.405	.711	.793	2.159	.851
	It.19	4.21	1.182	.610	.700		
	It.20	4.05	1.305	.746	.778		
5. School knowledge for decisional capital (SKDC)	It.21	3.38	.835	.610	.660	1.839	.892
	It.22	3.25	.836	.874	.885		
	It.23	3.29	.786	.848	.842		
6. Supportive learning middle leadership (SLML)	It.24	2.58	1.187	.604	.703	1.451	.843
	It.25	3.02	1.063	.783	.735		
	It.26	2.78	1.163	.670	.678		
7. School knowledge for innovation (SKI)	It.27	2.98	1.079	.609	.654	1.304	.812
	It.28	2.78	.937	.560	.516		
	It.29	2.76	1.117	.784	.733		

Note. Converged rotation with seven iterations; extraction method: principal axis factoring; rotation method: varimax with Kaiser rotation.

Table 4.

Construct's descriptive statistics and correlations

Construct	Items (n.º)	Mean	Standard deviation	Cronbachs' alpha	1	2	3	4	5
1. ML	5	3.082	.8207	.890					
2. SCI	4	3.002	.6928	.857	.543*				
2. ICT	4	4.400	.8337	.713	.101 n.s.	.145*			
1. TCP	3	3.862	1.1974	.786	.339*	.441*	.172*		
2. SKDC	3	3.100	.8604	.891	.460*	.517*	.169*	.398*	
3. SLML	3	2.927	.9956	.902	.505*	.523*	.084 n.s.	.368*	.413*

N= 319; *Spearman's significant correlation at .01 (2-tailed); n.s. non-significant.

Additionally, moderately significant correlations were found between the mobilising leadership (ML) and the SCI ($r=.543$), SKDC ($r=.460$), and supportive learning middle leadership (SLML) ($r=.505$). The SCI showed a moderate statistically significant correlation with the TCP ($r=.441$), SKDC ($r=.517$), and SLML($r=.523$). The correlation was also moderate and statistically significant between the SKDC and SLML ($r=.413$). No significant correlations were found between the TCI and leadership (Table 4). The remaining significative associations between variables represent weak or very weak correlations.

The SEM's results (Fig. 2; Table 5) show that the SKDC and SCI cannot explain the TCI ($\beta=.108$, $SE=.067$, $p=.126$; $\beta=-.070$, $SE=.092$, $p=.358$). However, the ML is significantly related to the TCP ($\beta=.284$, $SE=.082$, $p<.001$), SKDC ($\beta= .296$, $SE=.082$, $p<.001$), and SCI ($\beta=.341$, $SE=.037$, $p<.001$). In the same way, the SLML is statistically related to the TCP ($\beta=.297$, $SE=.083$, $p<.001$), SKDC ($\beta=.227$, $SE=.050$, $p<.001$), and SCI ($\beta=.409$, $SE=.038$, $p<.001$). Finally, the TCP can explain the TCI ($\beta=.274$, $SE=.051$, $p<.001$). Hence, hypotheses 1 and 2 are supported by the data, hypothesis 3 is not supported, and the data only partially support hypothesis 4. The calculated indirect effects of leadership on the TCI revealed shallow connections due to an estimate of total causal effects of .162 (Table 6).

Table 5.

Results of standardised coefficients from SEM analysis

Constructs relationship	Standardised Estimate	Standard Error	Composite Reliability
ML → TCP	.284*	.082	4.246
ML → SKDC	.296*	.050	4.671
ML → SCI	.341*	.037	5.663
SLML → TCP	.297*	.083	4.374
SLML → SKDC	.227*	.050	3.619
SLML → SCI	.409*	.038	6.568
SKDC → TCI	.108 n.s.	.067	1.531
TCP → TCI	.274*	.051	3.288
SCI → TCI	-.070 n.s.	.092	-.919

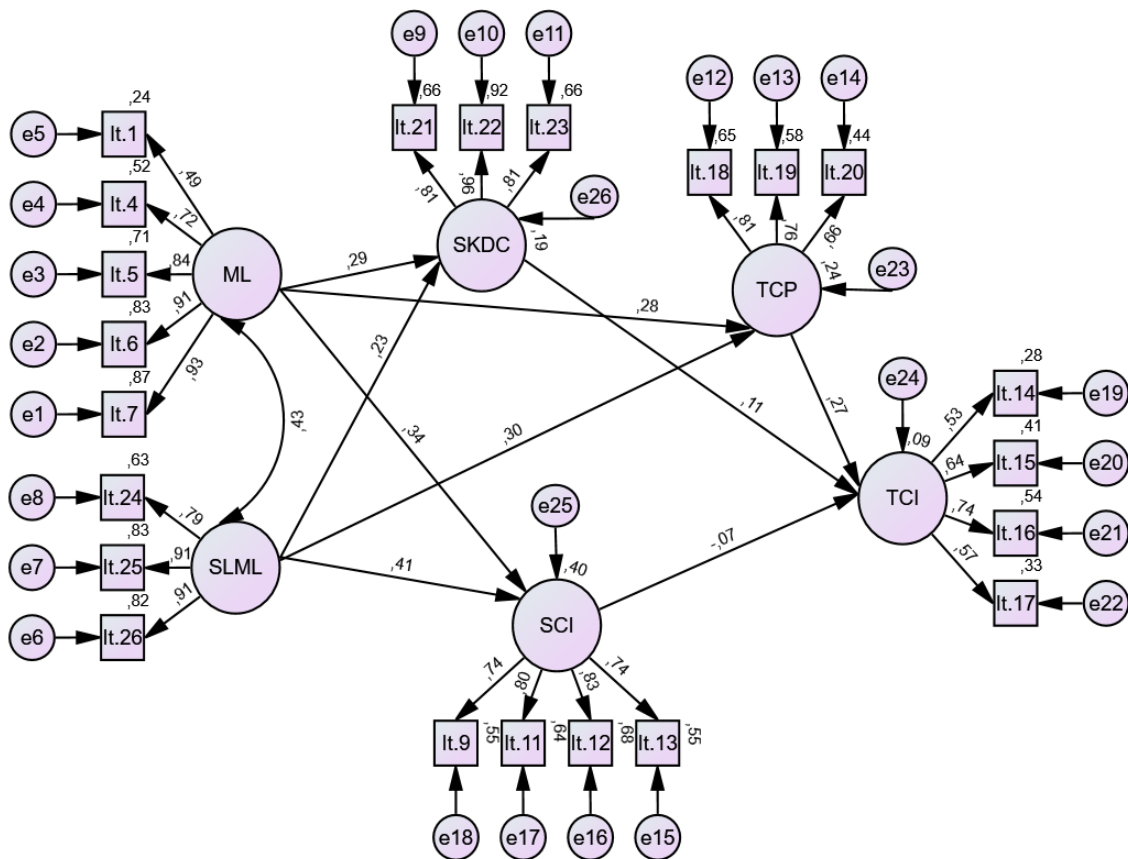
Note: * $p<.001$; n.s. non-significant.

Table 6.

Calculated results regarding the indirect effects

Constructs relationship	Standardised Estimate
ML → TCP → TCI	.076
SLML → TCP → TCI	.081
Total causal effects	.162

Figure 2.
SEM analysis results



5. Discussion

Innovation became a key for school transformation, which is stated in educational narratives, as innovative management (Zhao & de Pablos, 2009), pedagogical innovation, and innovative classroom practices (Blömeke, Nilsen, & Scherer, 2021; Cao et al., 2020; Major et al., 2020), innovative behaviour (Pathak & Mishra, 2019; Runhaar et al., 2016), and innovative cultures (Lee, 2020). Under this context, this study aims to understand how the schools' capital is used to transform the teaching and learning process through the role of leadership, SCI, and TCP. These constructs were measured through the perspective of the teachers' perceptions. The TCI was taken as an indicator of the school's innovation potential. This potential is characterised by the active teaching and learning classroom methodologies where the teachers act as moderators and support students learning. Additionally, the TCI involves using digital pedagogical resources and experimenting with new didactic approaches.

5.1. Effects on Teachers' Ways of Working

Leadership is considered the first-order indirect promoter of the student's learning (Daniëls et al., 2019; Leithwood, 2021; Pina et al., 2015; Wang, 2019). Leadership is pivotal in improving the teachers' efficacy, practices, and innovative behaviour (Çoğaltay & Boz, 2022; Rechsteiner et al., 2022; Xhomara, 2018; Zheng et al., 2019). In this study, the ML was considered an act of leading a group and an organisation that clarifies the intentionality underlying purposes and strategies defined for the school's action. It fosters the teachers' participation, mutual support, collaborative practices, and the diffusion of innovative experiences among teachers. Significant positive path coefficients were identified between the ML and the SCI, the TCP, and the use of SKDC. These coefficients represent a relatively low relationship between the variables (Sugiyono, 2008) but are still relevant considering the complexity of the educational systems. The same happens with the SLML concerning the TCP and the use of SKDC. In this study, the middle leaders' role regards supporting learning through training and with peers and inspiring teachers to take on new pedagogical experiences. The estimated effect measured between the SLML and the SCI was medium (Sugiyono, 2008). In this study, the SCI was studied through teachers' perception regarding (i) the receptiveness to new pedagogical approaches, (ii) the motivation to participate in improving planned interventions, (iii) the acceptance of changes and reforms, (iv) the active search for new methodologies to accomplish the teaching and learning.

Despite the weak connections measured but not neglectable, hypotheses 1 and 2 are supported by the data. The evidence gathered points out a significant weak effect of the leaders on the teachers' practices. These practices refer to (i) sharing and framing new pedagogical materials in collaborative work and (ii) reflecting and using information from schools' internal accountability mechanisms to plan and reorientate pedagogical action. Additionally, the leadership focused on the principals revealed a weak effect on the SCI, but middle leaders signalled a medium impact on it. The importance of the school leadership level to transform agents for a collaborative culture is highlighted by Azorín and Fullan (2022). Furthermore, the interactive and collaborative school climate emerged as an essential factor for promoting innovative work behaviour (Blömeke, Nilsen, Scherer, et al., 2021; Pathak & Mishra, 2019; Song et al., 2014). Encouraging knowledge sharing and discouraging knowledge hiding, along with the SCI, might increase innovation, including aspects related to the use of technology (Kaewsangon et al., 2022). Additionally, it is crucial to consider the schools' context and the product of collaboration and data-driven discussions and decisions to support the students best (Daniëls et al., 2019). Considering these implications and the effects of leadership on teachers' practices, robust leading approaches are needed to build more interdependent learning organisations.

5.2. Effects on Classroom Teachers' Practices

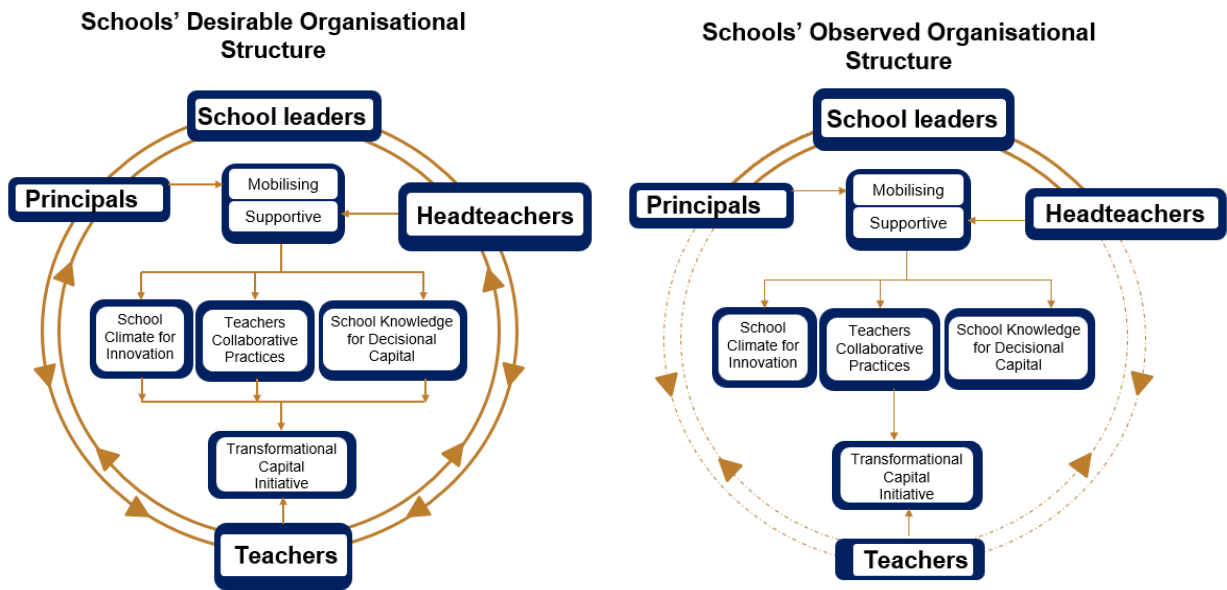
The TCI represents a construct that intends to become a metric for processes that happen in schools and lead to teaching and learning transformation. The collective pedagogical decisions may be supported by using and reflecting on the school knowledge. The school knowledge is expected to reinforce the teachers' decisional capital. However, it did not impact the TCI with statistical significance. The same happened with the SCI. Hence, hypothesis 3 is not supported by the data.

Data only partly supports hypothesis 4 once the collective use of the school knowledge has no significant effect on the TCI. Conversely, we registered a positive direct low effect of the TCP in the TCI. The effect of leadership in the TCI through the mediating role of the TCP evidences a shallow magnitude of a causal relationship (table 6). These findings are aligned with the ones reached by Xhomara (2018), who found that leadership styles predict teacher-student interactions, although in a relatively low percentage.

System disarticulations may explain our findings concerning the low influence of leadership in classroom transformation. Another explanation is superficial or lack of intentionality in supporting and supervising classroom practices. Brunsson (2006) defended that the inconsistencies in educational actions and the diversity within the organisation are inhibitors of the schools' efforts. The same author describes hypocrisy within organisations when ideas and actions are not mutually supported. It occurs when the agents of the dialogue are so far from the actions that it is practically impossible for them to exercise influence. The proximity between the teachers and supervisors and the collaborative learning cultures with rich intersive practices between teachers are needed to promote the teaching and learning process and the school's effectiveness (Alves, 2021; Azorín & Fullan, 2022; Da'as et al., 2020). Researchers have been investigating the difficulties that arose from the system disconnections and drivers for a more organic school culture. The difference between the desirable articulated and syntonio school and the one observed in this study is represented in Figure 3. These findings may be illuminated through the explanation evoked by Azorín & Fullan (2022) that 'some strong collaborative school cultures were established 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' (p.139-140).

A more interdependent educational organisation is needed to provide an intentional system change and to foster learning organisations with broad educational goals. Likewise, the leadership goes beyond the narrow vision of the principal regarding administrative management (González-Falcón et al., 2020). The involvement of the middle leaders and teachers through a shared clear vision in a learning organisation that uses information and the schools' knowledge are factors that can lead to effective leadership and the whole school's improvements (Andrews & Conway, 2020; González-Falcón et al., 2020; Rechsteiner et al., 2022).

Figure 3.
Schools' desirable vs. observed organisational structure



Note: Dashed lines represent weak or inept connections in the system, contrary to the continuous dark lines

6. Conclusions

Schools are supposed to be places marked by collaboration and shared practices and where reflection and decisions are assumed collectively. Co-agency and learning should describe the leaders', teachers', and students' ways of community participation. This work aimed to understand the effects of leadership, the SCI, the TCP, and the use of SKDC on the TCI. According to teachers' perspectives, this study showed that leaders have a small to medium direct positive impact in promoting an SCI, TCP, and SKDC. Despite the magnitude of the effect measured, we do not consider it neglectable, considering the diversity of factors implied in a school system. Hence, there is evidence that through principals and middle leaders, leadership may act as an endeavour to create collaborative cultures and innovative climates in the schools.

Notwithstanding, the SCI and the use of SKDC do not impact the classroom TCI. We conclude that collaboration among teachers has a low effect on classroom transformation, and leadership exhibits a very shallow indirect effect. These controversial results suggest that the boost reached on SCI and the use of school knowledge is nearly ineffective in transforming the teaching and learning process. More research is needed to evaluate if problems regarding superficial or lack of proximity and support of the teachers' actions by the leaders and peers or even system disarticulations are causal factors. Intentional, focused, supportive interventions involving the teachers and leaders are needed to build a more robust and effective organic school system.

Based on the results of this research, it is tautological to deduce that the leaders are perceived as endeavours for collaborative cultures and innovation within the school system. Hence, the leaders should invest in it, hoping it will increase the teachers' involvement and adherence to innovation and impact the students' learning. Through this, teachers may increase social knowledge, learn to build social agency, and gradually take more responsibility for their professional involvement and school improvement (Rechsteiner et al., 2022). Policymakers, principals, and teachers must comprehend that more interdependency is needed once educational leaders face the transformational power limits of the leadership due to the systems' complexity and multidimensionality and its tendency to operate as loosely coupled systems. However, these limits are also the school system's force and requirement.

Declaration of Competing Interest: No potential conflict of interest was reported by the authors.

References

- Alves, J. M., & Cabral, I. (2019). Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino. In M. C. Roldão (Ed.), *Quem lidera o ensino e a aprendizagem nas escolas? Um estudo de caso múltiplo sobre lideranças pedagógicas*. (pp. 13–34). Fundação Manuel Leão.
- Alves, J. M., & Cabral, I. (2021). No regresso à escola – Reimaginar e praticar uma gramática generativa e transformacional. In J. Matias Alves & I. Cabral (Eds.), *NO REGRESSO À ESCOLA – Reimaginar e praticar uma gramática generativa e transformacional* (pp. 4–20). Faculdade de Educação e Psicologia da UCP.
- Andrews, D., & Conway, J. M. (2020). Leadership for Ongoing Sustainability of Whole School Improvement. *Leading & Managing*, 26(1), 128–129. <https://search.informit.org/doi/10.3316/informit.437744412395345>
- 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). <https://doi.org/10.1080/2331186X.2022.2064407>
- Avidov-Ungar, O., & Forkosh-Baruch, A. (2018). Professional identity of teacher educators in the digital era in light of demands of pedagogical innovation. *Teaching and Teacher Education*, 73, 183–191. <https://doi.org/10.1016/j.tate.2018.03.017>
- 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>
- Bartee, R. (2007). Education Leadership as 'Capital' for a Diverse School Setting: Understanding the Dynamics of Social and Symbolic Capital as Exemplars of Successful Leadership Strategies. *Advances in Educational Administration*, 10, 179–194. [https://doi.org/10.1016/S1479-3660\(07\)10011-1](https://doi.org/10.1016/S1479-3660(07)10011-1)

- Baydar, F., & Cetin, M. (2021). The Model of Relationships between Intellectual Capital, Learning Organizations, and Innovation-Oriented Organizational Structures in Educational Organizations. *Eurasian Journal of Educational Research*, 21(94), 265–294. <https://doi.org/10.14689/ejer.2021.94.12>
- 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>
- 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>
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Cao, C., Shang, L., & Meng, Q. (2020). Applying the Job Demands-Resources Model to exploring predictors of innovative teaching among university teachers. *Teaching and Teacher Education*, 89, 103009. <https://doi.org/10.1016/j.tate.2019.103009>
- Chandra, P., Tomitsch, M., & Large, M. (2020). Innovation education programs: a review of definitions, pedagogy, frameworks and evaluation measures. *European Journal of Innovation Management*, 24(4), 1268–1291. <https://doi.org/10.1108/EJIM-02-2020-0043>
- Çoğaltay, N., & Boz, A. (2022). Influence of school leadership on collective teacher efficacy: a cross-cultural meta-analysis. *Asia Pacific Educ. Rev.* <https://doi.org/https://doi.org/10.1007/s12564-022-09754-9>
- Córdoba-Pachón, J. R., Mapelli, F., Taji, F. N. A. Al, & Donovan, D. M. (2021). Systemic Creativities in Sustainability and Social Innovation Education. *Systemic Practice and Action Research*, 34(3), 251–267. <https://doi.org/10.1007/s11213-020-09530-z>
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/https://doi.org/10.1007/BF02310555>
- Da'as, R., Schechter, C., & Qadach, M. (2020). School Leaders' Cognitive Complexity: Impact on the Big 5 Model and Teachers' Organisational Citizenship Behavior. *Journal of School Leadership*, 30(5), 398–423. <https://doi.org/10.1177/1052684619896535>
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A review on leadership and leadership development in educational settings. *Educational Research Review*, 27(January 2018), 110–125. <https://doi.org/10.1016/j.edurev.2019.02.003>
- Devos, G., Tuytens, M., & Hulpia, H. (2014). Teachers' organisational commitment: Examining the mediating effects of distributed leadership. *American Journal of Education*, 120(2), 205–231. <https://doi.org/10.1086/674370>
- Dimmock, C. (2011). *Leadership, Capacity Building and School Improvement Concepts, themes and impact* (1st ed.). Routledge. <https://doi.org/https://doi.org/10.4324/9780203817452>
- Figueiredo, A. D. (2020). The renewed human dimension of the school in the digital era. *EDUCA - International Catholic Journal of Education*, 6(January 2020), 168–176. <https://www.researchgate.net/publication/353669761>
- Fuad, D. R. S. M., Musa, K., & Hashim, Z. (2022). Innovation culture in education: A systematic review of the literature. *Management in Education*, 36(3), 135–149. <https://doi.org/10.1177/0892020620959760>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analysis Archives*, 23(15), 1–18. <http://dx.doi.org/10.14507/epaa.v23.1998>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update*.
- Gonzales, M., & Roberts, M. (2019). Franchise model schools: rethinking educational practices and structures. *Development and Learning in Organizations*, 34(2), 41–44. <https://doi.org/10.1108/DLO-08-2019-0196>
- González-Falcón, I., García-Rodríguez, M. P., Gómez-Hurtado, I., & Carrasco-Macías, M. J.

- (2020). The importance of principal leadership and context for school success: insights from '(in)visible school.' *School Leadership and Management*, 40(4), 248–265. <https://doi.org/10.1080/13632434.2019.1612355>
- 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*. NY: Teachers College Press.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60. <https://doi.org/10.21427/D7CF7R>
- Kaewsang-on, R., AL-Takhayneh, S. K., Jam, F. A., Chang, B. L., Pradana, M., & Mahmood, S. (2022). A three wave longitudinal study of school innovation climate and entrepreneurship teachers' acceptance to technology: Moderating role of knowledge sharing and knowledge hiding. *Frontiers in Psychology*, 13(October), 1–15. <https://doi.org/10.3389/fpsyg.2022.1028219>
- Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement*, 34(1), 111–117. <https://doi.org/https://doi.org/10.1177/001316447403400115>
- 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>
- Lacroix, E. (2020). Pedagogical Innovation: New Institutional Theory and Beyond Borders Experiential Learning Program. *Journal of Social Thought*, 4(1).
- Lee, A. N., Nie, Y., & Bai, B. (2020). Perceived principal's learning support and its relationships with psychological needs satisfaction, organisational commitment and change-oriented work behaviour: A Self-Determination Theory's perspective. *Teaching and Teacher Education*, 93, 103076. <https://doi.org/10.1016/j.tate.2020.103076>
- Lee, S. Y. (2020). Analysis of the effect of school organisational 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>
- Leithwood, K. (2021). A review of evidence about equitable school leadership. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080377>
- Major, J., Tait-McCutcheon, S. L., Averill, R., Gilbert, A., Knewstubb, B., Mortlock, A., & Jones, L. (2020). Pedagogical Innovation in Higher Education. *International Journal of Innovative Teaching and Learning in Higher Education*, 1(3), 1–18. <https://doi.org/10.4018/ijtlhe.2020070101>
- Mincu, M. (2022). Why is school leadership key to transforming education? Structural and cultural assumptions for quality education in diverse contexts. *Prospects*, 52(3–4), 231–242. <https://doi.org/10.1007/s11125-022-09625-6>
- Mioduser, D., Nachmias, R., Tubin, D., & Forkosh-baruch, A. (2003). Analysis Schema for the Study of Domains. *Education and Information Technologies*, 8(1), 23–36. <https://doi.org/https://doi.org/10.1023/A:1023922207476>
- Nelson, M. J., Voithofer, R., & Cheng, S. L. (2019). Mediating factors that influence the technology integration practices of teacher educators. *Computers and Education*, 128(October 2018), 330–344. <https://doi.org/10.1016/j.compedu.2018.09.023>
- O'Brien, S., McNamara, G., O'Hara, J., Brown, M., & Skerritt, C. (2022). Teacher leadership in school self-evaluation: an approach to professional development. *Irish Educational Studies*, 1–16. <https://doi.org/10.1080/03323315.2022.2135568>
- O'Shea, C. (2021). Distributed leadership and innovative teaching practices. *International Journal of Educational Research Open*, 2(November), 100088. <https://doi.org/10.1016/j.ijedro.2021.100088>
- OCDE. (2018). The Future of Education and Skills: Education 2030. *OECD Education Working Papers*, 23. [http://www.oecd.org/education/2030/E2030 Position Paper \(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
- Pan, H. L. W., & Chen, W. Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration*

- and Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- Pathak, D. P., & Mishra, S. (2019). *Assessment of Organisational Climate through Innovative Behaviour of the teachers*. 11(3). <https://doi.org/10.18311/gjeis/2019>
- Pestana, M. H., & Gageiro, J. N. (2014). *Análise de Dados para Ciências Sociais: A complementariedade do SPSS* (6ª). Edições Silabo.
- Pina, R., Cabral, I., & Alves, J. M. (2015). Principal's Leadership on Students' outcomes. *Procedia - Social and Behavioral Sciences*, 197(February), 949–954. <https://doi.org/10.1016/j.sbspro.2015.07.279>
- Rechsteiner, B., Compagnoni, M., Wullschleger, A., Schäfer, L. M., Rickenbacher, A., & Maag Merki, K. (2022). Teachers involved in school improvement: Analysing mediating mechanisms of teachers' boundary-crossing activities between leadership perception and teacher involvement. *Teaching and Teacher Education*, 116, 103774. <https://doi.org/10.1016/j.tate.2022.103774>
- 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>
- Schleicher, A. (2018). What makes high-performing school systems different. In *World Class: How to Build a 21st-Century School System* (pp. 61–137). OECD Publishing. <https://doi.org/10.1787/9789264300002-3-en>
- Serra, L., Alves, J., & Soares, D. (2023). Mapping innovation in educational contexts: drivers and barriers. *International Journal of Innovation and Learning*, in press. <https://doi.org/10.1504/IJIL.2024.10054841>
- Shirley, D., Hargreaves, A., & Washington-Wangia, S. (2020). The sustainability and unsustainability of teachers' and leaders' well-being. *Teaching and Teacher Education*, 92. <https://doi.org/10.1016/j.tate.2019.102987>
- Smith, J. (2020). Community and contestation: a Gramscian case study of teacher resistance. *Journal of Curriculum Studies*, 52(1), 27–44. <https://doi.org/10.1080/00220272.2019.1587003>
- Song, J. H., Kim, W., Chai, D. S., & Bae, S. H. (2014). The impact of an innovative school climate on teachers' knowledge creation activities in Korean schools: The mediating role of teachers' knowledge sharing and work engagement. *KEDI Journal of Educational Policy*, 11(2), 179–203. <https://doi.org/10.22804/kjep.2014.11.2.003>
- Sotiriou, S., Riviou, K., Cherouvis, S., Chelioti, E., & Bogner, F. X. (2016). Introducing Large-Scale Innovation in Schools. *Journal of Science Education and Technology*, 25(4), 541–549. <https://doi.org/10.1007/s10956-016-9611-y>
- Sugiyono. (2008). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. CV. Dr. P. (2008). Sugiyono, Metode Penelitian Kuantitatif Kualitatif dan R&D. CV. Alfabeta.
- Sujudi, N., Komariah, A., & Indonesia, U. P. (2020). Leadership Characteristics Era Disruption: *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), 276–279. <https://www.atlantispress.com/article/125933799.pdf>
- Taimalu, M., & Luik, P. (2019). The impact of beliefs and knowledge on the integration of technology among teacher educators: A path analysis. *Teaching and Teacher Education*, 79, 101–110. <https://doi.org/10.1016/j.tate.2018.12.012>
- Tan, M. Y., & Hung, D. W. L. (2020). Models of innovation scaling in Singapore schools: process objects as multi-level role clusters and outcomes—a multiple case study approach. *Asia Pacific Education Review*, 21(4), 553–571. <https://doi.org/10.1007/s12564-020-09642-0>
- 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>
- Vermeulen, M., Kreijns, K., & Evers, A. T. (2020). Transformational leadership, leader–member exchange and school learning climate: Impact on teachers' innovative behaviour in the Netherlands. *Educational Management Administration and Leadership*, 48(5), 1–20.

- <https://doi.org/10.1177/1741143220932582>
- Villamor, M. R., Pecson, G., Arcilla, L., Bacus, J., Abando, A., Bigcas, B., & Quinco-cadosales, M. N. (2022). A Meta-Synthesis on School Leadership Succession: Groundwork For Effective Transition. *8*(5), 61–72. <https://doi.org/10.5281/zenodo.6544657>
- Walder, A. M. (2014). The concept of pedagogical innovation in higher education. *Education Journal*, *3*(3), 195–202. <https://doi.org/10.11648/j.edu.20140303.22>
- Walder, A. M. (2017). Pedagogical Innovation in Canadian higher education: Professors' perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, *54*, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>
- Wang, S. (2019). School heads' transformational leadership and students' modernity: the multiple mediating effects of school climates. *Asia Pacific Education Review*, *20*(3), 329–341. <https://doi.org/10.1007/s12564-019-09575-3>
- Watkins, M. W. (2018). Exploratory Factor Analysis: A Guide to Best Practice. *Journal of Black Psychology*, *44*(3), 219–246. <https://doi.org/10.1177/0095798418771807>
- Wrigley, T., & Wormwell, L. (2016). Infantile Accountability: When Big Data Meet Small Children. *Improving Schools*, *19*(2), 105–118. <https://doi.org/https://doi.org/10.1177/1365480216651520>
- Xhomara, N. (2018). Influence of school leadership style on effective teaching and teacher-student interaction. *Pedagogika*, *132*(4), 42–62. <https://doi.org/10.15823/p.2018.132.3>
- 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>
- Zhao, J., & de Pablos, P. O. (2009). School innovative management model and strategies: The perspective of organisational learning. *Information Systems Management*, *26*(3), 241–251. <https://doi.org/10.1080/10580530903017781>
- 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>
- Zhu, J., Yao, J., & Zhang, L. (2019). Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety. *Asia Pacific Education Review*, *20*(4), 657–671. <https://doi.org/10.1007/s12564-019-09584-2>
- Zygmunt, C., & Smith, M. R. (2014). Robust factor analysis in the presence of normality violations, missing data, and outliers: Empirical questions and possible solutions. *The Quantitative Methods for Psychology*, *10*(1), 40–55. <https://doi.org/10.20982/tqmp.10.1.p040>

Appendix 1.

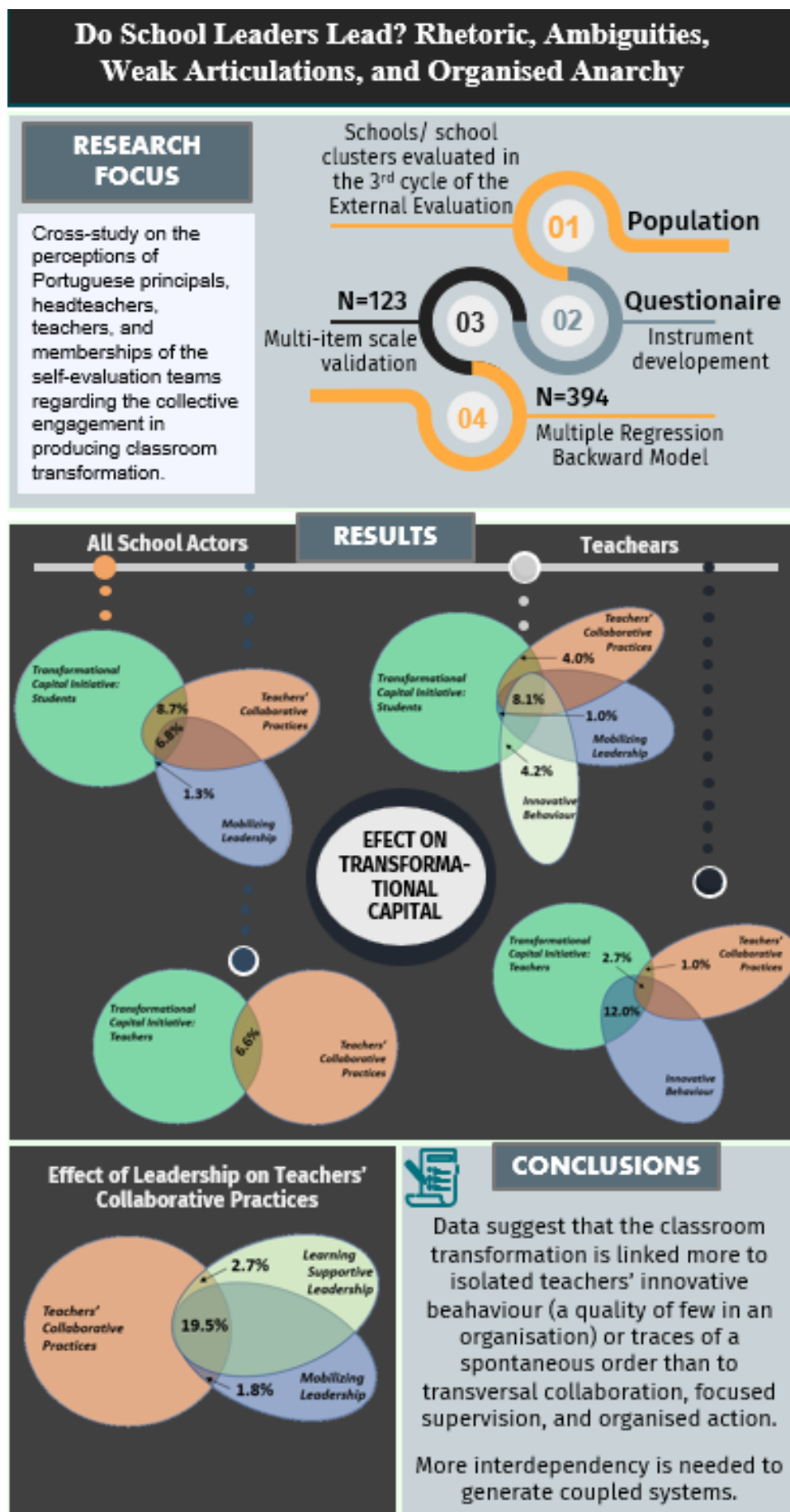
Questionnaire selected items according to EFA

Factor	Item	
1. Mobilising Leadership	It.1	The leaders make clear to the teachers the intentionality underlying the objectives and strategies of the educational activity.
	It.2	Exemplary and/or innovative pedagogical practices are given visibility in the school.
	It.3	At school, the leaders value my work, effort, and dedication.
	It.4	The principal promotes the participation of teachers in decision-making on strategic guidance and planning.
	It.5	The principal fosters the spirit of mutual help in teachers.
	It.6	The principal fosters the creation of spaces, times, activities, or networks for sharing innovative experiences among teachers.
	It.7	The principal encourages collaborative work between teachers, generating opportunities for its realisation.
2. School Climate for Innovation	It.8	Teachers organise themselves from a peer-to-peer perspective.
	It.9	Teachers are receptive to new pedagogical approaches.
	It.10	Teachers value innovative colleagues.
	It.11	Teachers are motivated to carry out interventions foreseen in the improvement plan.
	It.12	Teachers welcome changes and/or reforms.
	It.13	Teachers look for new methods and strategies to carry out teaching and learning.
3. Transformational Capital Initiative	It.14	I use learning platforms to manage teaching and learning (e.g. Moodle, classroom).
	It.15	I use digital materials available online.
	It.16	I assume the role of moderator and facilitator of learning.
	It.17	I have been experimenting with new teaching and learning methodologies for the last three years.
4. Teachers Collaborative Practices	It.18	Teachers jointly build didactic materials or new pedagogical approaches.
	It.19	Teachers work collaboratively in disciplinary teams.
	It.20	Teachers share pedagogical materials.
5. School Knowledge for Decisional Capital	It.21	Teachers reflect together on the school's self-evaluation results.
	It.22	Teachers, together, identify factors that promote and condition success based on the school self-evaluation results.
	It.23	Teachers together identify areas that need orientation changes and consolidation.
6. Supportive Learning Middle-Leadership	It.24	The head teacher helps me identify areas where I need training.
	It.25	The head teacher creates conditions for my development with peers.
	It.26	The head teacher challenges me to take on new pedagogical experiences.
7. School Knowledge for Innovation	It.27	The school self-evaluation team discloses information on school pedagogical practices.
	It.28	Teachers establish their training needs based on school self-evaluation results.
	It.29	Teachers are more likely to accept new pedagogical projects or experiences when the self-evaluation disseminates information regarding their impact.

Artigo 7. Do School Leaders Lead? Rhetoric, Ambiguities, Weak Articulations, and Organised Anarchy

Artigo elaborado em coautoria com José Alves e Diana Soares e submetido à revista *International Journal of Management in Education*. As referências foram redigidas segundo as normas da APA – 7.^a edição.

Graphic Abstract



RESULTS

All School Actors

Teachers

CONCLUSIONS

Data suggest that the classroom transformation is linked more to isolated teachers' innovative behaviour (a quality of few in an organisation) or traces of a spontaneous order than to transversal collaboration, focused supervision, and organised action. More interdependency is needed to generate coupled systems.

Abstract

In an era that values school-based autonomy, we know little about how school actors interact to transform teaching and learning and improve organisational performance. This paper surfaces the perceptions of the school leaders, teachers, and memberships from the schools' self-evaluation teams regarding the collective engagement in producing the classroom transformation. The subjects were enrolled for a questionnaire validation (N=123) and a survey study (N=394). Multiple regression models were run to evaluate associations between the transformational capital initiative and organisational features – school vision, decisional capital, mobilising leadership, learning-oriented and supportive leadership, teachers' collaborative practices, innovative behaviour, and climate for teachers' involvement and innovation. The findings include (i) differences in the perceptions regarding leadership among school actors and (ii) weak to moderate effects of leadership, teachers' collaborative work, and innovative behaviour in promoting classroom transformation. Hence, investing in producing systemic and articulated interventions is still a keystone in the school's organisation.

Keywords: Transformational capital; leadership; innovation; collaborative practices; spontaneous order; loosely coupled system

1. Introduction

The schools are educational organisations between logics of action politics, contextual, cultural, managerial, and relational. Then, the school transformation processes demand the comprehension of the organisation as a system of actors, a perspective defended by Friedberg (1995) that sustains the approach explored in this article. According to the same author, the schools' transformation is associated with relatively autonomous actors acting through the general constraints of bounded rationality. Its role is to structure and regulate their conflictual cooperation to pursue common purposes. Highlighted by this premise, the school transformation depends on the capacity to create unblocking within the organisation and among the school actors. Therefore, reinforcing a constructed school autonomy is crucial for reforms and a solution for comprehensive and contextualised transformations. However, according to Barroso (2022), school autonomy has been implemented more as a need fiction for legitimate government control than to promote school decision initiatives. Brunsson (2006) also referred to the logic of legitimacy and signalled the inconsistencies between the dialogue, the decisional centres, and the action that shaped organised hypocrisy. The tensions on educational systems forge the idea of schools as decoupling or loosely coupling systems, functioning modes regarding formal rules and practices (Brunsson, 2006; Orton & Weick, 1990; Weick, 1976). Indeed, Kılıçoğlu and Kılıçoğlu (2021) identified significant gaps between the proposed values and daily practices in the school organisation and inconsistency between rhetoric and reality. Types of loose coupling systems have been characterised in the literature regarding (i) formal structures and principles, (ii)

practices and activities within the organisation, (iii) horizontal and vertical fragmentation, respectively, within the school organisation and between levels of governance (Elken & Vukasovic, 2019). Still, regarding social institutions' functioning, Hayek (1979) announced a spontaneous order for defining self-organised systems. The spontaneous order is distinguished from the instrumental organisations since it is not established to attain a particular aim but to help individuals meet its purpose (diZerega, 1989). According to Luban (2020), the spontaneous order has become a key concept in modern social theory due to the idea of a 'grown' order instead of 'made' and as the result of gradual evolution rather than conscious planning. Thus, the schools appear to be drifting between instrumental and rational organisations and self-organised, fragmented, and loosely coupled systems.

This article focuses on the paradoxical issues that enrol organisations, analysing school actors' perspectives on school transformation and innovation. Two approaches were assumed in the research. In a cross-analysis, the first intends to comprehend how the school actors perceive their agentic patterns regarding their particular space of action within the organisation. Second, we expect to find clues that contribute to perceiving the modes of school organisation regarding its transformation. Therefore, this study is oriented by the questions: (i) Which factors regarding school organisation act as promoters or hindrances for the teaching and learning transformation process?; (ii) The school leaders, teachers, and memberships of the schools' self-evaluation teams exhibit different perceptions regarding the school agency?; (iii) How is the school functioning? Does it follow a rational logic, or does the sense of spontaneous order, fragmentary cultures, or loose coupling system prevail within the organisation?

2. Conceptual framework

2.1. Paths for Unlocking the School Transformation

Building a school of agency across the system and focusing on a collective alignment of dynamics, wills, and aims represent the path to unlocking the schools' transformation. In general, the concept of agency, transposed in educational contexts as school agency or school actors' agency, according to Oolbekkink-Marchand et al. (2017), is "based on the understanding that people do not merely react to and repeat given practices" (p.38). It represents the principals' and middle leaders' actions for (i) building a learning vision, providing learning support, and managing the learning program (Bellibaş et al., 2020); (ii) exercising influence toward the identification and achievement of the organisation's vision and goals (Leithwood, 2021); (iii) inducing motivation on the staff to ensure that they contribute to the school's mission (Daniëls et al., 2019); (iv) providing regulation for cooperation and system reassessment to meet teacher's needs (Altun & Yengin Sarkaya, 2020). The agency residing in individuals is an emergent phenomenon of the actor-situation transaction, and it is not something that people can have – as a property, capacity, or competence – but is something that people do (Biesta et al., 2015). It represents how the leaders' agency meets the teachers' agency to produce effective and successful solutions for teaching

and learning. More specifically, agency denotes the quality of the actors' engagement with the temporal-relational contexts for action, not the quality of the actors themselves (Biesta et al., 2015). From the teachers' perspective, the agency represents an *ethos* where the organisation's contextual factors and cultural trends interact with the teachers' individual characteristics and professional beliefs. Aligned with these theoretical assumptions, we propose the hypothesis:

H1: *The school actors' perceptions regarding the organisational ethos differ.*

2.2. Context and Organisational Culture as the Onus of Leadership

The school transformation requires integrated systems where synergistic leadership capacity meets the teachers' capacity-building for raising sustainable changes. It means increasing the comprehensive, responsive, and inclusive solutions for improving learning communities and the students learning. Therefore, the school leaders must provide a "willingness for the organisation to change, and the concept of new challenges is paramount by prioritising mastering knowledge, services, and products" (Fuad et al., 2022, p.4).

Successful schools claim successful school leadership. No one is better placed to influence the teachers' quality directly and indirectly than the school's principal regarding professional autonomy, professional capital, commitment, and expertise (Day, 2017). Innovation is a rule of thumb for guiding a system. However, according to the literature, schools are still fighting with conservatism, resistance, and failing to address challenges (Ellis et al., 2019; Eyal, 2009; Fuad et al., 2022; Hargreaves, 2010; OECD, 2016; Tyack & Tobin, 1994). Instead of devoting time to developing justifications for inertia, it would be worth it to pursue engagement and the risks of action (Nóvoa, 2019). Empowering an organisation requires leading to a shared vision of innovation and building integrated and contextualised responses for teaching and learning. Bottom-up solutions, leveraged in the school's real, deep, and shared knowledge, may strengthen leaders' and teachers' decisional capital. For Constantinides (2022), this means to assure a shared and collective process through constructing meanings. It would help teachers understand the contexts and enact educational changes grounded on professional accountability and a culture of collaborative instructional focus. The literature describes the importance of the school evaluation, external and self-evaluation, on providing shared collective responsibility and mutually constructed narratives, understandings, values, and vision (Cochran-Smith, 2021; Hutt & Lewis, 2021; O'Brien et al., 2022; Simeonova et al., 2020).

Besides possessing and spreading school knowledge, supporting change is also challenging for school leaders. Transformational, empowering, and learning-centred leadership, either of principals or middle leaders, is needed to address the school change. Transformational leadership for sustainable organisational change evidences five insights: (i) communicating collective ownership of the change agenda, (ii) maintaining a sense of urgency, (iii) empowering teachers to act in furtherance of the change agenda, (iv) embedding the change in the

consciousness of the staff, and (v) implementing a succession plan (Thompson, 2020). Coherent school projects of change are better engendered through empowered leaders and empowering relationships with empowered teachers (Ezzani, 2015). Empowering-centred leadership can foster collectivism, teachers' psychological empowerment, a school climate for innovation and learning, and social capital (Bak et al., 2022; Vermeulen et al., 2020; Wang, 2019; Yuan et al., 2018; Zhu et al., 2019). The literature documents that learning-centred leadership influences (i) the promotion of social and individual capital, (ii) climate for innovation, (iii) innovative learning environments, (iv) teachers' agency, (v) learning cultures, and (vi) learning organisations (Daniëls et al., 2019; French et al., 2022; Gil et al., 2018; Pan & Chen, 2021; Tayag & Ayuyao, 2020; Zhu et al., 2019).

Transformational, empowering, mobilising, and learning-oriented leadership is crucial for aligning visions and school aims and building and sustaining teachers' expertise, commitment, resilience, and well-being. These are the ultimate challenges to undertaking transformational efforts and avoiding turnaround. Therefore, we propose to examine the following hypotheses:

H2: *Leadership, directly or indirectly, influences teaching practices.*

H3: *The school vision impacts teaching practices.*

H4: *The knowledge provided by the schools' self-evaluation impacts teaching practices.*

2.3. Innovation and Involvement as the Onus for Transformation

A change strategy must be conceived as a sustained process from the beginning and focused on the actors of the organisational scenario. Teachers are the final and decisive referees of the educational transformation, and "no plan for sustainable educational change can ignore or bypass the teacher" (Hargreaves & Shirley, 2009, p.88). Unless teachers are deeply engaged in the transformation, conservatism will prevail. Fullan (2007) alerts that the pressures for schools to become innovative when they were not prepared for it resulted in "innovations [that] were adopted on the surface, with some language and structures becoming altered, but not the practice of teaching" (p.6).

"As a learning approach, innovation pedagogy is constantly evolving to meet the changing requirements of the environment" (Konst & Kairisto-Mertanen, 2020, p.51). Hence, it requires agency as an essential dimension of teachers' professionalism and means for teachers to be active agents in and of their work (Biesta et al., 2015). Developing an intrinsic spirit of the agency requires a sustainable, positive school climate that fosters collaborative work and gives autonomy to the teachers (Pathak & Mishra, 2019). A study developed by Oolbekink-Marchand et al. (2017) revealed that the achievement of the agency is influenced by teachers' beliefs, contextual support and trust from leaders, and strong pedagogical beliefs. Personal and individualised support is also necessary to empower teachers to engage in innovative practices (Sotiriou et al., 2016). Building and sustaining expertise requires the teachers' confidence to take risks and regular reflection on their practices and policy contexts (Day, 2017).

The focus of teachers on collective interests must be encouraged by leaders and, according to Gao et al. (2021), includes (i) motivation regarding an inspiring vision, (ii) intellectual stimulation expressed by encouraging the followers to challenge the *status quo*, and (iii) individual consideration by supporting teachers' individual development. An environment with these attributes is crucial to foster teachers' professional continuous learning, which is instrumental for teachers' growth and effectiveness (Lee et al., 2020). Tautologically, the school climate emerges as a crucial factor for teachers' involvement, mutual collaboration, innovative behaviour, continuous learning, and resilience, five exponents of school innovation and transformation. Hence, we propose to examine the following hypotheses:

H5: *The school climate influences teaching practices.*

H6: *Innovative behaviour influences teaching practices.*

H7: *The teachers' collaborative practices impact teaching practices.*

3. Methodology

We used online questionnaires to assess a cross-analysis of principals', middle leaders', memberships of the schools' self-evaluation teams' (SST), and teachers' perceptions due to promoters and barriers to successfully transforming teaching and learning. A quantitative study was designed regarding three main steps: instrument development and validation, sample constitution, and survey for construct measurement. The statistical analysis was performed with IBM SPSS Statistics 28.0.

3.1. Instrument

The first step of the research process included identifying analysis domains to build questionnaires, item generation, and content validity (Boateng et al., 2018). Highlighted in the existing literature, we identified two major domains for understanding the successful transformation of classroom practices: (i) subscribing organisational aspects, the leadership capital (Bartee, 2007; Sujudi et al., 2020); (ii) regarding the teachers' practices, the professional capital (Chen et al., 2016; Day, 2017; Fullan et al., 2015). Then, we defined the dimensions related to both domains to sustain the construction of items. Related to the former domain, we identified the variables school vision (Daniëls et al., 2019; Hargreaves & Shirley, 2009), mobilising, learning-oriented, and supportive leadership (Brown et al., 2020; De Matthews, 2015; Hitt & Tucker, 2016; Torres et al., 2020) and use of school knowledge to support decision making (Cochran-Smith, 2021; Hutt & Lewis, 2021; Portz, 2021). Regarding professional capital, we pointed out three focuses: (i) climate for innovation and teachers' involvement (Gao et al., 2021;

Khun-Inkeeree et al., 2021; Vermeulen et al., 2020; Yim et al., 2020); (ii) innovative behaviour (Gkorezis, 2016; Khaola & Oni, 2020; Vermeulen et al., 2020); (iii) teachers' collaborative practices (Azorín & Fullan, 2022; French et al., 2022; Jones et al., 2023; Sinnema et al., 2022). For measuring the changes in the teaching and learning process, we conceived the construct transformational capital initiative deduced by the prevailing literature (Alves, 2021; Kaewsangon et al., 2022; Konst & Kairisto-Mertanen, 2020; Lacroix, 2020; Nelson et al., 2019). We comprehend the proposed operative construct as a systemic, sustainable, and driven mission process that happens in schools, leading to its transformation and being how professional and organisational capital is used to transform teaching and learning (Serra et al., 2023). It refers to the existence of an initiative for mobilising transformation. This perspective is aligned with the idea of teachers' autonomy and intentional use of their professional space (Oolbekkink-Marchand et al., 2017) for classroom transformation. The constructs were mapped to identify their specific components that led to items or observed variables.

Variants of the questionnaire were adapted to accomplish different respondents: principals, middle leaders, teachers, and memberships from SST. Innovative behaviour and teachers' perception of involvement were variables exclusively included in the teachers' questionnaire because it intended to perceive the ability and willingness to apply new ideas or practices self-perceived (Rogers, 2003). The variations between questionnaires considered aspects like '*I foster teachers to participate in pedagogical experiences*' for principals and middle leaders and '*Leaders foster teachers to participate in pedagogical experiences*' for memberships of the SST and teachers. A four-point Likert scale concerning agreement was adopted '1- totally disagree to 4- totally agree' to evaluate items regarding the school vision (SV- 8 items), use of school knowledge for decisional capital (SKDC- 8 items), mobilising leadership (ML- 5 items), learning-oriented and supportive leadership (LSL- 4 items), school climate for teachers involvement (CTI- 5 items) and for innovation (CI- 4 items), innovative behaviour (IB- 7 items), and transformational capital initiative concerning the students perspective (TCIs- 8 items). IB included a reverse-scored item: '*Innovative teachers do not always see their proposals being welcome*'. A scale for evaluating the frequency of practices was adopted to appreciate teachers' collaborative practices (TCP- 7 items) and transformational capital initiative regarding teaching practices (TCIt- 7 items). It considered the degrees: '1 - never, 2 - punctually or once a year, 3 – ounce per trimester, 4 – several times per trimester'. Both scales offered the no opinion possibility to avoid waiver and, according to Krosnick et al. (2002), to prevent the respondents from "fabricate reports of 'non-attitudes' due to pressure to appear opinionated [...] choosing purely randomly among offered response alternatives", or "making a choice driven by the structure of the question".

We conducted a reflection with two experts to evaluate the item's content relevance, representativeness, and technical quality per domain. Then, we proceed to a spoken reflection above the questionnaires with teachers, one element of an SST, one teacher with experience in school management, and one teacher with specialised training in school management and administration.

The survey questionnaire was applied to a sample of 123 Portuguese teachers with the purpose of validation: 59 (48.0%) from the north country, 46 (37.4%) from the centre, and 18 (14.6%) from the south. It included 23 (18.7%) males and 100 (81.3%) females, with an average age of 51.76 ± 8.09 , average teaching tenure of 25.83 ± 10.750 , 67 (54.5%) are graduated, and the remaining have additional qualifications. The sample included 18 (14.6%) teachers from primary school, 17 (13.8%) from middle school, and 88 (71.6%) from high school level.

The validation process adopted a multi-item scale procedure. According to Diamantopoulos et al. (2012), it outperforms single-item scales in predicting validity. Instrument validation included (i) item analysis, (ii) reliability of constructs, and (iii) dimensionality of constructs and confirmation of the structure conceptual framework (Tapsir et al., 2018). The internal consistency of constructs has been tested by calculating Spearman's correlation coefficient of the item's score with the total score of the axis it measures. The corrected item-total correlation was used to ensure the selected item had high item-score reliability (Zijlmans et al., 2019). Items with very low adjusted item-total correlations (< 0.30) are less desirable and were considered a cue for potential deletion from the analysis (Boateng et al., 2018). Secondly, each construct defined in the questionnaire was analysed concerning reliability through Cronbach's Alpha coefficient. The correlation between variables or items influences this statistic, and when it is weak, even though Cronbach's Alpha is high, it wrongly suggests that the consistency is good (Pestana & Gageiro, 2014). Therefore, the correlations between variables and the effect of each variable in the internal consistency through Alpha if Item Deleted was also analysed. Finally, the uni-dimensionality of the constructs was assessed through principal component analysis, which provided information on substantial factors persisting in the residuals after estimating a primary measurement dimension.

3.2. Hypotheses test

The study was conducted in Portugal with an estimated population of 11700 subjects belonging to 60 school clusters evaluated by the Inspectorate in the third cycle of evaluation, which started in 2018. At the same time, a reform was introduced in Portugal aligned with the pillars of education for the 21st century (OECD, 2018). In this process, curricular autonomy and flexibility were granted to the schools, and administrative decentralisation from the state to the local political power occurred.

The survey was developed to allow construct analyses and included a 394-subject sample (principals, middle leaders, teachers, and members from the SST). The sample comprised schools whose principals freely agreed to participate in the study. Furthermore, all teachers who voluntarily participated in the study gave their informed consent to the confidential use of information for research purposes.

The internal consistency of each construct was assessed using Cronbach's Alpha before hypothesis tests were employed to ensure validity. Regarding the hypotheses under study, we analysed the existence of differences between principals, middle leaders, teachers, and members

of SSTs' perceptions regarding the school organisation and practices, namely, SV, SKDC, ML, LSL, TCP, CTI, TCIt, and TCIs. Therefore, the Kruskal-Wallis's test was performed for an unrelated k-sample, considered preferable due to unequal group sample size (under 30 among principals and teachers' membership of the SST) and SV variable normality violation. Furthermore, to evaluate the tests' type I error rate and power rate, the Monte Carlo evaluation was performed and determined the approximate critical values for the Kruskal-Wallis H-test. When significant differences between educational actors' perceptions existed, a Wilcoxon-Mann-Whitney U-test was conducted to identify the divergent groups.

A multiple regression backward model was run to evaluate associations and forecast an effect between the variables regarding organisational and cultural patterns of schools (SV, SKDC, ML, LSL, TCP, CTI, CI, and IB) and the teaching and learning process (TCIt and TCIs). The cut-off levels of significance applied were .05 and .10 for variable entry and removal, respectively. For each multiple regression model, we checked the following criteria: (i) collinearity among the independent variables assessed through variance inflation factor (VIF) for each independent variable; (ii) F-test ANOVA to evaluate the lack of fit provided by the regression model, with 95% confidence interval; (iii) t-test for checking the statistical significance of the independent variables in predicting the dependent variable; (iv) the residuals were plotted and examined for homoscedasticity. Additionally, a linear regression analysis was performed between TCIt and TCIs.

3. Results and Discussion

3.1. Instrument validation

The questionnaire comprised 61 items regarding nine constructs and the dimensions of leadership capital and teachers' professional capital. Skewness and kurtosis values were analysed to determine constructs and items' normality. Most of the constructs and items respect the cut-offs between -2 and +2 for asymmetry and kurtosis considered acceptable to prove normal univariate distribution (George & Mallery, 2003), except for SV, IB, and TCIt. The item analysis (table 1) conducted with Spearman's' inter-item correlation and item-total correlation revealed mainly positive and significant values, indicating that items fit together conceptually (DeVon et al., 2007). The items IB1, TCIs3, and TCIt7 were an exception. They registered very low inter-item correlations with the remaining items, some negative and two non-significant correlations (TCIt1-TCIt7 and TCIt5-TCIt7). High correlations suggest multi-dimensionality and low inter-item statistics pronounce non-discriminant items within the construct. If item TCIt7 is deleted, Alphas' Cronbach concedes to the respective construct stronger reliability (table 1). For TCIt7, the internal consistency of the construct will increase but will still be good, changing from .825 to .844. However, deleting TCIs3 and IB1 does not increase the construct's reliability. Concerning constructs' reliability, it varies between reasonable for SV, LSL, CTI, TCIs, and IB and good for SKDC, ML, TCP, and TCIt. The item-total correlations within .30 to .70 are acceptable, besides

having at least 50% of the retained items with total scores in the range of .30 and .70 (Carmines & Zeller, 1974). Regarding the three items referred to above, the cross-analysis of inter-item correlations' values and Cronbach's Alpha coefficient value denounce that no combinations are considered with an unacceptable range (Tapsir et al., 2018).

Table 1.

Statistics for scale validity

Constructs	Spearman's Rho		Cronbach's alpha if the item deleted	Cronbach's Alpha
	Item-total correlation	inter-items correlation		
<i>School Vision</i>				
SV1: Teachers share a school vision	.647**	.161	.739	.773
SV2: School vision influences the teachers' classroom practices	.472**	to .682	.771	
SV3: School vision determines the self-evaluation strategy	.682**		.759	
SV4: Leaders work concertedly to develop a school vision	.647**		.746	
SV5: Middle leaders involve teachers in the school vision	.671**		.738	
SV6: Working to strengthen the school's vision and expand its mission	.631**		.741	
SV7: Fostering a sense of mission	.745**		.744	
SV8: Streamline work routines to foster a shared idea of pedagogy	.624**		.748	
<i>Use of School Knowledge for Decisional Capital</i>				
SKDC1: Fostering debate about schools' results	.749**	.219	.858	.872.
SKDC2: Joint identification of drivers and obstacles to educational success sustained in the schools' results	.748**	to .759	.844	
SKDC3: Joint identification of areas that need improvement or consolidation sustained in schools' results	.704**		.848	
SKDC4: Support decisions and strategic action on knowledge produced by the SSE	.799**		.842	
SKDC5: Teachers' training plan definition is sustained on the SSE	.705**		.857	
SKDC6: Self-evaluation activity appreciation	.771**		.848	
SKDC7: Alignment between teachers' looking for training and knowledge produced by the SSE	.577**		.898	
SKDC8: Teachers reflect together on the schools' results	.683**		.852	
<i>Mobilising Leadership</i>				
ML1: Clarification of the intentionality of the educational aims and strategies by middle leaders	.755**	.406 to .813	.780	.821
ML2: Promotion of teachers' participation in the decision make and strategic planning	.796**		.759	
ML3: Fostering new approaches for teaching and learning	.813**		.794	
ML4: Fostering teachers' participation in pedagogical experiences	.734**		.811	
ML5: Valuing and giving visibility to exemplary or innovative practices	.754**		.787	

<i>Learning and Supportive Leadership</i>				
LSL1: Fostering teachers' spirit of mutual help	.837**	.321	.704	.759
LSL2: Fostering the creation of internal support and learning networks between teachers	.637**	to .878	.705	
LSL3: Fostering the creation of spaces, moments, and activities for innovative experiences sharing	.863**		.704	
LSL4: Generation of opportunities that promote collaborative work	.878**		.700	
<i>Teachers' Collaborative Practices</i>				
TCP1: Teachers regularly do collaborative work in school	.742**	.204	.816	.833
TCP2: Teachers build together didactical materials	.804**	.804	.785	
TCP3: Teachers do pedagogical work in multisubject teams	.732**		.805	
TCP4: Teachers do pedagogical work in subject teams	.736**		.797	
TCP5: Teachers observe other teachers' practices	.556**		.791	
TCP6: Teachers share new ideas/knowledge	.772**		.842	
<i>Climate for Teachers' Involvement</i>				
CTI1: Collaborative work occurs in a trustful climate	.831**	.493	.855	.890
CTI2: Collaborative work promotes professional development	.743**	to .837	.857	
CTI3: Collaborative work fosters involvement in the schools' dynamics	.744**		.865	
CTI4: Teachers organise themselves for mutual support	.837**		.862	
CTI5: Teachers feel motivated to fulfil the school improvement plan	.835**		.890	
<i>Climate for Innovation</i>				
CI1: Teachers show receptiveness to new pedagogical approaches	.777**	.393	.671	.772
CI2: Teachers value the innovative colleagues	.807**	to .793	.703	
CI3: Teachers accept well changes and reforms	.711**		.727	
CI4: Teachers accept better new pedagogical experiences when the SSE diffuses information on it	.793**		.774	
<i>Teachers' Innovative Behavior</i>				
IB1: Teachers look for new methods or strategies to develop the teaching-learning process	.529**	-.024	.730	.715
IB2: I look for new methods or strategies to develop the teaching-learning process	.614**	to .700	.652	
IB3: I incentive other teachers to adopt new teaching strategies	.616**		.689	
IB4: I like to experience new teaching methods in my classes	.597**		.653	
IB5: I feel cheered up when I face the possibility of developing educative experiences	.555**		.685	
IB6: I take risks on my concerning pedagogical-didactics options	.552**		.668	
IB7: I take risks with peers concerning pedagogical-didactics options	.724**		.692	

<i>Transformational Capital Initiative – students’ perspective</i>				
TCIs1: Students work on projects that take at least a week to be concluded	.657**	-.042 to	.724	.769
TCIs2: Students work in groups to solve problems or tasks	.681**	.681	.726	
TCIs3: Students can change between classes in some subjects and for a few periods	.536**		.757	
TCIs4: Students are involved in activities that imply the fusion of classes	.653**		.754	
TCIs5: Students are involved in interdisciplinary activities	.627**		.735	
TCIs6: Students, in most subjects, use digital interactive tools for learning	.515**		.759	
TCIs7: Students build digital materials in most classes/subjects	.671**		.728	
<i>Transformational Capital Initiative – teachers’ perspective</i>				
TCIt1: Most teachers / I use learning platforms to support the teaching-learning process	.585**	.058 to	.799	.825
TCIt2: Most teachers / I use digital materials available online	.506**	.755	.787	
TCIt3: Most teachers / I use digital material produced by them/me	.755**		.809	
TCIt4: Most teachers / I use active methodologies for teaching	.755**		.791	
TCIt5: Most teachers / I play the role of a moderator or mediator in the teaching-learning process	.499**		.795	
TCIt6: Most teachers / I have been experimenting with new forms of developing the teaching and learning process for the last three years	.628**		.780	
TCIt7: Most teachers / I teach with other colleagues in the same classroom	.598**		.844	

**p<.001

The dimensionality of the construct’s evaluation was conducted through principal component analysis. It revealed that all constructs were suitable for factorial analysis according to significant values of the KMO test and sphericity among the variables measured through Bartlett’s test (table 2). SV eigenvalues suggested a multi-dimensional construct, so we remove items SV2, SV3, and SV8 with lower communalities, ensuring that the factor loadings still represent the underlying factor. Other items with very low communalities or loadings were also removed: SKDC1, LSL2, TCP5, IB1, IB3, TCIs3, TCIs4, and TCIt7. All items with loadings above .50 were included in the construct. Despite LSL3 ‘*Fostering the creation of internal support and learning networks between teachers*’ evidence of a low communality and loading under .50 (Table 1), it was included in the construct because we believe that it is critical in explaining the scale’s structure (Acar Güvendir & Özer Özkan, 2022). Except for IB, all constructs are unidimensional, including items that explained between 53.4% (TCIs) and 70.8% (CTI) of the total variance. IB appears as a two-dimension construct according to two eigenvalues above 1. The cross-analysis of IB loadings, item-total correlation, and Cronbach’s Alpha suggested IB5 item deletion. However, innovative organisations foster risk tolerance (Day & Shea, 2020), and “creating and protecting a space for

Table 2.*Dimensionality analysis of constructs*

Construct	KMO	X ²	Sig.	Eigen- value	% Variance Explained	Communalities	Loadings	
SV	.702	185.867	<.001	1.732	53.396	SV1	.758	
						SV4	.640	
						SV5	.798	
						SV6	.793	
						SV7	.647	
SKDC	.867	543.555	<.001	4.444	63.484	SKDC1	.692	
						SKDC2	.877	
						SKDC3	.851	
						SKDC4	.843	
						SKDC5	.712	
						SKDC6	.807	
						SKDC8	.776	
						ML	.784	236.880
ML2	.852							
ML3	.740							
ML4	.677							
ML5	.777							
LSL	.775	259.580	.001	2.684	67.092	LSL1	.873	
						LSL2	.479	
						LSL3	.921	
						LSL4	.918	
CTI	.810	402.347	<.001	3.538	70.751	CTI1	.886	
						CTI2	.883	
						CTI3	.856	
						CTI4	.837	
						CTI5	.758	
CI	.765	141.043	<.001	2.451	61.282	CI1	.856	
						CI2	.793	
						CI3	.776	
						CI4	.698	
TCP	.774	195.648	<.001	2.832	56.633	TCP1	.727	
						TCP2	.824	
						TCP3	.760	
						TCP4	.798	
						TCP5	.641	
IB	.620	245.776	<.001	2.591	51.828	IB1	.848	
				1.115		22.299	IB2	.882
				IB3		.661		
				IB4		.740		
				IB5		.416		
TCIs	.693	166.347	<.001	2.620	52.397	TCIs1	.745	
						TCIs2	.796	
						TCIs5	.643	
						TCIs6	.695	
						TCIs7	.731	
TCIt	.852	319.756	<.001	3.564	59.397	TCIt1	.767	
						TCIt2	.855	
						TCIt3	.631	
						TCIt4	.721	
						TCIt5	.800	
						TCIt6	.825	

experimentation, research and risk-taking in schools foster educational innovation in teaching practices, curricula, and administration” (Ellison, 2009, p.42). Thus, we decided to include IB5 in the construct due to its relevance in explaining it. Besides, Spector et al. (1997) state that patterns of subject responses to items that vary in direction and extremity can produce an artifactual two-factor structure. The appearance of two factors depends upon the joint distributions of the items and people on the underlying measurement continuum. The same author adds that extreme items are necessary to distinguish extreme individuals on the construct from moderate (Spector et al., 1997).

In conclusion, the questionnaire validated included 52 items belonging to the constructs SV (five items), SKDC (seven items), ML (five items), LSL (four items), CTI (five items), CI (four items), TCP (five items), IB (five items), TCIs (five items), and TCIt (six items).

4.2. Findings

4.2.1. Respondent profile

This study was developed to understand and compare school actors' perceptions about formal and informal, collective and individual modes of organisational functioning, and their perceived impact on teaching and learning. It involved 394 individuals (table 3), including 11 principals (2.8%), 44 middle leaders (11.2%), 20 memberships of the SST (5.1%), and 319 teachers (80.9%). Most principals were males (81.8%), had an average age of 55.7 ± 5.9 years, had special training in school management and administration, and exercised between 1 and 20 years (8.5 ± 6.3 years). Middle leaders were mainly female (72.7%), with an average age of 55.1 ± 6.3 years; 52.3% are graduated, 68.2% did not have special supervision training and assumed leadership functions from as long as 1 to 31 years (6.0 ± 6.4 years). The memberships of the SST are mostly women (70.0%), with 50.4 ± 13.7 years old, 75% are graduated, and only 35% exhibit special training for exercising the function, which they execute for 4.5 ± 4.4 years. Most teachers were females (76.2%) with 52.1 ± 7.9 years, 67.1% graduated, 32.9% evidence of additional qualifications, and they taught for as long as 1 to 44 years (25.3 ± 10.9). This sample is representative of a population estimated at 11700 teachers, with a confidence level of 95% and a margin of error of 5%.

4.2.2. Cross-analysis of the school actors' perceptions

The reliability of each scale measured through Cronbach's Alpha coefficient (table 4) reflects that the constructs exhibit a reasonable (between .750 and .795) to a good level (between .816 to .897) of consistency (Cronbach, 1951). The skew values and kurtosis were found to be no bigger than -2 and smaller than 2 (George & Mallery, 2010) except for IB Kurtosis (2.594) but still inferior to 7 (West et al., 1995), which indicated that the data are normally distributed.

Table 3.*Sample description*

		Principals	Middle Leaders	Members of SST	Teachers
<i>Number of respondents</i>		11 (2.8%)	44 (11.2%)	20 (5.1%)	319 (80.9%)
<i>Age (years)</i>	Minimum / Maximum	44 / 64	44 / 66	40 / 64	24 / 67
	Mean	55.7	55.1	50.4	52.1
	Standard deviation	5.9	6.3	13.7	7.9
<i>Gender</i>	Frequencies				
	<i>Male</i>	9 (81.8%)	12 (27.3%)	6 (30.0%)	76 (23.8%)
	<i>Female</i>	2 (18.2%)	32 (72.7%)	14 (70.0%)	243 (76.2%)
<i>Qualifications</i>	Frequencies				
	<i>Graduated</i>	0 (0.0%)	23 (52.3%)	15 (75.0%)	214 (67.1%)
	<i>Postgraduate</i>	3 (27.3%)	7 (15.9%)	1 (5.0%)	32 (10.0%)
	<i>Master's degree</i>	8 (72.7%)	11 (25.0%)	2 (10.0%)	70 (21.9%)
	<i>PhD</i>	0 (0.0%)	3 (6.8%)	2 (10.0%)	3 (1.0%)
<i>Tenure (years)</i>	Minimum / Maximum	1 / 20	1 / 31	0 / 15	1 / 44
	Mean	8.5	6.0	4.5	25.3
	Standard deviation	6.3	6.4	4.4	10.9
<i>Specialised training¹</i>	Frequencies				
	<i>No</i>	0 (0.0%)	30 (68.2%)	13 (65.0%)	
	<i>Yes</i>	11 (100%)	14 (31.8%)	7 (35.0%)	

¹School Management and Administration; Teachers Supervision; School Evaluation

The Kruskal-Wallis test enounces no statistically significant differences between the schools' actors regarding the perception of SKDC, TCP, CI, TCIs, and TCIt (table 5). Conversely, the results indicate a statistically significant difference between the school actors regarding SV with $H(n=394)=10.804$, $p<.05$, ML with $H(n=394)=46.699$, $p<.001$, and LSL($n=394$)= 29.150, $p<.001$.

A Wilcoxon-Mann-Whitney-U test was conducted for two unrelated samples to compare and identify the divergent individuals due to the pairwise comparisons between principals, middle leaders, membership of the SST, and teachers (table 6). Bonferroni correction was applied in these analyses to counteract the multiple comparisons problem and avoid Type 1 Error (p -value=.05/6 =.008). According to Table 5, the differences regarding SV are not statistically significant, meaning that the school actors share the same perception. The SV average value is $3.32 \pm .65$ (table 4) and elucidates that they agree about a shared school vision where leaders and teachers work to expand the school mission. Creating a positive school culture includes sharing a common vision, and leaders should appear as role models in inspiring others to accomplish the school vision and mission statement in daily practice (Juwono et al., 2017).

Regarding leadership variables, ML and LSL, there are no significant differences between principals and middle leaders and between teachers and members of the SST. However, the Mann Whitney-U test (table 6) revealed, for a p -value $<.008$, statistically significant differences between the: (i) principals and the SST members regarding ML with $U(n=394)=26.000$, $p<.001$ and LSL with $U(n=394)=41.000$, $p<.003$; (ii) principals and teachers about ML with $U(n=394)=473.500$, $p<.001$ and LSL with $U(n=394)=632.500$, $p<.001$; (iii) middle leaders and the

SSTs' members concerning ML with $U(n=394)=199.500$, $p<.001$; (iv) middle leaders and teachers due to the ML with $U(n=394)=3393.500$, $p<.001$ and the LSL with $U(n=394)=4388.000$, $p<.001$.

Table 4.

Latent variables descriptive statistics and reliability of the constructs

Constructs		Global	Principals	Middle Leaders	Members of SST	Teachers	Cronbach's alpha
SV	<i>Mean</i>	3.32	3.67	3.49	3.16	3.29	.844
	<i>SD</i>	.65	.29	.65	.67	.06	
SKDC	<i>Mean</i>	3.09	3.32	3.19	3.40	3.05	.897
	<i>SD</i>	.77	.22	.58	.76	.80	
ML	<i>Mean</i>	3.13	3.87	3.65	3.05	3.03	.816
	<i>SD</i>	.75	.24	.40	.82	.75	
LSL	<i>Mean</i>	3.15	3.86	3.58	3.26	3.05	.846
	<i>SD</i>	.82	.26	.45	.79	.85	
TCP	<i>Mean</i>	3.17	3.36	3.28	3.17	3.15	.795
	<i>SD</i>	.72	.48	.70	.77	.73	
CTI	<i>Mean</i>					3.39	.839
	<i>SD</i>					.58	
CI	<i>Mean</i>	2.94	2.84	3.06	2.56	2.95	.750
	<i>SD</i>	.67	.59	.49	.90	.67	
IB	<i>Mean</i>					3.51	.753
	<i>SD</i>					.53	
TCIs	<i>Mean</i>	2.88	2.90	2.92	2.52	2.90	.836
	<i>SD</i>	.73	1.02	.79	.64	.72	
TCIt	<i>Mean</i>	3.28	3.23	3.41	3.02	3.29	.767
	<i>SD</i>	.69	.75	.65	.72	.69	
TCP6. Teachers observe other teachers' practices	<i>Mean</i>	1.93	1.91	2.18	2.09	1.90	
	<i>SD</i>	1.17	.09	1.11	1.12	1.18	
TCIs3. Students can change between classes in some subjects, and a few periods	<i>Mean</i>	1.10	1.36	1.50	1.25	1.03	
	<i>SD</i>	1.11	.06	1.23	.94	1.10	
TCIs4. Students are involved in activities that imply the fusion of classes	<i>Mean</i>	1.66	1.64	1.80	1.45	1.66	
	<i>SD</i>	1.25	.06	1.25	1.07	1.28	
TCIt7. Teachers teach with other colleagues in the same classroom	<i>Mean</i>	2.35	3.09	3.39	2.95	2.12	
	<i>SD</i>	1.39	1.24	.83	1.02	1.38	

SD - Standard deviation

These differences in perceptions point out a more favourable and optimistic perception among leaders regarding ML, with mean values of $3.87\pm.24$ for principals and $3.65\pm.40$ for middle leaders, against the perceptions of teachers and SSTs' members of partial concordance of $3.03\pm.75$ and $3.05\pm.82$, respectively (table 4). The differences registered indicate a divergence in how leaders perceive their actions regarding clarifying aims, fostering participation, and promoting

pedagogical innovation and the one comprehended by teachers and the SST members. The same perspective exists regarding LSL. Leaders document an action strongly oriented to support teachers with mean results of $3.86 \pm .26$ for principals and $3.58 \pm .45$ for middle leaders (table 4). This perception is slightly diluted among the SSTs' members ($3.26 \pm .79$) and teachers ($3.05 \pm .85$), which partially agree that leaders foster the teachers' mutual help, support collective learning and sharing practices, and promote teachers' collaboration. Hence, what leaders believe they are doing or how they are doing it is not wholly aligned and understood by teachers and the SSTs' members. Leadership effectiveness must be grounded within the context to ensure that responsibilities remain 'fit in mind' (Midha, 2022) and that a mission spirit prevails. Transformational leadership influences organisational learning climate (Vermeulen et al., 2020), and learning-centred leadership impacts teachers' agency (Bellibaş et al., 2020), essential elements for teachers to develop commitment, intrinsic motivation, and effectiveness (Pellegrini et al., 2020). Deeper forms of collaboration for the system change that may elevate human potential concerning student learning (Azorín & Fullan, 2022) are values that school leaders must nurture.

Table 5.

Results of the Kruskal-Wallis test

	Kruskal-Wallis			Monte Carlo	
	H	df	Sig.	Sig.	99% Confidence Interval
<i>SV</i>	10.804	3	.013	.012	.009 / .014
<i>SKDC</i>	6.826	3	.078	.076	.069 / .083
<i>ML</i>	46.699	3	<.001	.000	.000 / .000
<i>LSL</i>	29.150	3	<.001	.000	.000 / .000
<i>TCP</i>	1.680	3	.641	.650	.638 / .662
<i>CI</i>	4.302	3	.231	.228	.217 / .239
<i>TCIs</i>	5.522	3	.137	.140	.131 / .149
<i>TCIt</i>	4.984	3	.173	.175	.166 / .185

The Kruskal-Wallis's test states no statistically significant differences between school actors regarding SKDC, TCP, CI, TCIs, and TCIt (table 5). School actors partially agree that the school knowledge produced by the SST sustains the reflection, decision, and action ($\mu=3.09 \pm .77$). Likewise, it partially fulfils the primary goal of improving the school's decisional capital and professional capital. Pellegrini et al. (2020) defend the importance of "leveraging leadership to develop effective knowledge management systems", which will benefit "intellectual property capital, new product development, and, more generally, innovation outcomes" (p.1459-1460). Several studies document the benefits of teachers' collaboration practices in improving student learning (Green et al., 2020; Park & Ham, 2016; Vaillant, 2019). However, the literature also alerts for the existence of limited cultures of collaboration (Azorín & Fullan, 2022) and the importance of collaborative work "that moves beyond superficial interactions of help, support, or assistance" (DeMatthews, 2014, p.180). In this study, school actors enounce and partly agree ($\mu=3.17 \pm .72$)

that they belong to a community of teachers that share and build pedagogical materials in disciplinary and multidisciplinary teams.

Table 6.

Results of the Wilcoxon-Mann-Whitney test

		U	Sig.
<i>Principals / Middle Leaders</i>	<i>SV</i>	222.500	.644
	<i>ML</i>	149.000	.041
	<i>LSL</i>	144.500	.031
<i>Principals / SST</i>	<i>SV</i>	46.000	.007
	<i>ML</i>	26.000	<.001
	<i>LSL</i>	41.000	.003
<i>Principals / Teachers</i>	<i>SV</i>	1176.500	.061
	<i>ML</i>	473.500	<.001
	<i>LSL</i>	632.500	<.001
<i>Middle Leaders / SST</i>	<i>SV</i>	266.000	.011
	<i>ML</i>	199.500	<.001
	<i>LSL</i>	328.500	.099
<i>Middle Leaders / Teachers</i>	<i>SV</i>	5508.000	.019
	<i>ML</i>	3393.500	<.001
	<i>LSL</i>	4388.000	<.001
<i>SST / Teachers</i>	<i>SV</i>	2697.000	.242
	<i>ML</i>	3008.500	.668
	<i>LSL</i>	2722.000	.267

Regarding CI, school actors' perceptions registered average values of 2.94 ± 0.67 , suggesting a less positive orientation to receptiveness to new pedagogical approaches, acceptance of changes and reforms, and valorisation of innovative colleagues. Finally, concerning teaching and learning, we registered slight but disquieting differences between TCIt ($\mu=3.28 \pm 0.69$) and TCIs ($\mu=2.88 \pm 0.73$). While school actors partially agree that classroom practices value active methodologies, broad use of digital and new pedagogical approaches, on the perspective of students learning the frequency varies between once a year to once a trimester. Note that classroom practices do not generally include school grammar changes, mechanisms provided by the Portuguese law (Table 4). Interdisciplinary practices also reveal low significance, even though they are fostered in Portuguese law and actively promoted by Government central services. Regarding these practices, were registered expressive differences between leaders' perceptions, $\mu=3.09 \pm 1.24$ for principals and $\mu=3.39 \pm 0.83$ for middle leaders, SSTs' member's perceptions ($\mu=2.95 \pm 1.02$), and teachers' perceptions ($\mu=2.12 \pm 1.38$). It reveals the functioning of two different schools and orders and the distance between the governmental and school centres of decision and reality. Additionally, classroom practice observations between peers, highly recommended by the Portuguese Inspectorate, are devalued in the schools. The logic of fragmentation, vertical

and horizontal, characterises the school system and produces cultural disconnections (Elken & Vukasovic, 2019; Torres & Palhares, 2008).

In short, data partially support hypothesis 1, once leadership effort and practices are not equally perceived among leaders and leads, even though school actors agree regarding SKDC, TCP, CI, and TCI. The data also suggest the existence of system disarticulations, pointing out distance and lack of dialogue or knowledge sharing between the school decision centre or supervision providers and the real realm.

4.2.3. Model measurements

Multiple linear regression models were developed to predict classroom TCI from exogenous variables relevant to educational organisations. The purpose was to comprehend which ones may act as explanatory variables and determine the model's overall fit and the relative contribution of each predictor to the total variance explained. Table 7 presents the results regarding the multiple linear regression models. The F-ratio of the ANOVA test sustains that the independent variables significantly predict the dependent variable with $p < .001$. Hence, the regression models are a good fit for the data. VIF-values measured are under the threshold of 5, the cut-off value considered problematic in generating multicollinearity problems (James et al., 2017).

Considering all educational actors, the model obtained regarding the learning process is expressed by $TCIs = 1.430 + .126ML + .338TCP$, statistically significant ($p < .05$), and with an $r^2 = .168$ (table 7). In the model, the proportion of variance purely explained by ML is 1.27%, and by TCP is 8.7%. The joint contribution of both independent variables is 6.8% (fig.1). The remaining variables – SV, SKDC, LSL, and CI – were excluded from the model. Because teachers are the final and decisive providers of any change and we found evidence of divergent perspectives regarding leadership, a multiple regression was run considering only teachers. From their perspective, TCIs' changes are explained by $TCIs = .833 + .110ML + .221TCP + .294IB$, with an $r^2 = .173$ (table 7). In this model, the independent variables TCP and IB are statistically significant with p-value $< .001$, but the effect of ML is not significant ($p = .051$). Thus, in the model, 4.0% of the variance is exclusive due to TCP, IB explains 4.2%, and 8.1% regards the joint contribution of both variables (fig. 1).

The global perception of all educational actors concerning the teachers' classroom practices leads to a regression model where TCP is the only statistically significant predictive variable ($p < .001$). The equation $TCIt = 2.523 + .243TCP$ expresses the model with an $r^2 = .066$. Regarding merely teachers' perceptions, the regression model is $TCIt = 1.340 + .095TCP + .469IB$, only statistically significant for IB ($p < .001$) and with $r^2 = .157$.

Table 7.

Results of backward multiple linear regression modelling concerning TCI

Dependent variable	Independent Variables			ANOVA		Coefficients			Collinearity	
		r	r ²	Z	Sig.	β	t	Sig.	VIF	
TCIs	All	.410	.168	39.537	<.001					
	Educational Actors (N=394)	Constant				1.430	8.290	<.001		
		ML				.126	2.454	.015	1.280	
		TCP				.338	6.406	<.001	1.280	
	Excluded variables*:									
		LSL				.006	.076	.939	3.146	
		SKDC				.016	.266	.790	1.637	
		CI				.027	.442	.659	1.757	
		SV				-.057	-.895	.371	1.879	
	Teachers (N=319)	Constant	.416	.173	21.941	<.001	.833	3.071	.002	
		ML				.110	1.956	.051	1.315	
		TCP				.221	3.887	<.001	1.288	
		IB				.294	3.990	<.001	1.110	
Excluded Variables*:										
	SKDC				-.074	-1.047	.296	.530		
	LSL				.006	.093	.926	.529		
	CI				.047	.530	.596	.327		
	SV				-.097	-1.400	.163	.573		
					-.106	-1.477	.141	.504		
TCIt	All	.256	.066	27.590	<.001					
	Educational Actors (N=319)	Constant				2.513	16.678	<.001		
		TCP				.243	5.252	<.001	1.000	
	Excluded variables*:									
		SKDC				.024	.441	.660	1.272	
		LSL				.008	.150	.881	1.295	
		ML				.068	1.224	.222	1.280	
		SV				-.027	-.482	.630	1.316	
		CI				.084	1.514	.131	1.311	
	Teachers (N=394)	Constant	.397	.157	29.488	<.001	1.340	5.189	<.001	
		TCP				.095	1.909	.057	1.066	
		IB				.469	6.729	<.001	1.066	
	Excluded Variables*:									
	SKDC				-.043	-.733	.464	1.293		
	CTI				-.026	-.442	.658	1.328		
	CI				-.074	-1.186	.236	1.441		
	LSL				-.055	-.937	.350	1.273		
	ML				-.018	-.307	.759	1.315		
	SV				-.093	-1.573	.117	1.328		
TCIs	All	.606	.367	227.637	<.001					
	Educational Actors (N=394)	Constant				.756	5.256	<.001		
		TCIt				.647	15.088	<.001	1.000	
TCP	All	.496	.240	63.500	<.001					
	Educational Actors (N394)	Constant				1.670	12.031	<.001		
		ML				.228	3.063	.002	3.038	
	LSL				.251	3.721	<.001	3.038		

*By order of exclusion

In short, the r of the tested models varies between .256 and .416 (table 7), indicating that the proportion of the TCI that the independent variables can explain drifts between weak to moderate (Pestana & Gageiro, 2014). The r of the variables included in the models varies between .256 and .394 (fig. 1), representing weak correlations. Hence, the data do not support hypotheses 3, 4, and 5, and SV, SKDC, CI, and CTI do not directly predict classroom practices. The data support hypotheses 6 and 7 poorly and partly hypothesis 2. ML, TCP, and IB appear as explanatory variables but with weak influences. The variable LSL did not have any direct impact on TCI.

Considering teachers' classroom practices as a predictor for TCI from the perspective of the learning process, we have reached the model $TCl_s = .756 + .644TCl_t$, having the predictive variable a statistically significant effect ($p < .001$), with an $r^2 = .367$. Hence, TCl_t has a moderate influence on TCl_s .

Finally, regarding the direct effect of leadership on TCP and a plausible indirect impact on TCI, the relation is expressed by $TCP = 1.670 + .228ML + .250LSL$, statistically significant ($p < .001$) and with an $r^2 = .240$. The model describes that the proportion of variance purely explained by ML is 2.7% and by LSL is 1.8%. The joint contribution of both independent variables evidences a higher magnitude of 19.5% (fig.2) and represents a moderate effect on TCP. The leadership action on classroom transformation seems to be exercised more indirectly by promoting collaborative work among teachers than as a direct effect, supporting hypothesis 2. It represents a moderate effect on classroom practices, which is supported by the literature through impacts observed on students learning (Hitt & Tucker, 2016), innovation climate (Wang, 2019), teachers' self-efficacy (Zheng et al., 2019), and IB (Bak et al., 2022). From the perspective of teachers, IB outshines the TCP in explaining TCI. TCP is the most expressive and consistent variable with a significant effect in TCI when all school actors' perceptions are considered.

IB is a predictor identified by teachers as having an impact on TCI. But IB is a "construct that comprises a personal attribute or degree of involvement" (Pathak & Mishra, 2019, p.70), being "expressed through the teachers' professional self-development" (Nemeržitski et al., 2013, p.410) and is a characteristic of a few within the organisation (Rogers, 2003). A school climate supportive of innovation may act as an endeavour for sharing knowledge and encourage teachers' IB (Song et al., 2014) or favoured acceptance of innovations (Kaewsang-on et al., 2022). However, CI or CTI did not accomplish as variables with significant effects on TCI. Then, the influence of IB on the whole school organisation may be diluted. Considering the impact through TCP, it represents a weak effect with a small magnitude of 8.1% in TCl_s and 2.7% on TCl_t . Even though collaborative practices are identified with a positive impact on school innovativeness (Blömeke et al., 2021), our results point out minor effects. Learning-centred leadership significantly improves teaching and learning (Bellibaş et al., 2020) and encourages teacher engagement in professional learning (Conway & Andrews, 2016; Pan & Chen, 2021). In this study, we have identified a moderate effect of leadership with a magnitude of 36.7% in TCP, which represents a weak direct influence on TCI. Then, the impact of leadership on TCI will also seem diminished. Hence, TCI changes appear more isolated than collective action within the organisation - a development of spontaneous

orders. According to Hayek, the benefits of the spontaneous order result from the ‘rule-breakers’ teachers and the ‘rule-followers’ that may promote progress through innovation (Hayek, 2018). However, a “grown order is a fragile thing, liable to be destroyed by the over-ambitious efforts of planners and reformers” (Luban 2019, p.1).

Figure 1.

Correlations and magnitude of effects on TCI perceived by all the educational actors (A, B) and teachers (C, D)

A: Dependent variable TCIs

		Order-zero	Partial	Part
Regression correlations	ML	.284	.123	.123
	TCP	.394	.308	.295
Independent Variables Correlation		ML↔TCP	.468	

B: Dependent variable TCIt

		Order-zero	Partial	Part
Regression correlations	TCP	.256	.256	.256

C: Dependent variable TCIs

		Order-zero	Partial	Part
Regression correlations	ML ^a	.280	.110	.100
	TCP	.332	.214	.199
	IB	.305	.219	.204
Independent Variables Correlation		ML↔TCP	.468	
		ML↔IB	.285	
		TCP↔IB	.249	

D: Dependent variable TCIt

		Order-zero	Partial	Part
Regression correlations	TCP ^a	.191	.107	.099
	IB	.384	.354	.347
Independent Variables Correlation		TCP↔IB	.249	

^a Non-significant variable with a p-value >.050

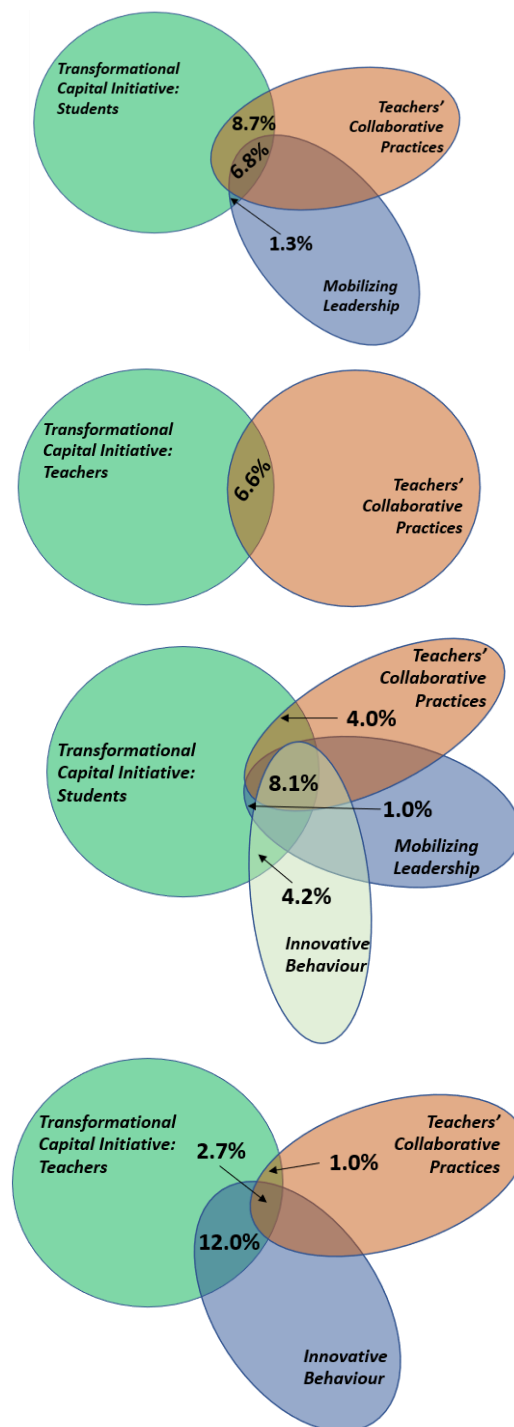
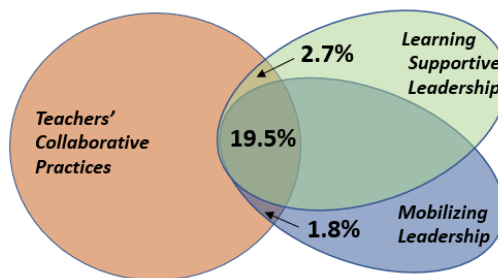


Figure 2.

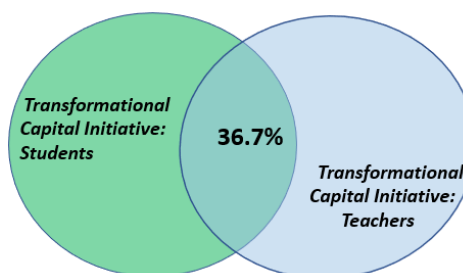
Correlations and magnitude of effects of leadership on TCP (A) and TCI teaching perspective on learning (B)

A: Dependent variable TCP

		Order-zero	Partial	Part
Regression	ML	.468	.153	.135
correlations	LSL	.477	.185	.163
Independent				
Variables Correlation	ML↔TCP		.819	



B: Dependent variable TCIs



In short, Portuguese schools appear as systems lacking articulation, even with traces of innovative practices mobilised for classroom transformation. However, data suggest a system fighting with problems of collective mobilisation, with the distance between leaders and teachers, and with no evident direct impact of SV and SKDC on teaching and learning. Schools appear as organisations loosely coupled. The traces of innovativeness observed may suggest the existence of a spontaneous order “supposed flow from individuals’ practical capacity to make use of their knowledge and act on their own initiative” (Luban, 2020).

4.2.4. Limitations and suggestions for further studies

Regarding the study, data interpretation and generalisation demand cautiousness once it proceeds from a cross-analysis regarding the principals, middle leaders, membership of SST, and teachers. The formers are less represented in the sample due to an inferior population representation. Additionally, the results may exhibit some bias regarding the adjustments introduced in the principals’, middle leaders’, and membership of SSTs’ questionnaires needed to assure complementary inquisition. Another limitation is that only teachers were questioned concerning IB and CI variables. Thus, in further studies, to go deeper into the analyses and to gain other insights, it will be interesting to understand how principals and middle leaders perceive teachers’ IB and CI.

The results analysed culminated in explanatory hypotheses regarding school organisation that require confirmation. So, we proposed deepening this work with studies of paradigmatic

cases that can clarify educational professionals' modes of action/interaction. Identifying additional drivers or obstacles to TCI may be achieved and enrich the explanatory models.

5. Conclusions

Schools are supposed to use their autonomy to create articulated and interdependent systems shaped by the staff's agency and places for all community learning. This study was developed to understand and compare school actors' perceptions regarding collective and individual modes of organisational function and their perceived impact on teaching and learning. Therefore, the study provided a multiple-sided focus on the school organisation elapsed from the different perceptions of the school actors that can highlight teachers, leaders, and policymakers to nurture interdependency within the organisations.

Relatively to the existence of divergent perceptions due to the school functioning among school actors, differences regarding leadership were observed, namely, aspects related to the mobilisation of teachers and its learning-supportive orientation. Divergent perceptions between leaders and leads may represent fragmentary cultures characterised by cultural disconnections and the dilution of the sense of belonging and isolation (Torres & Palhares, 2008). Misperceptions of reality can increase the gap (i) between decision centres and the spaces of pedagogical action, (ii) between the effectiveness of leadership and teachers' efficacy, (iii) between the desired vision, the sense of mission, and the engagement accomplished, and (iv) between the supportive learning centredness leaders' action and the agentic teacher behaviour. Leaders' social interactions with teachers can facilitate the development of trusting relationships, collaboration, and a diffusion of expertise and knowledge (DeMatthews, 2014). In Portuguese schools, signs of vertical fragmentation were also detected regarding the teaching and learning process, translated to no (or minimal) adherence to new regenerative grammar (Alves, 2021) and interdisciplinary practices.

Regarding the school patterns that can act as promoters or hindrances for the teaching and learning process transformation, the evidence suggests that IB and TCP can directly promote it. ML and LSL appear as indirect promoters, acting through TCP, on classroom transformation. However, these four patterns represent weak to moderate effects on TCP. No direct effects regarding SV, SKDC, CI, and TCI were measured. The data suggest that classroom transformation is linked more to isolated teachers' IB or traces of a spontaneous order than to transversal collaboration and focused, supervised, and organised action. So, more interdependency is needed to generate coupled systems. The obstacles to improving the schools' performance through the transformation of teaching and learning may arise through: (i) leveraging leadership, which should unified and clear aims, and promote engagement, collective learning, sharing practices, deep collaboration, and innovation; (ii) providing a vision-oriented and a teacher-centred leadership focused, resilient, and attentive to teachers needs and perceptions; (iii) fostering leadership that actively contribute to a climate of innovation and involvement,

providing receptiveness and acceptance to new pedagogical approaches and changes; (iv) rapprochement between decisional and action centres and reinforcement of dialogue within the organisation; (v) narrowing divergent alignments and promote a focus on the schools' vision; (vi) to value the mobilisation of the school knowledge, provided by systemic evaluation, to accomplish the goal of improving decisional and professional capital; (vii) finally, and in consequence, to nurture professional development, agency on the curriculum represented as responsive classroom practices, and innovation outcomes. These seven premises highlight the need for convergent interactive professionalism within the school organisation. Autonomous educational teams working in the schools in strong teachers' communities of practices, supported by capacitating leadership, are pointed as determinants for (i) breaking the logic of disconnection, individualism, and voluntarism (Alves & Cabral, 2019); (ii) raising schools as learning organisations that continually expand their capacity to create the future and where is space for a shared vision, team learning, and systemic thinking (Machado & Formosinho, 2016).

Finally, according to the schools' functioning logic, this study rebounds the need for more interdependent organisations. It could be reached by paying close analytic attention to leaders-teachers alignment and increasing the effectiveness of the interactions between school actors to generate collegial and learning organisations. Fostering strong dialoguing cultures may counteract the observed pieces of evidence of systems' fragmentation and loosely coupled systems. The evidence of existing spontaneous growing orders within the schools - not necessarily bad once it may be a source of innovation - could appear as strength provided by the use of liberty and autonomy, according to Meirink et al. (2010) in a balance that needs to be fulfilled with collaboration and shared decision making.

Disclosure statement. The authors report there are no competing interests to declare.

References

- Acar Güvendir, M., & Özer Özkan, Y. (2022). Item Removal Strategies Conducted in Exploratory Factor Analysis: A Comparative Study. *International Journal of Assessment Tools in Education*, 9(1), 165–180. <https://doi.org/10.21449/ijate.827950>
- Altun, B., & Yengin Sarkaya, P. (2020). The actors of teacher supervision. *Journal of Human Sciences*, 17(1), 284–303. <https://doi.org/10.14687/jhs.v17i1.5880>
- Alves, J. M. (2021). Uma gramática generativa e transformacional para gerar outra escola. In *Mudança em movimento – Escolas em tempos de Incerteza* (pp. 25–48). Católica Editora. <https://www.uceditora.ucp.pt/pt/digital/3077-mudanca-em-movimento.html>
- Alves, J. M., & Cabral, I. (2019). Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino. In M. C. Roldão (Ed.), *Quem lidera o ensino e a aprendizagem nas escolas? Um estudo de caso múltiplo sobre lideranças pedagógicas*. (pp. 13–34). Fundação Manuel Leão.
- 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>

- Bak, H. U., Jin, M. H., & McDonald, B. D. (2022). Unpacking the Transformational Leadership-Innovative Work Behavior Relationship: The Mediating Role of Psychological Capital. *Public Performance and Management Review*, 45(1), 80–105. <https://doi.org/10.1080/15309576.2021.1939737>
- Barroso, J. (2022). *Administração e política educacional. um percurso de investigação* (Issue June). Instituto de Educação da Universidade de Lisboa.
- Bartee, R. (2007). Education Leadership as 'Capital' for a Diverse School Setting: Understanding the Dynamics of Social and Symbolic Capital as Exemplars of Successful Leadership Strategies. *Advances in Educational Administration*, 10, 179–194. [https://doi.org/10.1016/S1479-3660\(07\)10011-1](https://doi.org/10.1016/S1479-3660(07)10011-1)
- Bellibaş, M. Ş., Gümüş, S., & Kılınç, A. Ç. (2020). Principals supporting teacher leadership: The effects of learning-centred leadership on teacher leadership practices with the mediating role of teacher agency. *European Journal of Education*, 55(2), 200–216. <https://doi.org/10.1111/ejed.12387>
- Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching: Theory and Practice*, 21(6), 624–640. <https://doi.org/10.1080/13540602.2015.1044325>
- 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>
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quifonez, H. R., & Young, S. L. (2018). Best Practices for Developing and Validating Scales for Health, Social, and Behavioral Research: A Primer. *Frontiers in Public Health*, 6(June), 1–18. <https://doi.org/10.3389/fpubh.2018.00149>
- 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>
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Carmines, E. G., & Zeller, R. A. (1974). On establishing the empirical dimensionality of theoretical terms: An analytical example. *Society for Political Methodology On Establishing the Empirical Dimensionality of Theoretical Terms: An Analytical Example* Author(s): Edward G. Carmines and Ric. *Oxford Journals: Oxford University Press*, 1(4). <http://www.jstor.org/stable/25791395>
- Chen, L., Zheng, W., Yang, B., & Bai, S. (2016). Transformational leadership, social capital and organisational innovation. *Leadership and Organization Development Journal*, 37(7), 843–859. <https://doi.org/10.1108/LODJ-07-2015-0157>
- Cochran-Smith, M. (2021). Rethinking teacher education: The trouble with accountability. *Oxford Review of Education*, 47(1), 8–24. <https://doi.org/10.1080/03054985.2020.1842181>
- Conway, J. M., & Andrews, D. (2016). A school-wide approach to leading pedagogical enhancement: An Australian perspective. *Journal of Educational Change*, 17(1), 115–139. <https://doi.org/10.1007/s10833-015-9258-0>
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/https://doi.org/10.1007/BF02310555>
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A review on leadership and leadership development in educational settings. *Educational Research Review*, 27(January 2018), 110–125. <https://doi.org/10.1016/j.edurev.2019.02.003>
- Day, C. (2017). Leadership as a Way. *Profesorado*, 21(2), 21–26. https://doi.org/10.1007/978-981-10-3549-4_7
- Day, G. S., & Shea, G. (2020). Changing the Work of Innovation: A Systems Approach. *California Management Review*, 63(1), 41–60. <https://doi.org/10.1177/0008125620962123>
- DeMatthews, D. (2014). Principal and Teacher Collaboration: An Exploration of Distributed Leadership in Professional Learning Communities. *International Journal of Educational*

- Leadership and Management*, 2(2), 176–206. <https://doi.org/10.4471/ijelm.2014.16>
- DeMatthews, D. (2015). Clearing a Path for Inclusion Distributing Leadership in a High Performing Elementary School. *Journal of School Leadership*, 25(November 2015), 1000–1039.
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., Savoy, S. M., & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship*, 39(2), 155–164. <https://doi.org/10.1111/j.1547-5069.2007.00161.x>
- diZerega, G. (1989). Democracy As A Spontaneous Order. *Critical Review*, 3(2), 206–240. <https://doi.org/10.1080/08913818908459563>
- Elken, M., & Vukasovic, M. (2019). *The Looseness of Loose Coupling: The Use and Misuse of “Loose Coupling” in Higher Education Research*. October, 53–71. <https://doi.org/10.1108/s2056-375220190000005005>
- Ellis, V., Steadman, S., & Trippstad, T. A. (2019). Teacher education and the GERM: policy entrepreneurship, disruptive innovation and the rhetorics of reform. *Educational Review*, 71(1), 101–121. <https://doi.org/10.1080/00131911.2019.1522040>
- Ellison, S. (2009). Hard-Wired for Innovation? Comparing Two Policy Paths toward Innovative Schooling. *International Education*, 39(1), 30–48.
- Eyal, O. (2009). Degeneracy, resilience and free markets in educational innovation. *Systems Research and Behavioral Science*, 26(4), 487–491. <https://doi.org/10.1002/sres.940>
- Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education*, 2(1). <https://doi.org/10.1080/2331186X.2015.1018698>
- 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 organisational performance and change. *Journal of Educational Change*, 23(1), 115–130. <https://doi.org/10.1007/s10833-021-09431-5>
- Friedberg, E. (1995). *O poder e a regra: dinâmicas da acção organizada*. Instituto Piaget.
- Fuad, D. R. S. M., Musa, K., & Hashim, Z. (2022). Innovation culture in education: A systematic review of the literature. *Management in Education*, 36(3), 135–149. <https://doi.org/10.1177/0892020620959760>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analysis Archives*, 23(15), 1–18. <http://dx.doi.org/10.14507/epaa.v23.1998>
- Gao, Y., Zhao, X., Xu, X., & Ma, F. (2021). A study on the cross level transformation from individual creativity to organisational creativity. *Technological Forecasting and Social Change*, 171(June), 120958. <https://doi.org/10.1016/j.techfore.2021.120958>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update*.
- Gil, A. J., Rodrigo-Moya, B., & Morcillo-Bellido, J. (2018). The effect of leadership in the development of innovation capacity: A learning organisation 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>
- Green, C. A., Tindall-Ford, S. K., & Eady, M. J. (2020). School-university partnerships in Australia: a systematic literature review. *Asia-Pacific Journal of Teacher Education*, 48(4), 403–435. <https://doi.org/10.1080/1359866X.2019.1651822>
- Hargreaves, A. (2010). Presentism, individualism, and conservatism: The legacy of Dan Lortie’s Schoolteacher: A sociological study. *Curriculum Inquiry*, 40(1), 143–154. <https://doi.org/10.1111/j.1467-873X.2009.00472.x>
- Hargreaves, A., & Shirley, D. (2009). The fourth way: The inspiring future for educational change. In *The Fourth Way: The Inspiring Future for Educational Change*. <https://doi.org/10.4135/9781452219523>

- Hayek, F. (2018). *A constituição da liberdade* (J. C. Trad. Espada (ed.)). Edições 70.
- Hitt, D. H., & Tucker, P. D. (2016). Systematic Review of Key Leader Practices Found to Influence Student Achievement: A Unified Framework. *Review of Educational Research*, 86(2), 531–569. <https://doi.org/10.3102/0034654315614911>
- Hutt, M., & Lewis, N. (2021). Ready for reform? Narratives of accountability from teachers and education leaders in Wales. *School Leadership and Management*, 41(4–5), 470–487. <https://doi.org/10.1080/13632434.2021.1942823>
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2017). An Introduction to Statistical Learning. In Springer (Ed.), *Handbook of Quantile Regression* (8th ed.). <https://doi.org/10.1007/978-1-4614-7138-7>
- Jones, M., Azorín, C., Chapman, C., & Harris, A. (2023). Leading professional networks: different perspectives. *School Leadership & Management*, 43(1), 1–7. <https://doi.org/10.1080/13632434.2023.2175564>
- Juwono, I. D., & Harly, T. H. (2017). Leadership Succession Impact on School Culture: A Case Study at a Faith-Based Secondary School in Indonesia. *International Journal of Information and Education Technology*, 7(3), 184–189. <https://doi.org/10.18178/ijiet.2017.7.3.863>
- Kaewsang-on, R., AL-Takhayneh, S. K., Jam, F. A., Chang, B. L., Pradana, M., & Mahmood, S. (2022). A three-wave longitudinal study of school innovation climate and entrepreneurship teachers' acceptance to technology: Moderating role of knowledge sharing and knowledge hiding. *Frontiers in Psychology*, 13(October), 1–15. <https://doi.org/10.3389/fpsyg.2022.1028219>
- 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 organisational climate and job satisfaction. *International Journal of Instruction*, 14(3), 567–582. <https://doi.org/10.29333/iji.2021.14333a>
- Kılıçoğlu, G., & Kılıçoğlu, D. Y. (2021). Understanding organisational hypocrisy in schools: the relationships between organisational legitimacy, ethical leadership, organisational hypocrisy and work-related outcomes. *International Journal of Leadership in Education*, 24(1), 24–56. <https://doi.org/10.1080/13603124.2019.1623924>
- 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>
- Krosnick, J. A., Holbrook, A. L., Berent, M. K., Carson, R. T., Michael Hanemann, W., Kopp, R. J., Mitchell, R. C., Presser, S., Ruud, P. A., Kerry Smith, V., Moody, W. R., Green, M. C., & Conaway, M. (2002). The Impact Of "No Opinion" Response Options On Data Quality Non-Attitude Reduction Or An Invitation To Satisfice? *Public Opinion Quarterly*, 66(3), 371–403. <https://doi.org/10.1086/341394>
- Lacroix, E. (2020). Pedagogical Innovation: New Institutional Theory and Beyond Borders Experiential Learning Program. *Journal of Social Thought*, 4(1).
- Lee, A. N., Nie, Y., & Bai, B. (2020). Perceived principal's learning support and its relationships with psychological needs satisfaction, organisational commitment and change-oriented work behaviour: A Self-Determination Theory's perspective. *Teaching and Teacher Education*, 93, 103076. <https://doi.org/10.1016/j.tate.2020.103076>
- Leithwood, K. (2021). A review of evidence about equitable school leadership. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080377>
- Luban, D. (2020). What Is Spontaneous Order? *American Political Science Review*, 114(1), 68–80. <https://doi.org/10.1017/S0003055419000625>
- Machado, J., & Formosinho, J. (2016). Equipas educativas e comunidades de aprendizagem. *Revista Portuguesa de Investigação Educacional - Escolas, Melhoria e Transformação*, 16, 11–31. <https://doi.org/https://doi.org/10.34632/investigacaoeducacional.2016.3419>
- Meirink, J. A., Imants, J., Meijer, P. C., & Verloop, N. (2010). Teacher learning and collaboration in innovative teams. *Cambridge Journal of Education*, 40(2), 161–181.

- <https://doi.org/10.1080/0305764X.2010.481256>
- Midha, G. (2022). Meetings: school leadership infrastructure that creates sense. *International Journal of Leadership in Education*, 00(00), 1–26. <https://doi.org/10.1080/13603124.2022.2076287>
- Nelson, M. J., Voithofer, R., & Cheng, S. L. (2019). Mediating factors that influence the technology integration practices of teacher educators. *Computers and Education*, 128(October 2018), 330–344. <https://doi.org/10.1016/j.compedu.2018.09.023>
- Nemeržitski, S., Loogma, K., Heinla, E., & Eisenschmidt, E. (2013). Constructing a model of teachers' innovative behaviour in the school environment. *Teachers and Teaching: Theory and Practice*, 19(4), 398–418. <https://doi.org/10.1080/13540602.2013.770230>
- Nóvoa, A. (2019). Teachers and their education at a time of school metamorphosis. *Educação and Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>
- O'Brien, S., McNamara, G., O'Hara, J., Brown, M., & Skerritt, C. (2022). Teacher leadership in school self-evaluation: an approach to professional development. *Irish Educational Studies*, 1–16. <https://doi.org/10.1080/03323315.2022.2135568>
- OECD. (2016). *Innovating Education and Education for Innovation: The Power of Technologies and Skills*. <http://dx.doi.org/10.1787/9789264265097-en>
- OECD. (2018). The Future of Education and Skills: Education 2030. *OECD Education Working Papers*, 23. [http://www.oecd.org/education/2030/E2030 Position Paper \(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
- Oolbekkink-Marchand, H. W., Hadar, L. L., Smith, K., Helleve, I., & Ulvik, M. (2017). Teachers' perceived professional space and their agency. *Teaching and Teacher Education*, 62, 37–46. <https://doi.org/10.1016/j.tate.2016.11.005>
- Orton, J. D., & Weick, K. E. (1990). Loosely Coupled Systems: A Reconceptualization. *Academy of Management Review*, 15(2), 203–223. <https://doi.org/10.5465/amr.1990.4308154>
- Pan, H. L. W., & Chen, W. Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration and Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- 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*. 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 (6ª)*. 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>
- Rogers, E. M. (2003). *Everett_M* (5th ed.). Free Press.
- Simeonova, R., Parvanova, Y., Brown, M., & McNamara, G. (2020). A Continuum of Approaches to School Inspections: Cases from Europe. *Pedagogy*, 92(4), 487–507. <https://www.ceeol.com/search/article-detail?id=857814>
- 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>
- Song, J. H., Kim, W., Chai, D. S., & Bae, S. H. (2014). The impact of an innovative school climate on teachers' knowledge creation activities in Korean schools: The mediating role of teachers' knowledge sharing and work engagement. *KEDI Journal of Educational Policy*, 11(2), 179–203. <https://doi.org/10.22804/kjep.2014.11.2.003>
- Sotiriou, S., Riviou, K., Cherouvis, S., Chelioti, E., & Bogner, F. X. (2016). Introducing Large-Scale Innovation in Schools. *Journal of Science Education and Technology*, 25(4), 541–549. <https://doi.org/10.1007/s10956-016-9611-y>

- Spector, P. E., Van Katwyk, P. T., Brannick, M. T., & Chen, P. Y. (1997). When two factors don't reflect two constructs: How item characteristics can produce artifactual factors. *Journal of Management*, 23(5), 659–677. <https://doi.org/10.1177/014920639702300503>
- Sujudi, N., Komariah, A., & Indonesia, U. P. (2020). Leadership Characteristics Era Disruption : *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), 276–279. <https://www.atlantispress.com/article/125933799.pdf>
- Tapsir, R., Pa, N. A. N., & Zamri, S. N. A. B. S. (2018). Reliability and Validity of the Instrument Measuring Values in Mathematics Classrooms. *Malaysian Online Journal of Educational Sciences*, 6(2), 37–47.
- 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. <https://www.jstor.org/stable/26973760>
- 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, L. L., & Palhares, J. A. (2008). Cultura, formação e aprendizagens em contextos organizacionais. *Revista Crítica de Ciências Sociais*, 83, 99–120. <https://doi.org/10.4000/rccs.4579>
- Tyack, D., & Tobin, W. (1994). The “Grammar” of Schooling: Why Has it Been so Hard to Change? *American Educational Research Journal*, 31(3), 453–479. <https://doi.org/10.3102/00028312031003453>
- Vaillant, D. (2019). Directivos y comunidades de aprendizaje docente: un campo en construcción (Directors and teacher learning communities: a field under construction). *Revista Eletrônica de Educação*, 13(1), 87. <https://doi.org/10.14244/198271993073>
- Vermeulen, M., Kreijns, K., & Evers, A. T. (2020). Transformational leadership, leader–member exchange and school learning climate: Impact on teachers' innovative behaviour in the Netherlands. *Educational Management Administration and Leadership*, 48(5), 1–20. <https://doi.org/10.1177/1741143220932582>
- Wang, S. (2019). School heads' transformational leadership and students' modernity: the multiple mediating effects of school climates. *Asia Pacific Education Review*, 20(3), 329–341. <https://doi.org/10.1007/s12564-019-09575-3>
- Weick, K. E. (1976). Educational Organisations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 19. <https://doi.org/https://doi.org/10.2307/2391875>
- Yim, J., Sullivan, D. W., & Baumann, H. M. (2020). Performance Management and Innovation: a Human Capital Perspective. *Academy of Management Annual Meeting Proceedings, 2000*. <https://doi.org/10.5465/AMBPP.2020.45>
- Yuan, L., Nguyen, T. T. N., & Vu, M. C. (2018). Transformational leadership and its impact on performance: The role of psychological capital and collectivism. *ACM International Conference Proceeding Series*, 18–27. <https://doi.org/10.1145/3180374.3181325>
- 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>
- Zhu, J., Yao, J., & Zhang, L. (2019). Linking empowering leadership to innovative behaviour in professional learning communities: the role of psychological empowerment and team psychological safety. *Asia Pacific Education Review*, 20(4), 657–671. <https://doi.org/10.1007/s12564-019-09584-2>
- Zijlmans, E. A. O., Tijnstra, J., van der Ark, L. A., & Sijtsma, K. (2019). Item-score reliability as a selection tool in test construction. *Frontiers in Psychology*, 9(JAN), 1–12. <https://doi.org/10.3389/fpsyg.2018.02298>

**Artigo 8. O *Lugar* da Inovação nas Escolas
Portuguesas: as conclusões de um estudo, os seus
paradoxos e tensões**

Resumo Gráfico



Resumo

Concretizar boas ideias, estimular e sustentar o caminho da inovação é um desiderato que carece de lideranças visionárias que mobilizem e suportem os liderados e criem climas facilitadores de ações coletivas inscritas na visão de escola. Contudo, o processo de transformação da escola para ser operado requer, para além de liderança, três outras valências - a autonomia, a co-regulação e a inovação. É sob esta quadratura que construímos um ensaio onde debatemos a tese de que o equilíbrio entre autonomia e regulação ou controlo, as sinergias entre liderança mobilizadora e liderança para a aprendizagem e as alianças entre culturas de escola e práticas profissionais docentes são imperativos no sistema. Por conseguinte, transformar a escola implica uma cultura profissional de liberdade, compromisso e responsabilidade e de lideranças capazes de inspirar uma ação interdependente transversal a toda a organização assente na (re)construção de significados e na iniciativa de inovação. A argumentação construída neste ensaio é sustentada no cruzamento de dados de um estudo de investigação implicando o sistema educativo português, realizado entre 2018 e 2022. A casuística explorada no ensaio serve de base para a construção de um modelo orientador do processo de transformação da escola e de um referencial analítico para mensurar a inovação.

Palavras-chave: Inovação; transformação da escola; liderança; autonomia; avaliação de escola; ensaio

Abstract

Realising good ideas and stimulating and sustaining the path of innovation is a desideratum that can be accomplished based on visionary leaders by mobilising and supporting the leads and generating climates of collective action inscribed in the school's vision. The school transformation process to be implemented in schools demands a compromise between leadership, autonomy, co-regulation, and innovation. Therefore, we build an essay debating the thesis that balancing autonomy and regulation or control, synergies between mobilising leadership and leadership for learning, and associations between school cultures and professional teaching practices are essential. The school transformation requires a professional culture of freedom, commitment, and responsibility. Hence, transforming the school implies a leadership capable of inspiring a transversal interdependent action throughout the organisation, building significance, and innovation initiative. The argumentation is supported by data from a research study that implied the Portuguese educational system between 2018 and 2022. This analysis leverages a model for leading the school transformation and an analytical framework to measure innovation.

Keywords: Innovation; school transformation; leadership; autonomy; school evaluation; essay

1. Introdução

As escolas constituem sistemas imbuídos em conservadorismo, debilmente articulados (Brunsson, 2006; Weick, 1976), “agindo nos constrangimentos gerais de uma racionalidade limitada” (Friedberg, 1995, p.326), onde a autonomia configura uma ficção necessária (Barroso, 2022) e cujas lógicas de mudança emergem mais da ‘*ordem espontânea*’ (Hayek, 1979; Luban, 2020) do que da ação interna organizada e estratégica. O sistema educativo sobrevive refém de uma confortável “ideologia de ‘*comando e controlo*’, vivendo na ilusão de que as normas e os ‘*escritos*’ no diário da república são a alavanca principal das mudanças” operadas por comunidades de atores que, nas escolas, transpiram uma cómoda socialização ensombrada pela “lógica estatal de obediência que securiza e protege, estando dispensados de pensar, arriscar, servir as pessoas e as comunidades concretas” (Alves & Cabral, 2019, p.15).

A escola persiste enraizada numa gramática de escolarização tradicional alimentada por lógicas governativas descontínuas, que geram outras lógicas organizacionais e pedagógicas intermitentes, convidadas a conotar as mudanças a modas e ideologias e que, por isso, fazem duvidar da transformação e da própria necessidade dessa mudança. Embora, a política educacional global venha convocando os países à transformação da escola tradicional numa escola inclusiva e socialmente mais responsiva, Nóvoa (2019) sustenta que a educação pouco tem mudado ao longo dos últimos cento e cinquenta anos. Discursos paralelos relativos à necessidade de uma metamorfose, também, se arrastam, no meio académico, há pelo menos meio século. Urge a evolução de “um *locus* de transição normativa” (Lima, 1992, p.477) e da “lógica de um palimpsesto” (Alves e Cabral, 2019, p.18) para um *locus* de transformação cultural das organizações escolares, de reinvenção de gramáticas de escolarização e de reconstrução pedagógica. Mas, tal como “*on ne change pas la société par décret*” e “*on ne transforme pas l’homme par décret, par oukase*” (Croizier, 1979, p.57), também a escola permanece mais ou menos inerte aos temperos das iniciativas de mudança instigadas pela via *top-down* e na ansia de alcançar ganhos políticos de curto-prazo (Hargreaves, 2019). As respostas das escolas assumem as lógicas de sistemas pseudomórficos com discursos renovados, mas uma *práxis* enredada na velha ordem. É neste contexto que a palavra inovação se tornou recorrente em educação, criando fortes expetativas relativamente ao seu papel na promoção de transformações sistémicas e estruturais interpostas na forma de adaptabilidade das escolas às mudanças na sociedade (Blömeke et al., 2021).

Definimos inovação como um fenómeno social, cultural, organizacional, coletivo e individual que se prefigura como dinâmico, sistémico, intencional, multidimensional e com foco transformacional no que respeita ao desenvolvimento de estratégias ou soluções, tendo em vista a melhoria do processo e do resultado educativo. A inovação emerge como um fenómeno que tem por desiderato encontrar soluções para os problemas da aprendizagem plural de todos os alunos⁶ e de contribuir para a resolução da crise tripla da educação explanada pelas Nações

⁶ Por via da facilitação da leitura e da compreensão textual, cingimo-nos ao uso do masculino, uma forma legitimada pela gramática da língua portuguesa, que inclui por convenção elementos de ambos os sexos (evitando as repetições e as barras, por exemplo, alunos/as, professores/ras, diretores/ras, coordenadores/ras).

Unidas (2023), a crise da equidade e inclusão, a crise de qualidade e a crise de relevância. Contudo, a inovação não é um ato isolado, que se faz e está feito, pelo contrário, enforma em complexidades, requerendo a alavancagem da aprendizagem dos professores e das lideranças, bem como, carece de ser monitorizada, analisada, revisitada e revista (Maass et al., 2019). A inovação, se pretendida funcional e efetiva, tem de impactar todos os elementos do sistema. A transformação da escola surge como empreendedorismo e agência onde a inovação, considerados os fatores que a obstaculizam e que a promovem, requer a reestruturação dos constrangimentos e a maximização das oportunidades. Para tal, é necessário “desregular contextos nos quais rendas e desvios monopolistas se criaram” (Friedberg, 1995, p.327) quer nos centros políticos, quer nas arenas políticas das escolas. É neste contexto que nos propomos redigir este ensaio que tem como questão de partida: *Quais os impulsos e obstáculos que enredam a inovação quando consideradas as suas conexões com as lideranças, a avaliação de escola, as culturas de escola e o comportamento inovador dos professores?*

A tese ou argumento central explorado no ensaio tem subjacente três premissas. A primeira decorre de evidências paradoxais enunciadas na literatura reportadas à falta de impacto dos modelos *top-down* que visam interpor reformas no sistema, mas que esbarram em dificuldades de adaptação cultural nas escolas (Mincu, 2022) e dos modelos *bottom-up* de iniciativa escolar ou local cujo efeito na melhoria da educação também não é impressionante (Barroso, 2018; Hargreaves & Ainscow, 2015). Por esta via, aventamos como primeira premissa do argumento que abordagens cooperativas (Straub & Vilsmaier, 2020), conciliadoras de alinhamentos normativos⁷ com a iniciativa das escolas ou agrupamentos de escolas⁸, traduzidas na liberdade para realizar opções organizacionais, curriculares e pedagógicas no quadro da autonomia e flexibilidade curricular (AFC) consignada às escolas, detêm maior potencial de produzir uma metamorfose (fig.1). A segunda premissa enuncia que a transformação da escola requer o investimento em culturas colaborativas, iluminadas pela autoavaliação de escola e ativadas por lideranças mobilizadoras. Estas culturas colaborativas, focadas na aprendizagem contínua e numa visão comum de escola, se demarcadas por proatividade coletiva criativa, operam para assegurar a contínua adaptação e a procura de soluções organizacionais e pedagógicas para responder à diversidade e potenciar a aprendizagem de todos os alunos. A terceira premissa, está alinhada com uma nova dimensão da identidade profissional docente sustentada por Avidov-Ungar e Forkosh-Baruch (2018) de que os professores devem também ser inovadores pedagógicos, isto é, serem dotados de capacidades e competências que lhes permitam gerir a inovação e os processos de mudança. Assumindo estas associações entre autonomia e regulação ou controlo, liderança mobilizadora e liderança para a aprendizagem, culturas de escola e práticas profissionais docentes, então transformar a escola implica lideranças capazes de inspirar uma ação interdependente transversal em toda a organização em combinação com a iniciativa de inovação organizacional.

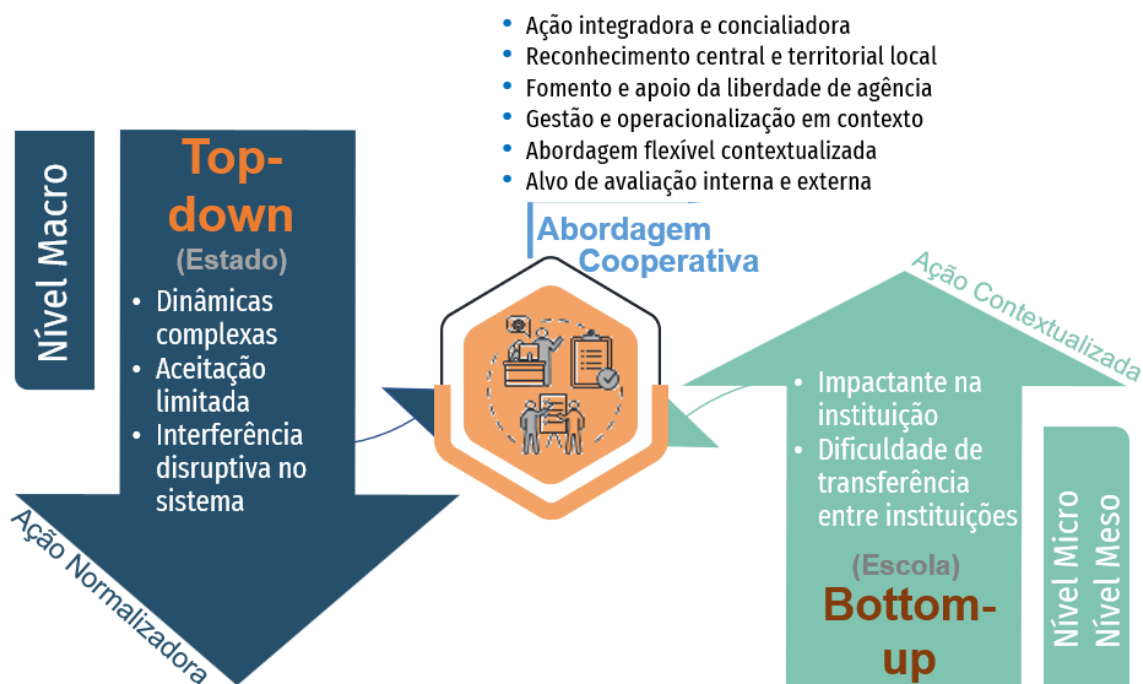
⁷ Inscritas no Decreto-Lei n.º 54/2018, de 6 de julho e no Decreto-Lei n.º 55/2018, de 6 de julho.

⁸ Por via da economia de palavras e da facilitação da leitura será aplicado o termo ‘escola’ com o sentido de escola não agrupada ou de agrupamento de escolas, as formas de organização dos estabelecimentos escolares do sistema educativo português.

A análise da tese enunciada, por referência às premissas que a suportam, vai ser conduzida através dos resultados e conclusões de um estudo de investigação, reportado ao sistema educativo português, realizado no período de 2018 a 2022. Este estudo considera as lógicas, as razões, os paradoxos e as tensões do sistema do educativo em três domínios: o das políticas educativas, o das culturas organizacionais e o das práticas profissionais. A base epistemológica usada para a construção deste ensaio atenta às orientações e estrutura definidas por Redman e Maples (2017), Redman (2011) e McMahan (2017). Por conseguinte, o corpo deste ensaio convoca três argumentos subsidiários reportados aos domínios referidos cuja descrição, análise, arguição, discussão e avaliação (McMahon, 2017), sustentada em evidências empíricas, é produto de pesquisa sistemática e rigorosa e recorre à teoria para construir explicações sobre a problemática enunciada (Redman & Maples, 2017). As evidências empíricas são mobilizadas, num processo de triangulação dos resultados alocados aos vários artigos desta tese, para responder às questões de investigação enunciadas para este estudo. O ensaio termina com a dilucidação sobre as conclusões, onde são revistos e sumariados os pontos chave do ensaio, se procura responder à questão de partida, se avalia o argumento central e se esboça um modelo para conduzir a transformação das escolas e para mensurar a inovação.

Figura 1.

Modelos de processos de transformação organizacional



2. O lugar da inovação nas escolas... um olhar sobre o sistema educativo português

2.1. Lógicas, razões, paradoxos e tensões implicando as políticas educativas

A autonomia curricular e pedagógica consignada às escolas pretende fomentar o funcionamento orgânico das escolas no sentido de estas (re)criarem estratégias sistémicas para uma metamorfose nas organizações que possa gerar mais equidade, mais inclusão, mais aprendizagem para todos. Contudo, a vitalidade de um sistema orgânico depende de processos homeostáticos que viabilizem a sua regulação, isto é, de mecanismos de *accountability* robustos que contribuam para a qualidade da educação e favoreçam a construção da escola inclusiva. Assumindo que uma nova geração de *accountability* valoriza intervenções alinhadas com modelos de co-regulação que conjugam a avaliação externa e a autoavaliação (Donaldson, 2013; Hanberger et al., 2016), é possível produzir processos de regulação mais compreensivos, inteligíveis, credíveis, transparentes e abrangentes. Logo, face a estas premissas, consideramos que a autonomia outorgada às escolas portuguesas, quando operada sob o desígnio de mecanismos de co-regulação, assume a função de geratriz de sistemas interdependentes inovadores e socialmente responsivos. Para sustentar avaliação deste argumento podemos ancorar a sua arguição em cinco questões que passamos a analisar.

Primeira, que práticas organizacionais são percebidas pela avaliação externa como sendo instituídas nas escolas por via do exercício da sua autonomia?

As representações construídas pela Inspeção, na sequência da sua suposta ação principal de acompanhamento e avaliação das escolas, são evocadas para testemunhar e aclarar o sentido da ação adotada por conta da autonomia, incidindo a análise sobre as práticas de autoavaliação, de liderança e gestão e profissionais docentes. O domínio da autoavaliação é percecionado como o mais frágil dos domínios analisados pela Inspeção. De facto, apesar de a ação da autoavaliação das escolas ser largamente intuída como consistente, muitas escolas ainda carecem de aprofundar práticas e de reorientar a sua ação no sentido de conferir maior centralidade ao ensino aprendizagem. Adicionalmente, é anotada uma carestia no que respeita a processos de reflexão reportados ao conhecimento de escola produzido pela autoavaliação e em relação à participação alargada da comunidade educativa no processo. Estas observações remetem para: (i) a persistência de uma cultura de autoavaliação pouco estruturada, que deriva no sentido de se afirmar nas comunidades educativas; (ii) ritmos e velocidades diversos operados no tecido escolar português no que respeita à incorporação, aprofundamento e impacto dos mecanismos de regulação da ação educativa. Progressos têm de ser operados para sustentar a tomada de decisão organizacional e suportar ações para a melhoria das escolas. A geografia das práticas de autoavaliação nas escolas portuguesas deprecia a premissa do argumento

enunciado que remete para a existência de mecanismos de compreensivos, abrangentes e inteligíveis que resultam do exercício da autonomia e que contribuem para a reforçar.

Apesar das fragilidades enunciadas em relação à autoavaliação, o domínio da liderança e gestão, na perspetiva da Inspeção, configura-se robusto na orgânica escolar face a uma panorâmica de apreciações de muito bom (superior a cinquenta por cento) e de bom (de aproximadamente 42%). O reconhecimento do mérito da liderança decorre, maioritariamente, de práticas de liderança distribuída, do clima de envolvimento organizacional potenciado, das interações estabelecidas na comunidade e da visão estratégica. Mas esta visão construída parece fazer parte de uma narrativa orquestrada pelos líderes organizacionais, não tendo, aparentemente, efeito na promoção de inovações que contribuam para a construção de uma escola efetivamente inclusiva. Aliás, face à meritocracia da liderança (ou das lideranças), seria expetável que os resultados da sua ação tivessem uma outra configuração. De facto, seria de esperar que a escola não permanecesse ancorada nas velhas conceções, em velhas práticas e em dinâmicas obsoletas (Santos Guerra, 2017).

Por outro lado, o retrato traçado pela Inspeção ainda em relação ao domínio da liderança e gestão, no que respeita à visão estratégica remete para uma dicotomização das escolas. De facto, a visão estratégica é percebida como uma força no exercício da liderança, mas também, em muitas escolas, como uma área que carece de melhoria. A construção de planos de formação dotados de intencionalidade, a efetividade da comunicação e a ação de lideranças intermédias mobilizadoras são áreas de melhoria que testemunham, também, as práticas de muitas escolas. Assim, na perspetiva da Inspeção, seis fatores-chave, referenciados na literatura como contributos para a promoção de melhores aprendizagens nos alunos, oscilam entre forças e áreas a interencionar: (i) liderança distribuída (Hargreaves, 2007; Khalifa et al., 2016); (ii) visão estratégica (Ho & Lee, 2016); (iii) clima de envolvimento organizacional (Day, 2017; Yuan et al., 2018); (iv) comunicação organizacional (Juwono & Harly, 2017); (v) foco na capacitação de professores (Bellibaş et al., 2020; Yakavets et al., 2017); (vi) interação com a comunidade (Portz, 2021).

Relativamente à primeira premissa do argumento enunciado, que atribui à autonomia o potencial de geração de estratégias sistémicas de mudança, a Inspeção documenta o compromisso das escolas com a inclusão e a formação cidadã e, em cerca de metade das organizações escolares, a valorização das metodologias ativas no ensino aprendizagem. Contudo, só pontualmente, constituem pontos fortes da ação organizacional ou pedagógica as práticas de avaliação formativa de alunos, de supervisão da sala de aula, de articulação curricular e de trabalho colaborativo. Estas práticas reverberam em áreas de melhoria, em muitas escolas, a par das metodologias ativas de ensino aprendizagem, o que indicia que os compromissos tecidos em relação à orientação educativa das escolas podem assumir uma natureza predominantemente retórica. “Não basta atribuir responsabilidades às diversas entidades, é necessário que elas tenham uma palavra a dizer, que elas tenham capacidade de decisão sobre os assuntos educativos” (Nóvoa, 2009, p.14), sendo ao Homem - às lideranças, aos professores

e demais atores educativos – que cabe assumir a responsabilidade primária da mudança, porque a margem de liberdade de que ele dispõe o torna responsável pela mesma (Croizier & Friedberg, 1977). Urge ser instituída uma cultura de liberdade e responsabilidade que permitirá construir uma escola receptiva à diferença e, por conseguinte, segundo Nóvoa (2009), uma escola pautada pela liberdade de organização, pela liberdade de construção de diferentes projetos educativos, pela liberdade na definição de percursos escolares e de currículos diferenciados.

Face às evidências reunidas relativas às práticas percecionadas pela Inspeção em 60 organizações escolares, é lícito afirmar-se que em muitas das escolas a autonomia curricular e pedagógica não está a produzir respostas sistémicas para a sua transformação, bem como, a autoavaliação de escola carece de ser aprofundada na sua função de suporte à tomada de decisão. Assim, fragilidades reportadas ao exercício da autonomia e à mobilização de processos de regulação apontam no sentido da persistência de escolas que operam de forma pouco interdependente. A análise complementar integral de documentos estruturantes de nove agrupamentos de escolas e respetivos relatórios de avaliação externa, também, denota que as práticas de autoavaliação de escola implementadas até 2021, apesar da sua instituição nos normativos datar de 2002, não raras vezes, secundam processos pouco participados e não conduzem, frequentemente, a atos de reflexão e construção de planos de melhoria com impacto. Assim, os processos de regulação operados nas escolas seguem a lógica explicitada por Barroso (2022), pois mais do que uma função instrumental para a resolução de problemas, a autoavaliação reverbera numa ‘mistificação’ com o propósito de ‘legitimar’ os objetivos de controlo do governo (e em seu nome, os objetivos dos próprios diretores). Duas décadas volvidas de autoavaliação escola e o sistema educativo português, ainda, apela por escolas que se afirmem como instituições aprendentes. A autoavaliação deve enformar um papel central na aprendizagem organizacional para que, como refere Bolívar (2001), possa contribuir para gerar novas competências nos seus membros e ampliar a utilização do potencial de aprendizagem dos indivíduos e dos grupos, num clima de melhoria contínua “*propio de una organización que ha situado el aprendizaje como su principal activo y valor*” (p.4). Se uma escola não construir a capacidade interna de desenvolvimento (ainda que contando com o apoio externo adequado), o trabalho inovador será sempre algo marginal, não sustentável ao longo do tempo (Bolívar, 2009). Uma organização que aprende carece de capital decisional para poder desenvolver o capital profissional dos professores, das lideranças e de toda a comunidade educativa.

Segunda questão, que mudanças em matéria de inovação são percebidas nas escolas, pela avaliação externa, por via do exercício da autonomia?

A inovação constitui uma dimensão de análise da avaliação externa marginal, surgindo, pontualmente, referenciada, quer como uma força, quer como uma área de melhoria. Estas referências, ausentes em relação à maioria das escolas ou escassas noutras, reportam à existência de uma visão de liderança de inovação, à observação de um clima escolar inovador e à necessidade de investimento em soluções inovadoras. Adicionalmente, o trabalho de

investigação realizado implicando a testagem de doze associações entre as evidências de inovação alocadas às escolas e as práticas organizacionais e pedagógicas, conduziu apenas a uma única correlação estatisticamente significativa, mas fraca, envolvendo a visão de inovação e as práticas de supervisão da sala de aula. Por outra via, também não se vislumbraram associações estatisticamente significativas relativas ao contributo das evidências de inovação observadas nas escolas na avaliação consagrada aos vários domínios pela Inspeção. O estudo integral das narrativas de nove relatórios de avaliação externa documenta, igualmente, o caráter marginal concedido à inovação, variando entre a ausência de considerações e anotações pontuais. Esta análise aponta para um discurso ainda mais escasso quando o enfoque recai na palavra transformação de escola.

O discurso minguido em matéria de inovação por parte da Inspeção remete para a deflexão da própria regulação da inovação, bem como, para um potencial limitado (ou anulado) de promoção de culturas de inovação ou catalisador de intervenções inovadoras. As evidências reunidas põem em causa a importância concedida à inovação na transformação dos sistemas educativos e que foi assumida no memorando de Bratislava, lavrado em 2013, na *Standing International Conference of Inspectors*, alertando para a questão “inspection can be seen as an inhibitor of innovation, given approval to what it values and taking responsibility away from the school” (Donaldson, 2013, p.5).

Terceira questão, *operam-se mudanças nas culturas de avaliação de escola no quadro da autonomia normativa atribuída às escolas? Se sim, quais?*

As culturas de escola repercutem-se na ação educativa e nos processos de transformação da escola como resultado da “sua estreita imbricação nas relações clássicas estabelecidas entre a estrutura e a agência humana” (Torres, 2005, p.436). A análise de documentos estruturantes das escolas aponta no sentido de um sistema educativo a rumar a diferentes velocidades, com escolas (poucas) com visões transformadoras traçadas para o ensino, outras alinhando percursos de processos de mudança e outras que ainda lutam por encontrar um caminho. Acresce a este panorama, indícios de escolas com culturas de configuração fragmentadora face à desarticulação entre os seus documentos de cariz estruturante – projeto de intervenção do diretor e projeto educativo –, anunciando visões diferentes, uma com uma veia de transformação organizacional evidente e outra onde esta dimensão é omissa. O potencial engajador de uma interdependência organizacional surge, assim, enfraquecido face às ambiguidades, desconexões, e mesmo a lideranças e ações incertas que podem ser geradas no seio da organização.

A cultura escolar é vital no processo de construção de condições de *capacity-building* pelas lideranças e para conduzir mudanças estruturais nas organizações que suportem a inovação (Yakavets et al., 2017) e, assim, professar mudanças transformativas sociais e a reconfiguração das práticas (Domanski et al., 2020). Apesar da sua importância, a cultura escolar constitui uma

dimensão ausente ou residual nos discursos da Inspeção, mas uma constante nas narrativas das escolas. Existe a percepção por parte dos diretores da importância de construir uma cultura escolar coletiva. As preocupações com a geração de simbioses na organização escolar reportam a considerações relativas às culturas profissionais e em relação ao desiderato de viabilizar ações que se repercutam na inclusão e numa cultura humanista que arrola a preparação para a vida num mundo globalizado. O enfoque dos diretores remete também para a necessidade de promover culturas colaborativas, culturas de avaliação e de melhoria contínua, culturas baseadas na missão e visão da escola e culturas que viabilizem ambientes de confiança enquanto base do desenvolvimento da ação organizacional. Estes desafios, na ótica das escolas são, também, partilhados pelos académicos que apontam como soluções a ação de lideranças inspiradoras que potenciem a inovação, empoderem os professores e produzam um ambiente de segurança psicológica para a ação (Zhu et al., 2019). Um estudo realizado em Portugal reafirma a importância da segurança psicológica no funcionamento de equipas por constituir um mediador da confiança no trabalho colaborativo e da própria viabilidade da ação das equipas (Quintana et al., 2019).

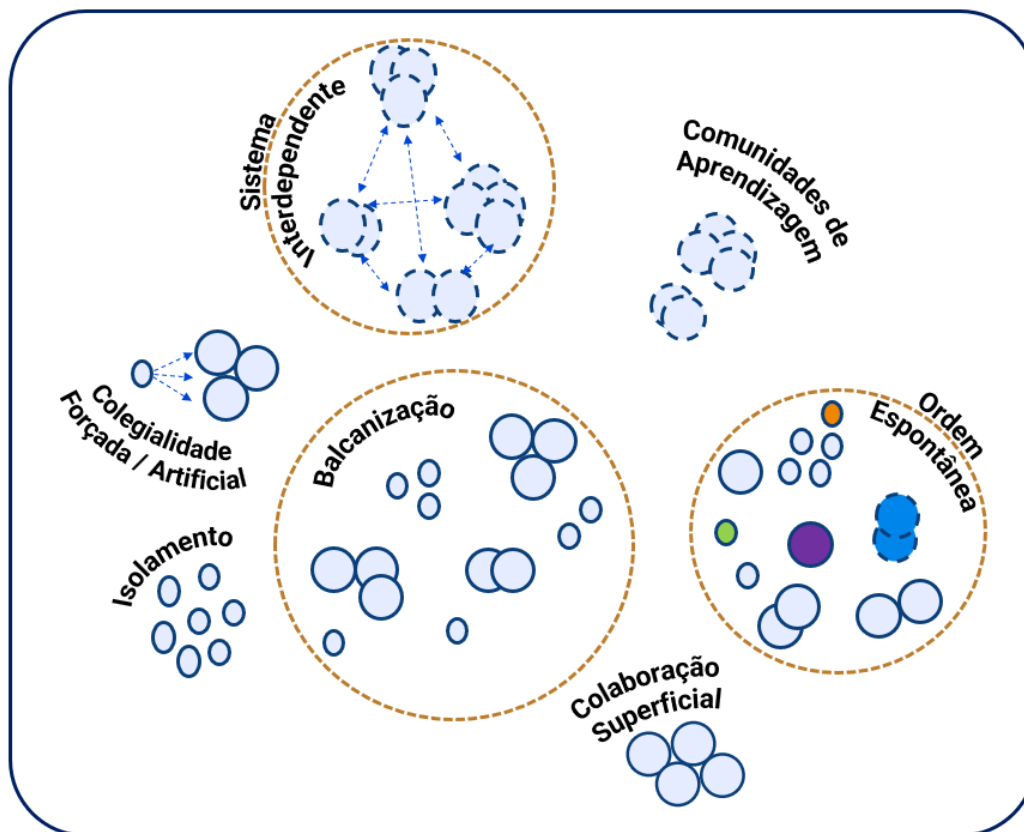
A ideia de promoção de culturas orientadas para a melhoria é forte nas narrativas de educação, quer por parte da Inspeção, quer nos projetos de intervenção dos diretores e nos projetos educativos. É feita alusão a culturas de melhoria contínua, enquanto parte integrante das expectativas de um sistema organizacional, na lógica da assunção de responsabilidades partilhadas, mas nem sempre, de forma explícita e concreta alicerçadas na autoavaliação de escola. Mais uma vez, é possível que estas narrativas registadas pela Inspeção possam ter uma natureza ficcional, um pouco à imagem da tese defendida por Barroso (2022), da autonomia como ficção necessária para legitimar as políticas e, em última instância, o próprio sistema.

A análise documental remete também para a existência de culturas de colaboração superficial e de isolamento acompanhadas de processos de partilha, bem como, de extemporâneas práticas de construção coletiva de materiais pedagógicos, de interdisciplinaridade e de realização conjunta do ensino aprendizagem. Estas, mesmo quando reconhecidas pela Inspeção, é-lhes apontada a falta de sistematicidade ou abrangência na organização. Apesar de o construto da AFC estar bem patente nos discursos, os diretores deparam-se com problemas para a sua implementação e definição de soluções organizacionais viáveis e efetivas para as promoverem. As soluções e orientações apontadas nos documentos estruturantes, esbarram, operativamente, em ideias que poderão incorrer em processos superficiais de colegialidade forçada. Estes dados remetem para uma condição organizacional em que a estrutura colide com a agência humana, produzindo fragmentação e desarticulação ao invés de interdependência (fig. 2). A literatura, vastamente, aclama a importância do trabalho colaborativo como fator promotor da aprendizagem dos alunos, dos professores, da própria escola e do sistema, bem como, lhe reconhece o caráter impulsionador da inovação ao convocar os professores para a mudança e gerar desenvolvimento do capital profissional (Blömeke et al., 2021; French et al., 2022; Fullan et al., 2015; Straub & Vilsmaier, 2020). A convocação do coletivo tem de crescer nas organizações escolares, aspeto que patenteia a sensibilidade dos diretores e é revelador das

suas inquietações. Nestas, parecem vislumbrar-se tensões claras entre o ideal, a ideologia, o normativo e a ação concreta que favorece o celularismo profissional.

Figura 2.

Modelos de formas de trabalho nas escolas



A ideia de uma cultura de promoção de soluções organizacionais inovadoras, está esvaziada nos discursos da Inspeção e os documentos estruturantes das escolas denotam abordagens igualmente superficiais em relação à introdução e difusão de práticas inovadoras. Por parte dos diretores, a problemática das culturas de inovação transcorre mais como considerações discursivas, não acompanhadas de reflexão sobre a raiz do problema. É exceção a palavra de um diretor, num *lever de rideau* sobre as dificuldades do processo de difusão das inovações em que aponta como causas as ações desconexas e pouco articuladas, difíceis de esbater nos modos de funcionamento das estruturas, e como soluções a interdependência organizacional ao nível do planeamento, da tomada de decisão, da resolução de conflitos, da colaboração, da participação e da ação das lideranças. É deduzido a partir dos discursos, que as culturas de inovação esbarram nas culturas colaborativas e, ambas encaixam em problemáticas que se prendem com a inércia dos professores, a resistência à mudança, a baixa disposição para a partilha, a resistência à supervisão pedagógica, o elevado número de alunos por turma (e professor) e a sobrecarga de trabalho burocrático dos professores.

Quarta questão, *os resultados da autoavaliação de escola contribuem para o capital decisional? Se sim, têm impacto na transformação organizacional?*

Um ano letivo após a avaliação externa, é notório o investimento da autoavaliação de escola na ampliação das práticas, num alinhamento com as orientações constantes nos relatórios de avaliação externa e com o próprio referencial de avaliação externa. As evidências apontam que as escolas formalizaram um plano estratégico, mas nem todas concetualizaram mecanismos formais de divulgação de resultados o que se pode traduzir em empobrecimento do capital decisional. Neste alinhamento, a empiria revela que, as representações dos atores educativos (comungada por lideranças, professores e elementos da equipa de autoavaliação) vão no sentido da concordância parcial de que o conhecimento produzido pela equipa de autoavaliação sustenta os processos de reflexão nas escolas. A constituição de uma autoavaliação pautada pela participação da comunidade também não se afirmou como uma prática generalizada da ação das escolas. Contudo, as escolas estão a construir planos de melhoria, uma orientação generalizada da Inspeção por não ser uma prática ou por evidenciar falta de impacto. Outro aspeto recursivamente criticado nos relatórios da avaliação externa reportava à monitorização das práticas de sala de aula e do trabalho colaborativo, vertente da avaliação que passou a ser adotada por várias escolas. Por outra via, a monitorização da concretização das finalidades, objetivos e metas dos documentos estruturantes, a qualidade dos serviços, a disciplina, os mecanismos de suporte à aprendizagem e a inclusão ainda não constituem práticas generalizadas. A autoavaliação está em processo de crescimento nas escolas, a diferentes velocidades, no que concerne à participação e ao âmbito da sua ação. Persiste, contudo, a interrogação em relação à sustentabilidade desta mudança e à capacidade de adaptação a alterações que se operem nos contextos.

Destaca-se um caso específico de um agrupamento de escolas que explicitou discórdia em relação ao sentido da avaliação tecida pela Inspeção, declarando que não se revê no rol de práticas descritas no relatório e acusando, em certa medida, a incompreensão das orientações e das propostas. O processo de avaliação instituído denotou uma carestia de significação para os atores educativos e disrupção entre a Inspeção e escola, perdendo o sentido construtivo e comprometendo a grande função da avaliação externa – contribuir para a melhoria da ação educativa. O relatório de autoavaliação, elaborado um ano letivo após a inspeção, denota um trabalho que prenuncia práticas balcanizadas, decorrente de as estruturas educativas, departamentos e outros, assumirem os próprios processos de autoavaliação, sem orientações, indicadores e referentes comuns. Este caso dilucida sobre a importância de uma avaliação externa construtiva que se afirme como suporte efetivo à ação das escolas. Simultaneamente, este caso remete para a importância da co-regulação, onde perspetivas múltiplas e processos balanceados podem produzir avaliações que se possam afirmar como contributos efetivos para a melhoria das escolas. Contudo, não pode ser esquecido, sob pena da perda de todo o seu potencial de impacto, que todo o processo de avaliação tem de ser inscrito sobre os princípios da confiança, da credibilidade e da transparência. Avaliações confusas, falsas, não confiáveis perdem significância e tornam-se inúteis (Zamir, 2019). Em sentido contrário, enuncia-se o caso

relativo a outro agrupamento de escolas, que reportou um elevado grau de autonomia e clarividência no que respeita a uma cultura de avaliação e de melhoria contínua, aspeto prenunciado na análise prévia dos documentos estruturantes de escola, no relatório de avaliação externa e, posteriormente, no relatório de autoavaliação. A coesão e sintonia entre os três documentos estruturantes de escola e o próprio relatório de avaliação externa, prenunciada pela análise documental, tecem evidências de que a agência deste agrupamento parece ser construída a conta de um substancial investimento em capital decisional, que ativa capital organizacional e transformacional. Este prefigura-se como um agrupamento que parece ser capaz de mudar por si próprio e, de acordo com Ehren e Visscher (2006), integra um pequeno grupo de escolas que não precisa de inspeção para encetar a mudança. Estes dois casos de agrupamentos, que configuram contextos desfavoráveis e ainda assim com desempenhos académicos, pelo menos, satisfatórios dos seus alunos, fazem-nos equacionar o pressuposto de que os cenários organizacionais estão adstritos aos desígnios, visões, perceções, crenças e estilos das lideranças, bem como, às culturas organizacionais expressas em expectativas, experiências, filosofia, valores e comportamentos dos seus membros com reflexo na autoimagem do funcionamento interno da escola. A avaliação de escola, externa e autoavaliação, deve, segundo Santos Guerra (2002), refletir a “realidade das escolas e permitir que os protagonistas se vejam com clareza e rigor” para que “da compreensão suscitada pela imagem contemplada, [nasça] a decisão de corrigir um gesto, limpar o rosto, ou a realização duma operação mais complexa” (p.11). O mesmo autor alerta-nos que, numa escola “não existe apenas uma imagem, mas muitas imagens” (p.11), pelo que a melhoria deve assentar na reflexão e em incursões conduzidas com o intuito orientar e apoiar processos de autoanálise claros e inteligíveis, reais e autênticos que convoquem melhorias e transformações com significado coletivo nas organizações. A dimensão construtiva da avaliação externa, uma aliada da autoavaliação de escola, deve onerar os mecanismos de controlo e, assim, potenciar uma autonomia que permita responder aos desafios da aprendizagem e da escola inclusiva.

Quinta questão, será que a avaliação de escola e a autonomia estão a potenciar transformações nas escolas?

Este problema remete para duas dimensões de análise: (i) a do capital decisional, que sendo sustentado pela avaliação de escola, corresponde à arte aprendida de tomar boas decisões, não apenas em relação ao ensino aprendizagem, mas também em relação ao sentido da ação de escola, à sua inscrição regional e mesmo de atenção à política nacional (Luger, 2011); (ii) ao capital organizacional percecionado como a capacidade da liderança para conceber soluções organizacionais que conduzam à produção de novas estratégias de ensino e aprendizagem, possibilitando sua transformação (Dimmock, 2011; Yakavets et al., 2017).

Relativamente à dimensão do capital decisional, constatou-se que muitas escolas apresentam processos de autoavaliação pouco abrangentes, pouco participados pela comunidade, frequentemente com uma ação desviada do ensino aprendizagem, da avaliação e

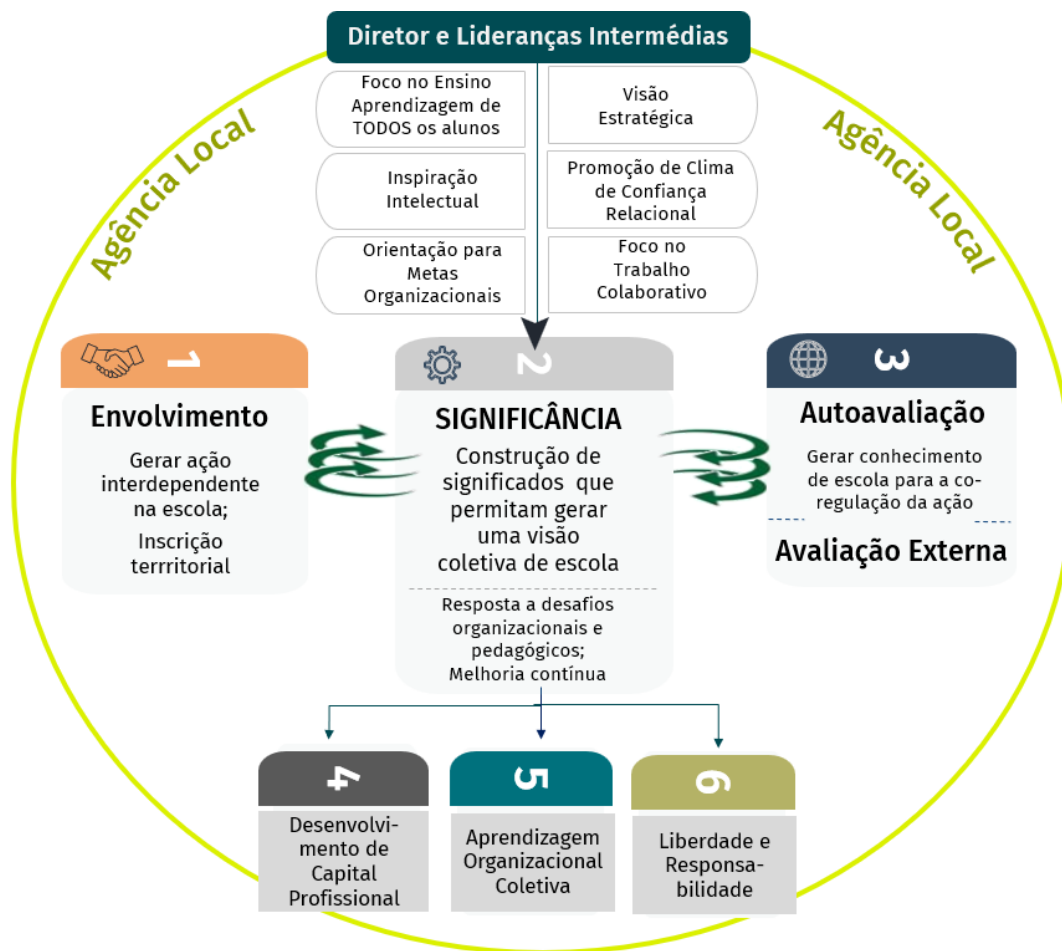
das práticas de sala de aula. Contudo, observou-se que a ação inspetiva deteve um potencial de mobilização das escolas no sentido da expansão dos processos de autoavaliação, bem como, os discursos das escolas patentes nos documentos estruturantes produzidos pós-inspeção, também, denotam o reconhecimento da insipiência dos modelos instituídos e a necessidade de reverter este princípio organizacional pelo valor que detém na promoção da melhoria da escola. No ADN da maioria das escolas não é notória a existência, inata e afirmada, de uma cultura de avaliação, talvez devido a uma socialização, como referem Alves e Cabral (2019), na ordem do 'comando e do controlo' central que dispensa as escolas e os atores de pensar, de arriscar, de ver e resolver problemas, e, até mesmo, de inovar. Esta cultura apenas foi vislumbrada num único agrupamento de escolas que reitera projetar a ação sob o enfoque de diagnósticos gradualmente construídos e reconstruídos, suportados no processo de autoavaliação, com vários anos de implementação. Em muitas escolas a autoavaliação não se vem consubstanciando em planos de melhoria com impacto e em reflexão, fazendo pensar que vivenciam uma autonomia não sustentada, que funciona por intuição. Contudo, os discursos registam sinais de compreensão da complementaridade e completude entre a avaliação externa e a autoavaliação, e do seu papel na promoção da melhoria das escolas. Por conseguinte, podemos afirmar que estão instituídas as bases da valoração do capital decisional das escolas, nos termos explanados por Fullan, Rincón-Gallardo e Hargreaves (2015), um mecanismo de desenvolvimento de *expertise* ao longo do tempo, na condição da sustentabilidade e continuidade das políticas centrais e locais.

Face ao exposto na segunda premissa do argumento de que os processos de co-regulação podem produzir formas de controlo mais compreensivos, inteligíveis, credíveis, transparentes e abrangentes, reunimos evidências de que este é um processo que está em curso com sinais positivos de efetividade, mas também com prenúncios de desarmonias. Estas remetem para possibilidades de disrupções entre a avaliação externa (coerciva em vez construtiva) e as escolas e, nas escolas que encetaram mudanças comprovadas em matéria de autoavaliação, sobre o seu impacto ao nível organizacional e na transformação da sala de aula. Estas duas visões, a incerteza do real impacto da avaliação externa e a da sustentabilidade das mudanças em curso, alertam para a possibilidade de serem gerados sistemas pseudomórficos caracterizados por mudanças discursivos e superficiais, mas pela persistência dos modos tradicionais de funcionamento da escola. Defendemos, por isso, que uma mudança tem de ser alicerçada na (re)construção de significados de forma transversal nas instituições escolares para se tornar impactante (Fig. 3). A construção de significados verticalmente, entre as escolas e a Tutela e entre as escolas e a Inspeção, e horizontalmente, no seio da escola, implicando o diretor, as demais lideranças (formais e informais) e os professores, pode gerar: (i) inteligibilidade sobre os contextos e os novos paradigmas de educação; (ii) racionalidade em relação à mudança; (iii) consciência de que afirmação, valorização e reconhecimento profissional e organizacional é uma condição de sobrevivência (Morin, 2003; Santos Guerra, 2002); (iv) e aceitação da necessidade de uma transformação. Urge desbloquear impasses e atentar às impossibilidades lógicas que geram duplos bloqueios nos sistemas, pois "não se pode reformar a instituição sem uma prévia reforma das mentes, mas não se podem reformar as mentes sem uma prévia reforma das

instituições” (Morin, 2003, p.99). A significância detém o poder de gerar envolvimento, a construção resiliente de significados assegurará esse envolvimento permanente e, ambos, a significância e o envolvimento, serão sustentados se soerguidos à custa da autoavaliação. As inconsistências exibidas pela avaliação externa e as incompreensões geradas nas escolas, bem como, as escolas que persistirem na falta do uso de autonomia no que respeita à mobilização de processos de regulação condicionam os respetivos processos de melhoria e o próprio exercício da sua autonomia.

Figura 3.

Princípios de um modelo de transformação da escola.



No que respeita ao capital organizacional, entendido como liderança para capacitação da transformação, e que decorre da forma proativa como é usada a autonomia, percebe-se que surge enredado nas desarticulações do sistema, incluindo nas fragilidades ao nível da autoavaliação. As evidências reunidas apontam para dificuldades decorrentes do baixo grau de articulação e coerência entre documentos estruturantes, da necessidade de lideranças intermédias proativas e autónomas, de problemas de comunicação institucional, da necessidade de aprofundamento de processo de reflexão institucional, da necessidade reconceptualização

das práticas de ensino e do próprio processo de avaliação formativa de alunos, do investimento em metodologias ativas e de mudanças na gramática escolar. Os discursos revelam riqueza de propostas de mudança e os diretores defendem a necessidade de mudanças nas culturas que, segundo Fullan (2007), são necessárias para produzir transformações nas escolas. Mas, a transformação da escola está coligida à inovação que constitui uma vertente marginal nos processos de avaliação externa e de autoavaliação. A inovação é fracamente considerada pelos diretores como um elo da cultura pretendida para a escola e surge enredada em dificuldades que se prendem com a ‘máquina escolar’, as culturas de escola e as formas de trabalho docente. Face ao exposto, em relação à primeira premissa do argumento que remete para o potencial de a autonomia fomentar a ação organizada na escola no sentido gerar estratégias sistêmicas para a transformação, percebe-se que o exercício pleno da autonomia continua a esbarrar em problemas sistêmicos organizacionais que prenunciam as escolas como sistemas debilmente articulados (Brunsson, 2006; Weick, 1976).

Os paradoxos e tensões observados por via da empiria nas escolas no que respeita ao uso da autonomia e aos processos de *accountability* descritos, permitem-nos concluir que as escolas denotam dificuldades em se afirmarem como sistemas interdependentes. A complexidade das instituições e do próprio sistema, a falta de articulação como imagem da ação da maioria das escolas, uma avaliação externa que não surge como garante da inovação, uma autoavaliação que carece de afirmar o seu papel na construção de capital decisional e de alavancar a ação do diretor, das lideranças e dos professores, as culturas de escola fragmentárias e a carestia concetual da própria dimensão inovadora na ação escolar, justificam a análise construída do argumento. Este é, portanto, um argumento que ainda ruma em direção a um horizonte de melhoria, pois a maioria das escolas ainda tarda em construir uma autonomia autorregulada.

2.2. Lógicas, razões, paradoxos e tensões implicando as culturas organizacionais – o segundo argumento

Os desafios interpostos à escola por via da globalização e da crise tripla que demarca presentemente a educação, demandam por uma ‘nova liderança’ que, segundo Fullan (2020), reúne as seguintes características: *experts* em contexto; poder de engajamento do coletivo nos processos da organização; assunção de uma cultura de liberdade e responsabilidade, isto é, uma *accountability* inteligente; e tornar-se num ator do sistema, ou seja, reiterar lógicas de agência. A ‘nova liderança’ terá o potencial para lidar com os desafios interpostos pela urgência da transformação da escola. Esta está conectada com um processo dinâmico de construção das culturas organizacionais, pois os processos de mudança requerem a compreensão dos valores, dos princípios, dos códigos e dos simbolismos que as caracterizam. Transformar a escola carece da reconstrução de significados, isto é, da reedificação de novos simbolismos para gerar envolvimento e a ativação de vontades individuais e colegiais. Face ao exposto, partimos da premissa que os documentos estruturantes procuram criar uma imagem da ação estratégica da

escola, estabelecendo uma visão que, no plano ideal, gera sentido de missão nos atores educativos. A segunda premissa aponta para que as lideranças (formais e informais) que operam a transformação da escola providenciam mobilização e suporte para os professores por via da geração de um clima escolar favorável à sua ocorrência. Por conseguinte, lideranças mobilizadoras que assentam a sua ação na visão de escola e na promoção da aprendizagem organizacional, congregam o potencial para gerar a transformação da escola. A avaliação deste argumento será consagrada através de três questões-chave seguidamente enunciadas e da análise o conceito de capital transformacional, um processo sistémico, sustentável que enforma a missão das escolas e conduz à sua transformação. As iniciativas de capital transformacional instituídas nas escolas representam a forma como o capital profissional e o capital organizacional são usados para transformar o ensino aprendizagem (Serra et al., 2023).

Primeira, qual é a orientação educativa constante nos documentos estruturantes de escola em matéria de inovação?

O estudo das narrativas dos projetos educativos e dos projetos de intervenção de diretores remetem para a escassez de considerações implicando as palavras inovação e transformação da escola, apesar de integrarem inúmeras propostas de mudança tendo em vista processos de melhoria. As poucas estratégias de inovação consideradas apontam para a promoção de soluções de inovação, genérica e superficialmente enunciadas, em relação ao processo de ensino aprendizagem e à promoção de uma cultura de suporte e difusão de experiências pedagógicas. As considerações discursivas encontradas assumiram a forma de observações circunstanciais nas várias escolas com exceção de uma, que apesar de pertencer a um contexto muito desfavorável, nos documentos estruturantes, construídos antes da ação inspetiva, denota clarividência em matéria de inovação enquanto recurso para a transformação da escola. Neste agrupamento, também, foi verificada a existência de correlações implicando o capital decisional, o capital organizacional e o capital transformacional, prenunciando um elevado potencial de construção da ação articulada, um alinhamento de visão e do sentido de missão, bem como, uma cultura de melhoria contínua reconhecida pela Inspeção. Paradoxalmente, na maioria das escolas estudadas, encontraram-se pares de documentos – projeto educativo e projeto de intervenção do diretor - com similaridades de alinhamentos na visão, ação e estratégia projetadas que oscilaram entre 40 e 60%, remetendo para desconexões que podem produzir incongruências nos percursos de melhoria. Sem uma visão partilhada e holística clara, a escola operará em vácuo, em vez de liderar e orientar a organização numa direção clara e desejável (Mogren et al., 2019). O projeto educativo e o projeto de intervenção do diretor constituem elementos fundacionais para a construção de uma cultura organizacional. Sem esta perceção, as organizações ficam reduzidas e meros instrumentos em “que des acteurs sociaux se sont forgés pour régler leurs interactions de façon à obtenir le minimum de coopération nécessaire à la poursuite d'objectifs collectifs, tout en maintenant leur autonomie d'agents relativement libres” (Croizier & Friedberg, 1977, p.196).

Segunda, as lideranças mobilizam e suportam os processos de inovação e transformação de ensino aprendizagem?

O sucesso numa organização depende da liderança do diretor, nomeadamente da visão e da capacidade para gerar uma estratégia para a sua implementação, do uso que faz do conhecimento de escola para a concretizar e da atitude e estilo de liderança que adota para mobilizar as suas lideranças intermédias e, com elas, os professores. Sem liderança, os professores agem como um grupo debilmente articulado sem visão e motivação para introduzir mudanças no sistema (Mincu, 2022), no processo de ensino aprendizagem e na avaliação. Assim, o capital de liderança nas organizações educativas corresponde, enquanto veículo de visões apelativas e mobilizadoras numa escola, à força motriz para a ação (Bartee, 2007).

As evidências reunidas com base na empiria apontam, na perceção dos professores, para a existência de associações estatisticamente significativas entre a liderança mobilizadora empreendida pelo diretor e o uso do conhecimento de escola para suporte ao capital decisional, e com a mobilização do trabalho colaborativo. Estas, embora fracas, reportam a interações que consideram o incentivo à participação ativa dos professores na organização, a iniciativas de difusão de processos de inovação, à promoção do trabalho colaborativo e ao incentivo a práticas de suporte entre pares. Relativamente à ação das lideranças intermédias, também, foram mensuradas associações positivas estatisticamente significativas, igualmente fracas, com as práticas de trabalho colaborativo dos professores e com o uso do conhecimento de escola para o exercício do capital decisional. Estas associações reportam, especificamente, a processos de suporte à aprendizagem dos professores através do incentivo à formação e da aprendizagem em interação com os pares, acrescidos de inspiração para a assunção de novas experiências pedagógicas.

No que respeita à perceção relativa aos processos de liderança implementados nas escolas – liderança mobilizadora e liderança orientada para suporte e aprendizagem dos professores -, constata-se não existirem diferenças entre diretores e coordenadores departamento. Contudo, essa perceção muito positiva e otimista em relação aos modos de condução dos processos de liderança não é inteiramente partilhada pelos professores e elementos da equipa de autoavaliação. Há alguma divergência em relação à forma como as lideranças intuem que clarificam metas, fomentam a participação, promovem a inovação pedagógica, incentivam o apoio mútuo entre professores, viabilizam a partilha de práticas, suportam à aprendizagem coletiva e promovem a colaboração entre professores. O que as lideranças intuem que estão a fazer não está inteiramente alinhado com a perceção dos professores e elementos da equipa de autoavaliação, aspeto que poderá acarretar perda de eficácia na ação de liderança.

Tendo por base a análise da perceção dos atores educativos em 23 agrupamentos de escolas, num estudo de modelação, verificámos que a liderança não se afirma como um fator capaz de exercer um efeito direto na iniciativa de capital transformacional das escolas. Efetivamente, mensuramos influências residuais de uma liderança mobilizadora centrada na figura do diretor na ordem 1.3%, embora num efeito conjunto com o trabalho colaborativo de

6.8%. Esta percepção reportada a todos os atores educativos não converge com as representações dos professores, que não a consideram, de todo, impactante. Em contrapartida, não foram encontradas evidências, estatisticamente significativas, relativas à influência direta da liderança de suporte e orientada para aprendizagem, por parte dos coordenadores de departamento, sobre as práticas de ensino aprendizagem. A influência direta da liderança faz-se sentir sobre o trabalho colaborativo dos professores que, por sua vez, é um fator, a par do comportamento inovador dos professores, determinante na transformação do ensino aprendizagem. Neste estudo de modelação, estimamos uma influência de 2.7% em relação ao efeito isolado da liderança de suporte e para aprendizagem, de 1.8% para o efeito isolado da liderança mobilizadora e de 19.5% relativo ao efeito conjunto de ambas. Assim, a liderança parece ser exercida mais como um efeito indireto moderador da iniciativa do capital transformacional, por via da promoção e suporte ao trabalho colaborativo, do que de forma direta. Considerações diversas existem na literatura, reportando que a liderança é fundamental na promoção da eficácia, das práticas e do comportamento inovador dos professores (Çoğaltay & Boz, 2022) e, por isso, um fator determinante, ainda que indiretamente, da aprendizagem dos alunos (Daniëls et al., 2019; Leithwood, 2021; Pina et al., 2015; Wang, 2019).

As dificuldades da mobilização dos atores educativos e a importância de a ação das lideranças ser soerguida sobre os princípios da confiança, da proximidade e da inspiração, do envolvimento organizacional e da consolidação de uma cultura de grupo constitui o maior dos desafios organizacionais. Apesar de pontualmente os diretores enunciarem esta problemática nas suas narrativas, esta consciência não é acalentada pela maioria. A empiria dá-nos sinais da existência de baixa interdependência organizacional nas escolas, da parca concetualização de soluções possíveis para viabilizar níveis crescentes de interdependência e, também, do esquecimento e desvalorização desta questão. A realidade espelha uma escola que não se permite ver as necessárias interdependências dialógicas (fig. 2). São parcas as preocupações expressas pelos diretores em relação às formas de articulação entre departamentos e professores e demais comunidade educativa, com a promoção da articulação curricular horizontal e vertical, com a articulação entre escolas e documentos estruturantes, e, ainda, com a integração articulada no quotidiano da sala de aula das atividades dos projetos e da interdisciplinaridade. Sem uma visão de um projeto de escola alicerçado na interdependência dialógica organizacional, produzir mudanças na escola, numa alusão ao poeta Vinícius de Moraes, é como “um barco sem mar, um campo sem flor”. Para produzir a transformação da escola é preciso mudar as crenças e missões pessoais dos professores (Goodson, 2014), fazer uso do capital profissional dos professores (Fullan et al., 2015) e transformar as lideranças pela influência que detêm sobre o clima de escola, a aprendizagem dos professores e comportamento inovador (Pan & Chen, 2021; Shirley et al., 2020; Tayag & Ayuyao, 2020).

Um estudo realizado em Portugal, por Espuny, Cabral e Alves (2020), dá-nos conta da dificuldade em encontrar lideranças intermédias, influentes. A visão estratégica sólida das lideranças, uma liderança distribuída, partilhada e mobilizadora que produza envolvimento profissional (Devos et al., 2014), norteie a ação para as metas e finalidades da escola, induza

uma visão comum (O'Shea, 2021) e fomenta impulsos inovadores (Müller, 2021) pode ser a base para a afirmação de lideranças transformadoras construtoras de significados. As evidências reunidas, tendo por base as representações da Inspeção em relação às organizações escolares, reproduzem, apenas em parte, esta imagem. Apesar do número reduzido de associações estatisticamente significativas encontradas, apenas doze, sete reportam a dinâmicas implicando as lideranças e consubstanciam-se em efeitos moderados entre: a visão estratégica das lideranças e a observância de metodologias de ensino aprendizagem ativas e de práticas de avaliação formativa; fomento de um clima de envolvimento organizacional e a viabilização da articulação vertical do currículo e com os resultados académicos dos alunos. Paradoxalmente, os relatórios da Inspeção também expõem associações controversas de dimensões de liderança robusta com dimensões frágeis da organização escolar, nomeadamente, entre liderança distribuída e mobilizadora e necessidade de ampliação de metodologias ativas de ensino aprendizagem e entre um clima de envolvimento organizacional e a necessidade de investimento em processos de supervisão na sala de aula. Adicionalmente, não se percebem associações entre o domínio da liderança e gestão e fatores da inovação ou porque estas não se verificam na realidade ou devido ao facto de a inovação ser um aspeto marginal da avaliação externa. A identificação da dimensão inovadora da ação escolar constitui uma debilidade no discurso da Inspeção, uma problemática com certeza acalentada pela dificuldade de identificar iniciativas inovadoras e ou pela sua carestia no quotidiano escolar. As associações controversas acima identificadas também remetem para processos da avaliação externa que carecem de maior transparência e que configuram fragilidades num processo de regulação.

Terceira, existe uma visão e um clima de escola que contribui para a transformação do ensino aprendizagem?

O estudo empírico implicando os atores educativos - diretores, coordenadores de departamento, elementos da equipa de autoavaliação – revelou que as suas perceções não diferem no que respeita à visão de escola. Os resultados permitem deduzir que existe concordância parcial entre os vários atores educativos em relação à existência de uma visão comum de escola e de um trabalho desenvolvido pelos professores no sentido da expansão da sua missão. Gerar uma cultura positiva de escola inclui partilhar uma visão, onde as lideranças devem assumir-se como modelos e, assim, inspirar outros a assumir essa visão e missão na prática diária (Juwono & Harly, 2017), aspeto que parece constituir uma realidade nas escolas portuguesas. Esta visão tem, no entanto, de ser lida com algumas reservas, pois pode não ser claro o conceito de escola (e respetiva visão / missão específicas), nem ser consistente a imagem de modelação e inspiração das lideranças. Considerada a globalidade dos elementos empíricos reunidos, enuncia-se a hipótese de que estes resultados poderem expressar uma dimensão pseudomórfica da realidade, em que os discursos esperados em relação a uma visão de escola não compaginam inteiramente as práticas instituídas.

Os atores educativos também partilham a mesma perceção em relação ao clima de inovação instituído nas escolas, concordando parcialmente que se verifica recetividade em relação a novas abordagens pedagógicas, à aceitação de mudanças e de reformas, à valorização dos colegas mais inovadores e ao investimento em novas metodologias ou abordagens para o ensino aprendizagem. Na perspetiva dos professores, foram encontradas associações estatisticamente significativas, embora fracas, entre o clima de inovação e a liderança mobilizadora do diretor, mas moderadas com a liderança de suporte à aprendizagem alocada às lideranças intermédias.

Paradoxalmente, constatou-se que, quer a visão partilhada de escola, quer o clima de inovação não produzem impacto na iniciativa de capital de transformação e, por isso, na transformação da sala de aula. Contudo, a literatura estabelece que o clima de escola é determinante do comportamento inovador (Song et al., 2014) ou favorece a aceitação de inovações (Kaewsang-on et al., 2022). Logo, quando o clima inovação não representa um direto promotor da iniciativa do capital transformacional, mas tem um impacto mensurado, ainda que fraco, sobre o trabalho colaborativo dos professores, levanta-se a hipótese que possa ter um impacto indireto na iniciativa de capital transformacional ou funcionar como um facilitador nos processos de difusão da inovação nas organizações.

Realizar boas ideias, estimular inovação e sustentar o caminho da inovação é um desiderato que pode ser concretizado com base em lideranças visionárias que mobilizam e suportam os liderados e geram climas facilitadores de ações individuais e coletivas inscritas na visão de escola. Na prática foram detetados dilemas que comprometem as proposições que enquadram esta tese. Primeiro, apesar de existir (retoricamente) uma visão partilhada de escola pelos atores educativos, esta não se revelou impactante sobre o ensino aprendizagem. Segundo, apesar de ser reconhecido que as lideranças são mobilizadoras do clima de inovação nas escolas, este não justifica, diretamente, a iniciativa de capital transformacional. Assim a visão e o clima de inovação observados nas escolas, instigados por lideranças mobilizadoras e orientadas para aprendizagem institucional, perdem impacto no efeito esperado na sala de aula, remetendo para a necessidade de maior integração e interdependência organizacional. As escolas carecem de concetualizar e operacionalizar a sua capacidade para melhorar. As lideranças precisam investir na construção de capacidades, isto é: (i) de apoiar o desenvolvimento profissional; (ii) de criar infraestruturas que ampliem o conhecimento em linha com as melhores práticas e os resultados da investigação; (iii) e de gerar comunidades de aprendizagem que induzam os professores a investigar a sua prática a partir dos processos de autoavaliação (Bolívar, 2009). É preciso mais compromisso e maior desenvolvimento da profissionalidade docente e das lideranças.

2.3. Lógicas, razões, paradoxos e tensões implicando as práticas profissionais – o terceiro argumento

Os professores e os alunos constituem os atores principais numa cena que reclama por alterações dos papéis dos personagens: com o aluno como protagonista da aprendizagem e o

professor como construtor de ambientes de aprendizagem e mediador; mudanças nos cenários, traduzidas na alteração das gramáticas de escolarização (espaços, tempos, agrupamento de alunos, modos de trabalho pedagógico); e mudanças de roteiro, com novas abordagens pedagógicas, implicando múltiplos lugares e suportes, que permitam a aprendizagem de todos os alunos. Esta constitui a premissa de um argumento que remete para mudanças nas práticas profissionais dos professores, entre si e com os alunos, enquanto fatores de uma transformação da sala de aula que se sustenta na inovação. A avaliação deste argumento vai ser explorada a partir de três questões-chave.

Primeira, o comportamento inovador e o trabalho colaborativo constituem fatores determinantes da transformação do ensino aprendizagem?

A transformação da sala de aula requer iniciativa, conhecimento e capacidade de inovar que se traduzam em comportamento inovador, uma característica, segundo Schumpeter (1997) e Rogers (2003), de poucos nas organizações. Fomentar a inovação numa escola, isto é, gerá-la, difundi-la e assegurar a sua sustentabilidade requer lideranças visionárias, empoderadoras, construtivas e inspiradoras e o enfoque em culturas colaborativas e na interdependência organizacional. Contudo, o comportamento inovador é uma peça do processo de transformação das escolas arredado dos documentos estruturantes de escola, dos relatórios de avaliação externa e de autoavaliação. Provavelmente, porque a inovação não é vista como um processo sistemático de resolução de problemas organizacionais e profissionais, porque a naturalização da velha gramática escolar não permite ver outros modos de organizar o currículo e aprendizagens, porque prevalecem culturas de vassalagem e de obediência, enfim, porque a escola é resiliente e conservadora.

Relativamente ao trabalho colaborativo, foram encontradas evidências de efeitos estatisticamente significativos, ainda que fracos, em relação à iniciativa de capital transformacional, na perspectiva dos professores. O trabalho colaborativo remete para processos de partilha de materiais pedagógicos, partilha e difusão de novas abordagens ao ensino aprendizagem e reflexão sobre a informação procedente da autoavaliação enquanto suporte à reorientação da ação pedagógica. Também foi verificado que professores e os demais atores educativos partilham as mesmas representações relativas à natureza do trabalho instituído. Estes concordam parcialmente que as práticas adotadas nas suas escolas implicam a partilha e construção conjunta de materiais pedagógicos, quer em equipas disciplinares, quer interdisciplinares. Paradoxalmente, o trabalho colaborativo dos professores só foi identificado como uma força em sete dos sessenta agrupamentos de escolas, cujos relatórios de avaliação externa foram analisados.

O estudo realizado com base em questionários e por via do recurso a técnicas de modelação, permitiu-nos reunir evidências de que, na perspectiva conjunta dos atores educativos, o efeito mensurado na iniciativa de capital transformacional alocado ao trabalho colaborativo oscila entre 6.6% a 8.7%, acrescido 6.8% fruto de um efeito conjunto com a liderança mobilizadora.

Diferenças de percepções entre líderes e liderados foram observadas, pelo que, na perspetiva dos professores, os executores da mudança, o efeito isolado do trabalho colaborativo torna-se diminuto (apenas 1.0% a 4.0%), perdendo relevância para o comportamento inovador cujo impacto mensurado foi de 4.2. a 12.0%. Neste caso o efeito conjunto do trabalho colaborativo e do comportamento inovador sobre a iniciativa de capital transformacional reporta a valores de 2.7% a 8.1%. Assim, quer o trabalho colaborativo quer o comportamento inovador assumem-se como fatores com algum impacto na transformação da sala de aula, que segundo Pathak e Mishra (2019), não podem ser dissociados do grau de envolvimento dos professores no ato educativo e na organização. A valorização do comportamento inovador, em detrimento do trabalho colaborativo concedido ato educativo por parte dos professores e face às demais evidências reunidas de desarticulações no sistema, faz com que a transformação da sala de aula pareça prefigurar a forma de ordens espontâneas geradas nas organizações. Estas, à falta de interdependência organizacional e da ação organizada em comunidades de práticas, precisam ser monitorizadas, avaliadas e mobilizadas para interpor transformações em toda a instituição. Afinal, os benefícios de uma ordem espontânea, em linha com as ideias de Hayek, (2018), associada à ação de professores com um papel de 'rule-breakers' pode potenciar processos de inovação entre os pares, os 'rule-followers'. Contudo, uma ordem espontânea em crescimento é algo frágil e passível de ser destruída nos processos de transformação (Luban, 2020).

Segunda, operam-se mudanças na gramática escolar e no processo de ensino aprendizagem na sequência da autonomia consignada às escolas?

Uma inovação pedagógica corresponde a uma nova prática de ensino que difere das formas tradicionais de instrução e tem o propósito de melhorar a aprendizagem (Walder, 2017). Uma pedagogia inovadora é definida como um conjunto planeado de atividades educativas que contempla novas ideias face a um determinado contexto com o propósito de melhorar a aprendizagem em condições de interação (Avidov-Ungar & Forkosh-Baruch, 2018). Walder (2014) identificou sete atributos distintivos de uma inovação pedagógica: (i) novidade para envolver e surpreender os alunos; (ii) processo de mudança que implica adaptação; (iii) reflexão criativa; (iv) aplicação considerando o assunto, a audiência ou a tecnologia; (v) contribuir para melhor a qualidade ou o sucesso; (vi) incluir interação pedagógica e tecnológica; (viii) e constituir uma atividade relacional que implica professores e alunos e outros professores. Inovar em educação assume a perspetiva do 'profissionalismo interativo' que conjuga a interação e a colaboração, a experimentação de novas abordagens, o estímulo ao desenvolvimento de uma mentalidade orientada para o risco e aprecia os empreendedores de mudança (Machado & Formosinho, 2016). Por conseguinte, perfilar a inovação demanda a existência de uma visão ou horizonte de melhoria, de um sortido de competências necessárias nos atores, de um sistema de incentivos e de apoios, de recursos e de um plano estruturado de ação (Azevedo, 2016). É sob esta conjetura que iremos enquadrar as mudanças operadas nas escolas portuguesas.

Os discursos constantes nos documentos estruturantes de escola expõem uma profícua abordagem reportada aos caminhos de mudança anunciados para a escola, especificamente em

relação: (i) à valorização das metodologias ativas de ensino aprendizagem; (ii) à necessidade de empreender a mudança de um paradigma centrado em conhecimentos para outro que considere uma formação, também, para as atitudes, valores, capacidades, competências e para o exercício da cidadania; (iii) à importância a conceder no ensino aprendizagem à criticidade, criatividade, comunicação e colaboração; (iv) à necessidade de diversificação de práticas, incluindo a digitalização, por forma a assegurar a inclusão. Por outra via, e no sentido oposto ao dos discursos de escola, a avaliação externa tece com frequência considerações numa lógica de melhoria, aprofundamento e ou alargamento em relação: (i) ao investimento em metodologias ativas de ensino aprendizagem; (ii) à melhoria dos procedimentos de avaliação formativa; (iii) e à promoção da articulação horizontal do currículo, incluindo a interdisciplinaridade. Acrescem ainda os relatos relativos à necessidade de investimento em processos de supervisão da sala de aula. Contudo, implicando as dimensões observadas pela Inspeção apenas foram identificados efeitos estatisticamente significativas em relação às metodologias ativas de ensino aprendizagem decorrentes da visão estratégica das lideranças, e relativos à influência das primeiras sobre os resultados académicos dos alunos. Paradoxalmente, as representações da Inspeção também anunciam associações desconcertantes, pois fragilidades ao nível das metodologias ativas tendem a surgir com uma probabilidade quatro vezes superior em escolas com robustas lideranças partilhadas e mobilizadoras. Do mesmo modo, também foram atestadas associações inconsistentes entre a necessidade de melhoria das práticas de ensino dos professores e a avaliação formativa de alunos. Assim, considerados os discursos de escola, as representações da avaliação externa e as associações mensuradas, encontram-se desalinhamentos e controvérsias que não são enquadráveis com um sistema interdependente. Pelo contrário, prefigura-se um sistema caótico de encenação errática que institui uma radical perplexidade, só compreensível à luz das teorias neo-institucionais e da “hipocrisia organizada”.

No que respeita à iniciativa de capital transformacional, os atores educativos – diretores, coordenadores de departamento, professores e elementos da equipa de autoavaliação - partilham a mesma percepção, concordando parcialmente que as metodologias ativas são valorizadas no ensino aprendizagem e se verifica o uso alargado do digital e o recurso a novas metodologias de ensino aprendizagem. Contudo, quando questionados em relação à frequência das práticas, estas oscilam entre uma vez por ano letivo a uma vez por período, remetendo maioritariamente para um cariz pontual. Na perspetiva dos professores, as práticas apontam apenas, pontualmente, para mudanças de gramática escolar e de um ensino interdisciplinar. Importa referir que a visão das lideranças, diretores e coordenadores de departamento, no que respeita à interdisciplinaridade é contraditória em relação à evocada pelos professores, reportando maior abrangência e regularidade de práticas. Isto indicia situações de fragmentação horizontal face às percepções díspares dos atores educativos em relação à realidade escolar e fragmentação vertical, uma vez que a interdisciplinaridade apesar de valorizada nos normativos constitui um aspeto, tendencialmente, apagado da ação desenvolvida nas escolas.

Terceira, existe sintonia entre as narrativas para a ação e as práticas, e articulação entre estas e a transformação do ensino aprendizagem?

A empiria dá-nos nota de um sistema educativo marcado por lógicas, razões, contradições, paradoxos e tensões implicando as práticas profissionais e as culturas organizacionais, os vários atores educativos e os próprios mecanismos de regulação das escolas. Existe desconexão no sistema uma vez que o esforço de liderança, no entender dos diretores e coordenadores de departamento, e as práticas de lideranças percebidas pelos professores e equipa de autoavaliação não estão alinhados. Por outra via, os vários atores educativos partilham perceções em relação à existência de uma visão comum de escola, ao uso do conhecimento de escola na promoção do capital decisional, ao sentido do trabalho colaborativo, ao clima de inovação existente nas escolas e à iniciativa de capital transformacional. Entre as escolas e os centros de decisão política também é notória a fragmentação face à parca exploração de opções curriculares viabilizadas pela AFC que não estão, de uma forma inovadora, a ser mobilizadas pelas escolas. As mudanças de gramática escolar, a interdisciplinaridade e a liberdade para o professor se assumir como um agente de desenvolvimento curricular, são dimensões diminuídas na ação empreendida pelas escolas. Provavelmente, porque o sistema sempre se organizou e agiu para subordinar as escolas e os professores. E as escolas, como bem explicam Croizier e Friedberg (1977), acabam por se dar bem num sistema que lhes retira a liberdade, mas que os desresponsabiliza e protege.

Apesar das mudanças, aparentemente, impulsionadas pela avaliação externa na autoavaliação de escola, observadas um ano letivo após o processo de Inspeção, os dados das perceções dos atores educativos, também obtidos após a Inspeção, apontam para a falta de correlação entre o uso do conhecimento de escola e a iniciativa de capital transformacional, isto é, a transformação da sala de aula. A falta de enfoque prévio da autoavaliação da escola no ensino aprendizagem pode requerer mais tempo para que as mudanças detetadas no ano 2022, em que foi feito o questionário, produzam impacto nas práticas. Outra hipótese pode decorrer de fragilidades, pós-inspeção, ainda persistentes nas práticas de autoavaliação, como a ausência de mecanismos de difusão de informação e por, nem sempre, aquela se consubstanciar num processo participado pela comunidade educativa. De qualquer modo, a ineficácia do conhecimento produzido pela autoavaliação nas iniciativas de transformação da sala de aula remete para desarticulações no sistema, a falta de efetividade dos mecanismos de regulação ou da sua mobilização pelas lideranças. A autoavaliação parece, assim, cumprir a função de obediência aos normativos e aos desígnios da Inspeção, mais do que servir a escola. Assim, reitera-se que

“os impactos produzidos pela avaliação externa e pela autoavaliação se enquadram no plano formal do funcionamento organizacional, dando expressão a objetivos que não se referem, em primeiro lugar, à melhoria das escolas, mas à necessidade de legitimação do *statu quo*.” (Castro & Alves, 2013, p.49)

Estas evidências remetem para uma hipocrisia organizada (Brunsson, 2006) que se verifica quando os agentes de diálogo estão distanciados da ação, tornando-se impossível o exercício de influência. As lideranças, na sua dimensão de suporte e empoderamento da ação dos professores, por via da instigação do desenvolvimento do capital decisional, não conduzem ao impacto esperado. Este é o prenúncio de um déficit de regulação da autonomia das escolas e de liberdade e responsabilidade dos professores, que reverbere em déficit de interdependência no sistema e em débil articulação. Assiste-se na prática a uma autonomia *'fora da lei'*, isto é, a uma autonomia não regulada, não monitorizada, não supervisionada e sem ativação de vontades para exercer supervisão ou de ser supervisionado. As razões que fundamentam esta condição são aventadas pelos próprios diretores que reportam nos seus projetos de intervenção à problemática das resistências, das culturas de escola (fig. 2) e da mobilização das lideranças intermédias, esta última também corroborada pela Inspeção. Outra razão pode decorrer da necessidade de aprofundamento de práticas de supervisão da sala de aula também evocada pela Inspeção. A proximidade entre professores e responsáveis pela supervisão a par das culturas colaborativas para aprendizagem caracterizadas por práticas intervisivas enriquecedoras são necessárias para introduzir mudanças e melhorias efetivas no ensino aprendizagem (Alves, 2021; Azorín & Fullan, 2022; Da'as et al., 2020).

A investigação que empreendemos, consideradas as representações dos professores, os atores educativos que estão na linha da frente a operar a transformação do ensino aprendizagem, revelou resultados paradoxais. Apesar do efeito estatisticamente significativo das lideranças na promoção do capital decisional e do clima de inovação nas escolas, estes aspetos da organização escolar não se revelaram determinantes na produção de mudanças na sala de aula. Foram, contudo, encontradas associações de um efeito mediador das lideranças, diretor e coordenadores de departamento, na transformação da sala de aula, por via da influência no trabalho colaborativo. O modelo estatístico ensaiado aponta para um efeito fraco, resultado em linha com o obtido por Xhomara (2018) que descreve ter encontrado associações entre os estilos de liderança, enquanto preditor de interações professor-aluno, também em relativa baixa percentagem. Os professores atribuem ainda a iniciativa de capital transformacional ao comportamento inovador, renunciando a existência de uma ordem espontânea que pode atuar, segundo (Hayek, 2018), como *'rule-breacker'* e contribuir para espoletar ruturas com velhas ordens ou mesmo assumir-se como *'rule-follower'* e promover o progresso através da inovação.

Relativamente à transformação do ensino aprendizagem, os vários atores educativos concordam que, em parte, se consubstancia na adesão a metodologias ativas, ao uso alargado do digital e ao recurso a novas metodologias de ensino aprendizagem. Contudo, quando questionados em relação à frequência das práticas, o cariz pontual ou pouco regular, remete para transformações incipientes do ensino aprendizagem. Há uma carestia de práticas transformadoras associadas a alterações de gramática escolar, à interdisciplinaridade e à realização conjunta do ensino aprendizagem. Assim, o argumento enunciado da existência de uma transformação da sala de aula que se sustenta na inovação vai no sentido de ser fracamente

verosímil. Os dados sugerem que a transformação da sala de aula está mais ligada à ação isolada de professores por via do comportamento inovador e a traços de ordem espontânea do que a uma ação coletiva, focada, supervisionada, organizada e transversal à organização. Mantemos, assim, a ideia defendida por Pacheco, (2019) de que a inovação adotada tem sido superficial e inapta em produzir mudanças nas práticas de ensino, pelo menos, de acordo com as evidências que reunimos, de mudanças profundas, abrangentes e consistentes que possam ser anunciadas como uma transformação de escola.

3. Um modelo para mensurar a inovação nas escolas

A análise que vamos explicar em relação à tese central evocada para este ensaio conclusivo, apesar de alimentada pela evidencia empírica, visa sustentar a concetualização de um modelo que se pretende dilucidar para orientar o processo de transformação das escolas e de um referencial analítico desenhado para mensurar a inovação. Na base deste exercício teórico convoca-se a questão central subjacente a este ensaio: *Quais os fatores promotores e obstaculizantes da inovação, nas escolas?*

Da empiria transcorrem vários fatores que em função do sentido, orientação ou grau podem potenciar a inovação ou interpor obstáculos à sua concretização e, dessa forma, impactar igualmente a transformação da escola. Estes fatores podem ser enquadrados em quatro grandes domínios diretamente relacionados com a geografia da inovação conceptualizada em quatro dimensões: (i) a tecnológica, os dispositivos e forças de suporte da transformação; (ii) a cultural, a disposição e abertura de toda uma organização para a transformação; (iii) a organizacional, a visão e estratégia para conduzir a transformação traduzida na viabilização de uma nova gramática de escolarização; (iv) a pedagógica, as práticas dos professores, e os processos e metodologias de ensino aprendizagem.

Primeiro, no que concerne aos fatores promotores ou obstaculizantes da inovação ao nível tecnológico elencamos: os recursos digitais; a literacia digital dos professores; e a operacionalização de plataformas digitais de suporte ao trabalho entre professores e do professor com os alunos.

Segundo, em relação aos fatores que concorrem para à inovação ao nível cultural, reportam-se: a visão da escola contemplar a dimensão da inovação; a construção uma cultura coletiva de escola alicerçada na reflexão sobre a sua dimensão estratégica; a consolidação de uma cultura de avaliação de escola; a aposta em abordagens cooperativas na resolução dos desafios da escola; a promoção de culturas de colaboração, assentes na partilha, co-criação de valor e na sua difusão; a promoção de uma cultura de interdependência nas organizações escolares; o fomento da agência dos professores em oposição à inatividade e à resistência à mudança; a valorização do mérito e do esforço; o incentivo à investigação, à experimentação e ao

questionamento; a promoção de uma cultura de aprendizagem organizacional; o fomento de um clima escolar de envolvimento e de inovação assente numa perspetiva eudaimónica.

Terceiro, em relação aos fatores afetos à inovação no nível organizacional, referem-se: as lideranças formais intermédias proativas e as lideranças informais que têm o poder real de influenciar, mobilizar e empoderar; o exercício de uma liderança inspiradora e de suporte à aprendizagem; a articulação entre documentos estruturantes; a valorização da ação da equipa de autoavaliação na atividade quotidiana da escola; a reflexão sobre os desafios organizacionais, os obstáculos e as forças na base da construção de planos de melhoria; o investimento na articulação vertical e horizontal do currículo; o investimento em projetos que fomentem a inovação; a consolidação de estratégias de comunicação e difusão de informação; a aposta em formas de burocracia inteligente; a afetação da formação docente e não docente às necessidades e desafios interpostos à organização; o gerenciar de oportunidades regulares de partilha e difusão de experiências pedagógicas; o fomento de um clima de confiança, abertura e desafiador; a adoção de abordagens criativas, críticas e construtivas assentes na identificação de forças e fraquezas; a instituição e regulação da ação de equipas pedagógicas por forma a viabilizar mudanças de gramática escolar; a operacionalização da ação por referência a metas e com foco no curto prazo; enfim, a manutenção do foco no ensino aprendizagem.

Quarto, em relação aos fatores que potenciam a inovação ao nível pedagógico, elencam-se: a adoção de uma gramática regenerativa, alterando tempos e espaços e flexibilizando os grupos de alunos como resposta à diversidade; a maximização do recurso a metodologias ativas de ensino aprendizagem; a promoção da inter/transdisciplinaridade e do digital no ensino aprendizagem; o investimento na contextualização do currículo no ensino aprendizagem; a maximização da diversificação do ensino aprendizagem como resposta às singularidades, vertical e horizontalmente, explorando múltiplas formas de construção de conhecimento pelos alunos; o ensino aprendizagem com foco nos interesses, motivações e expectativas dos alunos e famílias; a promoção de práticas colaborativas com enfoque intervisivo e na supervisão; o fomento de experiências pedagógicas e do comportamento inovador; o investimento no desenvolvimento da profissionalidade docente e da promoção da sua capacidade de agência sobre o currículo; a assunção pelos professores do papel de inovador pedagógico; a naturalização das comunidades de práticas na base dos processos de planeamento, realização, reflexão e reorientação do ensino aprendizagem; a diversificação e flexibilização de respostas pedagógicas face a dificuldades de aprendizagem e a singularidades dos aprendentes, em abordagens multinível; e o enfoque da ação pedagógica na construção de uma escola inclusiva e numa educação que construa as bases para aprendizagem ao longo da vida.

As escolas, as lideranças, os professores e toda a comunidade devem desafiar-se e sentir o apelo para aderir a novas experiências, organizacionais e pedagógicas, e investigar, pesquisar, refletir, debater sobre soluções organizacionais, novas metodologias e abordagens pedagógicas que, de acordo com Schleicher (2018), contribuam para personalizar experiências de aprendizagem e permitam aos professores lidar com a diversidade crescente. Subsidiariamente

aos fatores que concorrem para a promoção da inovação referidos, acresce considerar as 'virtudes e vícios' do sistema implicando a autonomia e o controlo em educação e, assim, procurar estabelecer uma via para a construção de organizações escolares que configurem sistemas interdependentes. À luz dos resultados obtidos neste estudo, o sistema educativo português aparece como tendo uma interdependência frágil, com as escolas lutando com problemas de mobilização coletiva, com um distanciamento funcional entre líderes e liderados, com a falta de impacto da visão de escola, enredado na complexidade de gerar articulação nas realidades intrincadas dos mega-agrupamentos de escolas, com a dificuldade de gerar climas de inovação profícuos e de um capital decisional que suporte a transformação da escola. Por conseguinte, as escolas apresentam-se como sistemas debilmente articulados (Brunsson, 2006; Weick, 1976) e com pequenas ordens espontâneas (Hayek, 1979) que parecem germinar no interior do sistema.

No que concerne ao exercício da autonomia pelas escolas os dados apontam para: dificuldades de articulação alimentadas por desconexões ao nível dos documentos estruturantes; planos de intervenção de diretores nem sempre abrangentes considerada toda a dimensão da organização escolar, enunciando ações que pecam pela falta de visão de inovação e podendo produzir um insuficiente uso da autonomia; discrepâncias e desarticulações entre as práticas retratadas nos discursos das escolas e as práticas observadas pela Inspeção; a necessidade de reforço da capacitação das lideranças intermédias; necessidade de estreitar divergências de alinhamentos e de promover o enfoque na visão da escola; a existência de uma inovação incipiente e não regulada a par de climas de envolvimento e inovação irresolutos; culturas de avaliação orientadas para a melhoria que se apresentam débeis mas, estão em processo de reconstrução; a valorização de uma cultura de trabalho colaborativo que, na prática, enfrenta dificuldades resultantes de formas de trabalho superficiais e circunstanciais, acompanhadas de isolamento profissional e primando mais pela partilha do que pela co-construção; práticas intervisivas inexistentes ou superficiais e práticas supervisivas focadas na gestão e administração e deficitárias na dimensão pedagógica; défice de práticas de reflexão sobre ação e sobre os resultados, desempenho e desafios de escola; necessidade de fomentar a comunicação organizacional e de reforçar diálogos; intenções de instituir mudanças de gramática escolar e de novas formas de realização do ensino aprendizagem, mas que não se materializam; parca exploração dos mecanismos de AFC preconizados na lei; falta de impacto das soluções organizacionais na transformação da sala de aula; baixo impacto do trabalho colaborativo e do comportamento inovador na transformação do ensino aprendizagem; e, por fim, o efeito indireto da liderança mobilizadora do diretor e de suporte das lideranças intermédias no ensino aprendizagem, mas parco nas iniciativas de capital transformacional. Apesar das dificuldades a que estão acometidas, constatou-se que as escolas são inspiradas por valores de uma cultura humanista e expressam compromisso com a inclusão. Também se destaca a preocupação dos diretores em encontrar soluções organizacionais que combatam o isolamento e a colegialidade superficial, bem como, em fomentar climas de escola que gerem envolvimento, proximidade e confiança. Por fim, retratando o valor da interdependência nas organizações, sobreleva-se que escolas que investem na articulação entre o projeto de intervenção do diretor e o projeto

educativo, evidenciam maior capacidade para lidar com contextos desfavoráveis, por via da geração de maior capital decisional, que produz maior capital organizacional e, ambos, conduzem a um maior capital transformacional;

Em relação aos mecanismos de controlo e regulação instituídos no sistema educativo ressalta que: a autoavaliação representa uma área de melhoria na ação das escolas com falta de abrangência e profundidade ao nível organizacional e pedagógico; há necessidade de afirmação de um processo de autoavaliação de escola participado e partilhado, que incorpore o capital decisional da escola e sustente a reflexão sobre a ação; há necessidade de ações mais compreensivas e construtivas por parte da avaliação externa que possam enformar a atividade das escolas e a sua transformação; importa valorizar a coerência, a transparência e a confiança nos processos de avaliação externa; a avaliação externa não constitui um garante da inovação das escolas, face a dimensão marginal que esta toma no processo de avaliação; o enfoque da avaliação externa remete para ações de uniformidade e standardização e, em última instância, gerando, conformidade, mais do que inovação; há necessidade de uma reflexão sobre vantagens e desvantagens dos mega-agrupamentos de escolas, considerando as debilidades na interdependência da ação observadas; e há necessidade de gerar uma aproximação real, profícua e desburocratizada entre os centros de decisão e de ação na base das abordagens cooperativas de mudança que se pretendam instituir nas escolas.

O argumento central deste ensaio explana a vantagem de abordagens cooperativas quando se pretendem introduzir transformações num sistema, aspeto factualmente imbuído no espírito da AFC. Contudo, os valores implícitos na segunda e terceira premissas que remetem para o papel das lideranças geradoras de ação interdependente e da inovação e dos professores como inovadores pedagógicos, face às evidências reunidas, despontam em desarticulações e inação. Assim, urge repensar a ação e as limitações interpostas ao sistema, sob o desiderato da concretização da transformação da escola assente na inspiração de um funcionamento interdependente, transversal a toda a organização, em combinação com a iniciativa de inovação organizacional.

O retrato das dificuldades interpostas à inovação e dos enredos em que enformam os processos de autonomia e controlo no sistema educativo atestam as dificuldades da transformação da escola. Nas últimas décadas, mudanças nas escolas, na sala de aula, vêm sendo tentadas, mas, dificilmente, se tornaram parte da cultura estabelecida e produziram uma nova cultura. No essencial, produziram mudanças discursivas, mas mantiveram as formas tradicionais de atuar e remeteram a escola para uma existência pseudomórfica. A resolução do problema aponta para a necessidade de contrariar a fragmentação e a desarticulação observadas e de viabilizar lideranças transformadoras, que mais do que fomentar ordens espontâneas, operem uma verdadeira transformação regulada da escola. É preciso convocar um profissionalismo convergente e uma autonomia que rompa com as lógicas de desconexão, o individualismo e o voluntarismo (Alves & Cabral, 2019). Urge instituir escolas como organizações aprendentes que continuamente expandam a sua capacidade para criar o futuro e onde há

espaço para uma visão partilhada, para a aprendizagem com os pares e para o pensamento sistémico (Machado & Formosinho, 2016).

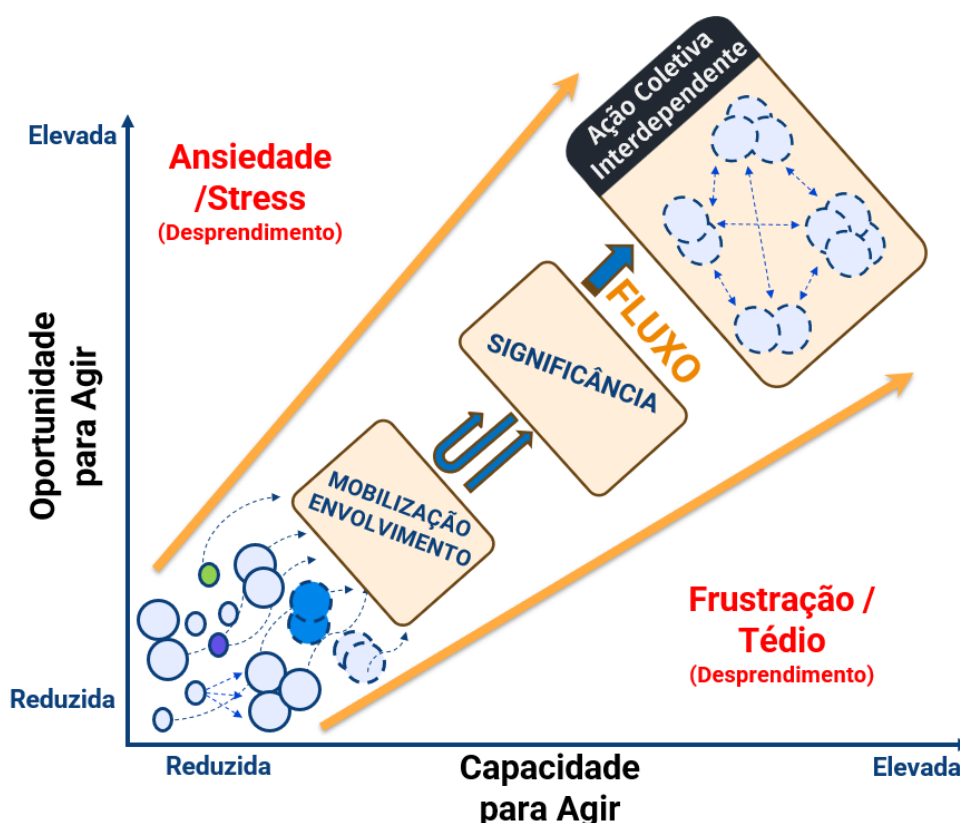
A liderança vai muito para além da visão limitada adstrita meramente aos processos de gestão e administração (González-Falcón et al., 2020). É preciso uma '*nova liderança*' para gerar uma transformação da escola (Fullan, 2020). Co-agência e co-aprendizagem, por via do uso do capital decisional, deviam adjectivar a ação do diretor, das lideranças intermédias, dos professores e dos alunos. Reunimos evidências de que as lideranças podem atuar como forças para gerar culturas colaborativas e climas de inovação, mas o processo tem de ser repensado, tem de se tornar mais orgânico, autêntico, interdependente e alicerçado na construção de significados.

Mihaly Csikszentmihalyi (1975) é o autor da teoria de fluxo, uma teoria da aprendizagem da ala da psicologia positiva, que nos serviu de inspiração para enunciar um modelo para a transformação da escola alicerçado no construto apresentado na fig. 3. Csikszentmihalyi (1975) concetualizou que o '*estado de fluxo*' corresponde a uma condição de elevado foco e controlo, geradora de uma sensação de empoderamento e motivação face a tarefas desafiantes, permitindo aos indivíduos trabalhar ao máximo das suas capacidades (Nakamura & Csikszentmihalyi, 2002). A vivência deste estado autotélico permite neutralizar as condições de frustração, stress, ansiedade, desmotivação e tédio face aos desafios. Os políticos vêm tecendo reformas para educação e de forma *naïve* entregam à hermenêutica a função de operar os processos de reforma. A mesma atitude acomete as lideranças nas escolas, num ciclo que poucas ou superficiais transformações vem gerando. Os professores são os árbitros finais da transformação educacional e, segundo Hargreaves e Shirley (2009), nenhum plano de uma mudança sustentável em educação pode ignorar ou passar ao lado dos professores. Não há transformação da escola sem a construção de significados, sem o empoderamento e a motivação para lidar com os desafios, enfim, sem gerar um '*estado de fluxo*' organizacional favorável à mudança.

O modelo de transformação da escola que enunciamos assenta no paradigma da construção e reconstrução de significados na e através da organização. Uma ação capaz de gerar envolvimento e criar '*estados de fluxos*' que alimentem a existência de um sistema interdependente deve fazer uso das oportunidades para agir (geradas nos níveis mega e macro), e potenciar a capacidade de agir através da produção de significância com base no conhecimento gerado pela avaliação de escola, na visão estratégica criada e partilhada, no funcionamento articulado das estruturas e equipas, no uso da inovação e do potencial de inovação associado aos indivíduos e aos grupos, no investimento na difusão da inovação e na partilha de experiências em ambientes marcados pelo conforto psicológico. Esta organização social de escola carece de uma liderança ativa, empoderadora, compreensiva, sensível, resiliente, mobilizadora, de suporte e, também ela interdependente e que opera para neutralizar o desligamento dos atores educativos (fig. 4). Gerar envolvimento nos professores é o maior dos desafios das lideranças, pois implica neutralizar a apreensão natural gerada pelas reformas e mudanças decorrente das baixas expectativas em relação às mesmas, da sensação de perda de

Figura 4.

Modelo para a transformação da escola



controle, da não interiorização da sua filosofia e necessidade, da percepção de dificuldades relacionadas com a performance no trabalho, com as novas interações que têm de ser estabelecidas com os pares e com a sobrecarga de trabalho. Combater a noção de desempoderamento implica criar desafios tangíveis, manter o foco na construção de significados, gerenciar caminhos de mudança que equilibrem as oportunidades para agir com a capacidade para agir, fomentar o trabalho em rede e em comunidade, fomentar climas relacionais positivos de suporte à inovação e às transformações, promover a liderança dos professores por via do compromisso entre a liberdade e a responsabilidade, operar desbloqueios e combater a desmobilização, fomentar processos de difusão, partilha e de co-criação, criar uma agenda comum e refletir regularmente sobre agendas locais, nacionais e transnacionais para a educação, combatendo, assim, o pseudomorfismo organizacional. Os desafios das lideranças, não terminam aqui, pois precisam de exercer uma autonomia autêntica e regulada por uma cultura de avaliação, que lhes permita admoestar um sistema marcado pela falta de desafio, com baixas expectativas e enredados no conformismo que reverbera em isolamento profissional ou colaboração superficial, em sistemas sem lugar para a inovação. As lideranças precisam de ser exercidas sob o princípio da construção de capital profissional assente: (i) na valorização e uso do conhecimento de escola no suporte à tomada de decisão e traduzido como riqueza de capital decisional; no investimento em mecanismos de empoderamento coletivo e por conseguinte na geração de capital social; e no investimento no desenvolvimento do capital humano individual

por via da motivação, da inspiração, da valorização e do suporte à construção de uma profissionalidade docente que incorpore a dimensão do comportamento inovador.

Os caminhos para desbloquear a transformação da escola, implicam a inovação e exigem das lideranças uma estratégia sustentável que convoque vontades, evite o *'turnaroland'* e promova o *'turnover'*. Projetar a sustentabilidade de um processo de mudança é tão importante como desenhar a própria mudança. A sua sustentabilidade reside na capacidade de construção da significância através de:

- Investimento no conhecimento organizacional efetivo - *mudança implica o conhecimento dos contextos e a regulação de experiências, da inovação e dos processos de mudança;*
- Investimento na aprendizagem organizacional - *mudança implica aprendizagem e (re)construção de novos significados;*
- Investimento na inovação organizacional e pedagógica através da experimentação regulada, refletida e partilhada – *mudança implica conhecimento em ação, contextos de aplicação de experiências pedagógicas e difusão da inovação;*
- Investimento na mobilização de atores educativos – *mudança implica criar condições de desbloqueamento e rotura com velhas práticas, implica compromisso profissional;*
- Investimento na capacitação de lideranças de topo e intermédias – *mudança implica lideranças capazes e coletivamente comprometidas com a construção de significados;*
- Investimento na capacitação de professores – *mudança é compreender o porquê de mudar, o sentido da mudança, é sentir o imperativo da sua necessidade;*
- Investimento numa resposta a todos os alunos, o coração da escola inclusiva – *mudança é enfoque no ensino aprendizagem;*
- Investimento na construção da autonomia – *mudança implica agência, liberdade e responsabilidade e carece de reforço e refortalecimento da autonomia. Que autonomia? Não de uma autonomia regulamentada, de uma autonomia pretendida ou de uma autonomia retórica que demarca as narrativas de educação, mas sim de uma autonomia praticada autêntica.*
- Investimento na regeneração organizacional e na construção de uma outra cultura – *mudança é um processo sistémico transversal a uma organização, que implica todos num sistema;*
- Investimento na inovação – *mudança implica uma arquitetura de inovação para operar a transformação da escola.*

A transformação e a mudança surgem ligadas à inovação, pelo que culminamos este ensaio com a apresentação de um referencial analítico enquadrador da iniciativa de capital de inovação para a educação. Este referencial, fundamentado nos dados empíricos reunidos e no próprio modelo construído para fomentar a transformação da escola, explicita uma dimensão de análise alocada ao nível macro de organização dos sistemas educativos e quatro dimensões alocadas à escola, correspondentes aos níveis meso e micro (fig. 5). Cada dimensão analítica é operacionalizada em três vetores representando as lentes mobilizadas para a análise

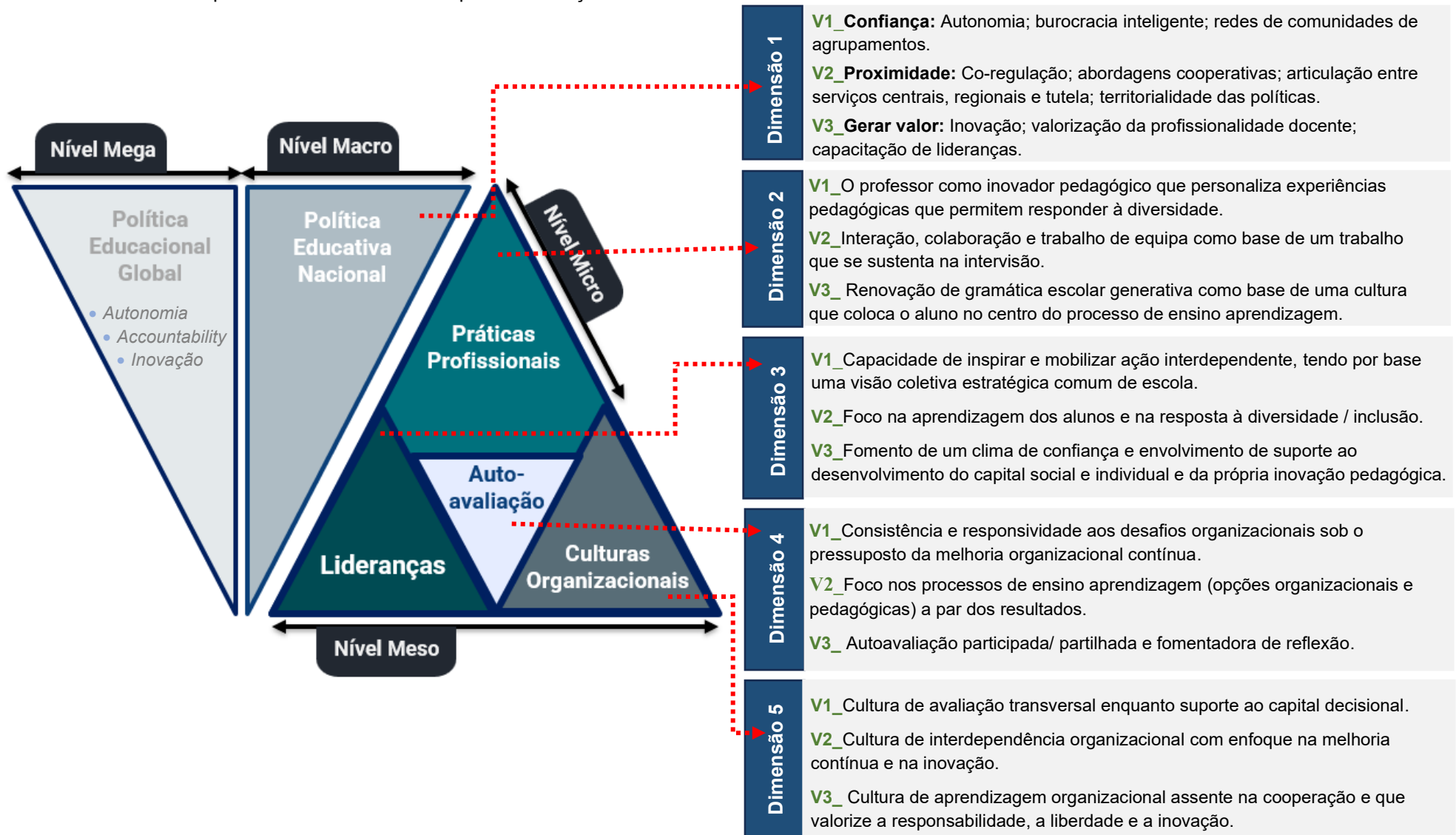
interpretativa de fatores que podem ativar a transformação das escolas. Este referencial, o modelo que construímos para a inovação nas escolas e toda a empiria subjacente a este estudo remetem para a importância de gerar equilíbrio entre autonomia e regulação ou controle, sinergias entre liderança mobilizadora e liderança para a aprendizagem e alianças entre culturas de escola e práticas profissionais docentes, imperativos, no sistema educativo, para uma visão integrada de melhoramento e transformação da escola.

No quadro do estudo realizado, importa tecer considerações em relação às limitações observadas, reportando-se: (i) não ter sido feita a avaliação das percepções das lideranças escolares e professores em relação ao processo de avaliação externa que permitiria compreender as disposições e receptividade em relação aos juízos avaliativos, um aspeto que pode influir sobre o impacto da avaliação externa nas escolas; (ii) impossibilidade de determinação de associações entre variáveis afetas aos domínios de avaliação externa quando correspondentes a construtos pouco frequentes; (iii) nos estudos quantitativos, classes de respondentes ao questionário com menor representatividade na população, como os diretores, podem gerar algum enviesamento na análise, aspeto que se procurou contornar com ensaios comparativos paralelos realizados com classes homogéneas; (iv) o recurso a variantes de questionários com adaptações para os diferentes atores educativos que pode gerar algum enviesamento analítico; (v) a componente do estudo implicando análise documental realizada envolveu nove agrupamentos de escolas que demonstraram disponibilidade para participar no estudo, não constituindo uma amostra aleatória.

Alfim, destacamos os contributos e implicações para as ciências da educação desta investigação, um estudo: (i) cuja ênfase reside na transformação da sala de aula por via da influência da inovação, mensurada como iniciativa de capital transformacional; (ii) que reflete uma investigação que cruza os níveis da organização dos sistemas educativos - micro, meso e macro – e as percepções de diferentes atores educativos – inspetores, diretores, coordenadores de departamento, professores e elementos da equipa de autoavaliação; (iii) que identifica desarticulações no sistema, permitindo aos vários atores educativos refletir sobre as mesmas e projetar soluções; (iv) que constrói uma panorâmica alargada e interrelacionada da problemática em que está envolta a inovação e a transformação da escola; (v) que aponta, para o contexto educativo português, os fatores promotores e as barreiras à inovação na escola pública; (vi) que aponta caminhos para instigar a inovação e a transformação da escola, considerados os desafios que interpõem; (vii) que enfatiza as dificuldades e os desafios enfrentados pelas lideranças de topo e intermédias na construção de uma escola inclusiva; (viii) que fornece um feedback que poderá ser usado para orientar a construção de processos de melhoria pelas escolas; (ix) que enfatiza a importância do desenvolvimento de um sistema educativo responsivo por via da instituição de mecanismos de co-regulação construtivos, transparentes e confiáveis; (x) que concetualiza um modelo para operar a transformação da escola e um referencial para mensurar a inovação nas escolas.

Figura 5.

Referencial analítico enquadrador da iniciativa de capital de inovação



4. Considerações finais - Um vislumbre do referencial para a inovação em ação e perspetivação futura

Um ensaio breve ao que poderá ser o referencial de inovação em ação numa lógica de lançamento das bases para a continuidade do processo de investigação da inovação das escolas e do aprimoramento do modelo na perspetiva de uma serventia pragmática é, manifestamente, importante. Assim, apresentamos um exercício exploratório empírico, ainda que nada ortodoxo num ensaio com esta tipologia, mas que se justifica pela pertinência de poder iluminar futuros trabalhos.

O referencial analítico da inovação, na sua função de informação e regulação, pode usar dados da organização procedentes de múltiplas fontes, unas ou compósitas: análise documental, entrevistas e *focus groups*, observação de aulas, questionários, etc. Neste vislumbre sobre o referencial em ação vamos socorrer-nos dos dados empíricos procedentes da aplicação dos questionários a dois agrupamentos de escolas. Para as quatro dimensões do referencial reportadas às escolas e para cada vetor foram mobilizados itens relacionados do questionário (apêndice 1), gerando uma variável compósita instrumental, correspondente à média dos itens, para mensurar os vetores adstritos às dimensões. Um vislumbre operativo desta ferramenta analítica consta da figura 6. A imagem gráfica, gerada com base nas perceções dos atores educativos, traduz, de forma clara e simples, as dimensões e vetores mais frágeis ou robustos da realidade das escolas. Sublinhamos que os resultados, correspondem a um exercício que visa explanar o potencial instrumental da ferramenta, mas cuja viabilidade aconselha ao seu aprimoramento, bem como, uma reflexão em relação às suas limitações, fragilidades e perigos. Com isto, deixamos em aberto uma linha de investigação futura.

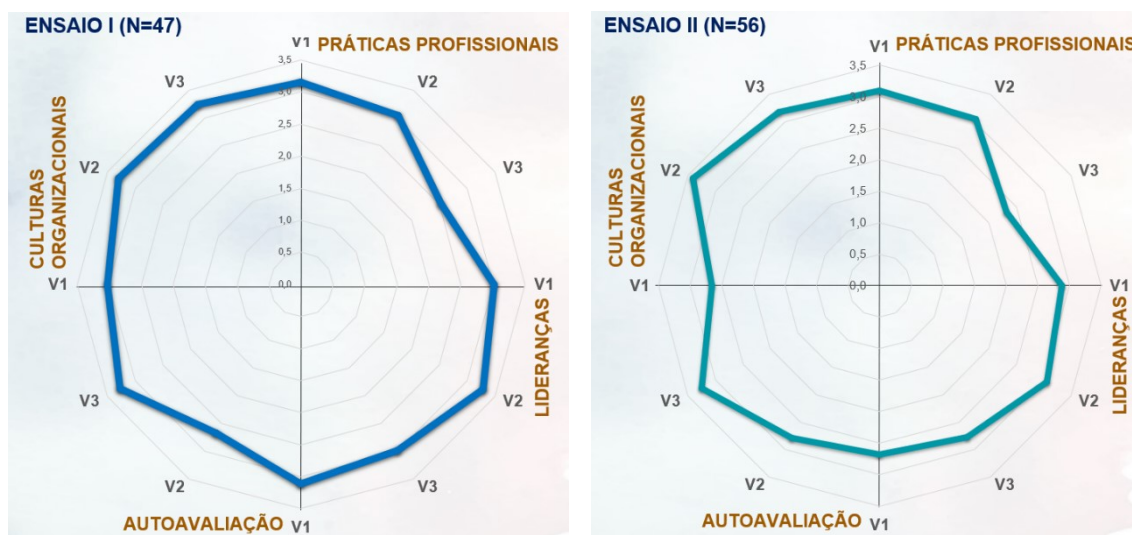
Para além, da importância de desenvolver trabalho investigativo com o intuito de ensaiar a consistência e verossimilhança do referencial analítico construído para mensurar a inovação e de proceder ao seu aprimoramento, outras linhas de investigação podem ser consideradas. Primeira, como a transformação é um processo e precisa de tempo para crescer e se afirmar, a dimensão vertical inerente a este estudo de investigação remete para a importância de se instituírem ações de *follow up* para perceber se as mudanças induzidas pela avaliação externa na autoavaliação de escola produzem efeito no capital decisional e impactam a sala de aula. Segunda, importa aprofundar até que ponto a ação da avaliação externa é percebida como construtiva pelas escolas, para que melhor se compreenda o seu potencial de regulação e impacto na melhoria da ação educativa, bem como, a sustentabilidade das mudanças percecionadas. Terceira, complementar a informação reunida nesta investigação com o estudo de casos paradigmáticos que permitam clarificar os processos de interação que demarcam a escola e a natureza das transformações operadas em matéria de ensino aprendizagem, indo além das teorizações adstritas às perceções dos professores.

A inovação enquanto processo fundacional da transformação da escola, face à complexidade que enforma, demanda o seu acompanhamento e avaliação pois, nas palavras de Miguel Santos

Guerra (2017), “a inovação não consiste em fazer por fazer; em mudar por mudar. Não é ativismo. A inovação, para ser educativa tem de estar enformada de valores”⁹.

Figura 6.

Ensaio preliminar da aplicação do referencial analítico de mensuração da inovação



Nota. Cada quadrante do diagrama está alocado a uma das quatro dimensões do referencial analítico definido para mensurar a iniciativa de capital de inovação reportadas à escola (fig. 5). Em cada quadrante são mensurados os três vetores respeitantes a cada uma das dimensões.

No ensaio I, segundo as representações dos atores educativos, no agrupamento de escolas percecionam-se como fragilidades ou áreas de melhoria os vetores V2 da dimensão da autoavaliação (denunciando falta de foco no ensino aprendizagem) e V3 da dimensão das práticas profissionais (apontando para o conservadorismo da gramática escolar e para a falta de centralidade no aluno).

No agrupamento de escolas representado no ensaio II, as fragilidades remetem: na dimensão da autoavaliação para os vetores V1 (debilidade de resposta consistente aos desafios organizacionais, tendo em vista processos de melhoria contínua) e V2 (carece de um maior enfoque ao ensino aprendizagem); na dimensão das lideranças as fragilidades estão alocadas aos vetores V1 (requer o investimento na inspiração e mobilização da ação interdependente por referência a uma visão coletiva de escola) e V3 (padece de fomentar um clima de confiança e envolvimento de suporte ao desenvolvimento do capital profissional e da inovação pedagógica); na dimensão das culturas organizacionais o vetor V1 (carece investir numa cultura de avaliação de escola de suporte à tomada de decisão); e na dimensão das práticas profissionais, o vetor V3 (denota uma gramática escolar conservadora e carece de maior investimento numa ação que coloque o aluno no centro do processo de ensino aprendizagem). A análise dos diagramas permite ainda observar os vetores do referencial que constituem pontos fortes e os que ainda detêm margem para melhoria.

Referências

- Alves, J. M. (2021). Uma gramática generativa e transformacional para gerar outra escola. In *Mudança em movimento – Escolas em tempos de Incerteza* (pp. 25–48). Católica Editora. <https://www.uceditora.ucp.pt/pt/digital/3077-mudanca-em-movimento.html>
- Alves, J. M., & Cabral, I. (2019). Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino. In M. C. Roldão (Ed.), *Quem lidera o ensino e a aprendizagem nas escolas? Um estudo de caso múltiplo sobre lideranças pedagógicas*. (pp. 13–34). Fundação Manuel Leão.

⁹ Tradução de: Santos Guerra, M. (2017, April 18). Innobar o morir. *El Diario de La Educación*. <https://eldiariodelaeducacion.com/2017/04/18/innovar-o-morir/>

- Avidov-Ungar, O., & Forkosh-Baruch, A. (2018). Professional identity of teacher educators in the digital era in light of demands of pedagogical innovation. *Teaching and Teacher Education*, 73, 183–191. <https://doi.org/10.1016/j.tate.2018.03.017>
- Azevedo, J. (2016). *Há uma brecha no dique: “Horizonte 2020” - Descrição do projeto de inovação educacional dos colégios jesuítas da Catalunha*. Fundação Manuel Leão.
- 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>
- 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>
- Barroso, J. (2022). *Administração e política educacional. um percurso de investigação* (Issue June). Instituto de Educação da Universidade de Lisboa.
- Bartee, R. (2007). Education Leadership as ‘Capital’ for a Diverse School Setting: Understanding the Dynamics of Social and Symbolic Capital as Exemplars of Successful Leadership Strategies. *Advances in Educational Administration*, 10, 179–194. [https://doi.org/10.1016/S1479-3660\(07\)10011-1](https://doi.org/10.1016/S1479-3660(07)10011-1)
- Bellibaş, M. Ş., Gümüş, S., & Kılınç, A. Ç. (2020). Principals supporting teacher leadership: The effects of learning-centred leadership on teacher leadership practices with the mediating role of teacher agency. *European Journal of Education*, 55(2), 200–216. <https://doi.org/10.1111/ejed.12387>
- 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>
- Bolívar, A. (2001). Los centros educativos como organizaciones que aprenden: una mirada crítica. *Contexto Educativo: Revista Digital de Investigación y Nuevas Tecnologías*, August, 4.
- Bolívar, A. (2009). De “la escuela no importa” a la escuela como unidad base de mejora. *Punto Edu*, 15, 28–33.
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Castro, H., & Alves, J. M. (2013). Avaliação de escolas: o gerenciamento da imagem ao serviço da legitimação. *Revista Portuguesa de Investigação Educacional*, 13, 49–82. <https://doi.org/10.34632/investigacaoeducacional.2013.3389>
- Çoğaltay, N., & Boz, A. (2022). Influence of school leadership on collective teacher efficacy: a cross-cultural meta-analysis. *Asia Pacific Educ. Rev.* <https://doi.org/https://doi.org/10.1007/s12564-022-09754-9>
- Croizier, M. (1979). *On ne change pas la société par décret*. Bernard Grasset.
- Croizier, M., & Friedberg, E. (1977). *L’acteur et le système*. Editions du Seuil.
- Csikszentmihalyi, M. (1975). *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play*. Jossey-Bass.
- Da’as, R., Schechter, C., & Qadach, M. (2020). School Leaders’ Cognitive Complexity: Impact on the Big 5 Model and Teachers’ Organizational Citizenship Behavior. *Journal of School Leadership*, 30(5), 398–423. <https://doi.org/10.1177/1052684619896535>
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A review on leadership and leadership development in educational settings. *Educational Research Review*, 27(January 2018), 110–125. <https://doi.org/10.1016/j.edurev.2019.02.003>
- Day, C. (2017). Leadership as a Way. *Profesorado*, 21(2), 21–26. https://doi.org/10.1007/978-981-10-3549-4_7
- 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>
- Dimmock, C. (2011). *Leadership, Capacity Building and School Improvement Concepts, themes*

- and impact (1st ed.). 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. *Starter Paper on Inspection and Innovation*, 1–8. <http://www.nmva.smm.lt/wp-content/uploads/2013/06/SICI-Paper-Bratislava-2013-final-version-24-05-Graham-Donaldson.pdf>
- Ehren, M. C. M., & Visscher, A. J. (2006). Towards a theory on the impact of school inspections. *British Journal of Educational Studies*, 54(1), 51–72. <https://doi.org/10.1111/j.1467-8527.2006.00333.x>
- Espuny, M. T., Cunha, R. S., Cabral, I., & Alves, J. M. (2020). Giving voice to problems faced by school leaders in Portugal. *School Leadership and Management*, 40(4), 352–372. <https://doi.org/10.1080/13632434.2020.1719400>
- 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>
- Friedberg, E. (1995). *O poder e a regra: dinâmicas da ação organizada*. Instituto Piaget.
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- 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 Analysis Archives*, 23(15), 1–18. <http://dx.doi.org/10.14507/epaa.v23.1998>
- González-Falcón, I., García-Rodríguez, M. P., Gómez-Hurtado, I., & Carrasco-Macías, M. J. (2020). The importance of principal leadership and context for school success: insights from ‘(in)visible school.’ *School Leadership and Management*, 40(4), 248–265. <https://doi.org/10.1080/13632434.2019.1612355>
- Goodson, I. (2014). Context, curriculum and professional knowledge. *History of Education*, 43(6), 768–776. <https://doi.org/10.1080/0046760X.2014.943813>
- 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). <https://doi.org/10.3402/edui.v7.30115>
- Hargreaves, A. (2007). *EBSCOhost: Sustainable Leadership and Development in Education: creating the future, c...* 42(2). <http://web.ebscohost.com.ezproxy.apollolibrary.com/ehost/detail?vid=5&hid=123&sid=5ff4bd16-e7cd-4f4f-b069-b5fba0c63d99@sessionmgr110&bdata=JnNpdGU9ZWhvc3QtbnGl2ZQ==#db=a9h&AN=25149963>
- 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., & Ainscow, M. (2015). The top and bottom of leadership and change. *Phi Delta Kappan*, 97(3), 42–48. <https://doi.org/10.1177/0031721715614828>
- Hargreaves, A., & Shirley, D. (2009). The fourth way: The inspiring future for educational change. In *The Fourth Way: The Inspiring Future for Educational Change*. <https://doi.org/10.4135/9781452219523>
- Hayek, F. (1979). *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy. Vol.3*. Routledge.
- Hayek, F. (2018). *A constituição da liberdade* (J. C. Trad. Espada (ed.)). Edições 70.
- Ho, D., & Lee, M. (2016). Capacity building for school development: current problems and future challenges. *School Leadership and Management*, 36(5), 493–507. <https://doi.org/10.1080/13632434.2016.1247040>

- Juwono, I. D., & Harly, T. H. (2017). Leadership Succession Impact on School Culture: A Case Study at a Faith Based Secondary School in Indonesia. *International Journal of Information and Education Technology*, 7(3), 184–189. <https://doi.org/10.18178/ijiet.2017.7.3.863>
- Kaewsaeng-on, R., AL-Takhayneh, S. K., Jam, F. A., Chang, B. L., Pradana, M., & Mahmood, S. (2022). A three wave longitudinal study of school innovation climate and entrepreneurship teachers' acceptance to technology: Moderating role of knowledge sharing and knowledge hiding. *Frontiers in Psychology*, 13(October), 1–15. <https://doi.org/10.3389/fpsyg.2022.1028219>
- Khalifa, M. A., Gooden, M. A., & Davis, J. E. (2016). Culturally Responsive School Leadership: A Synthesis of the Literature. *Review of Educational Research*, 86(4), 1272–1311. <https://doi.org/10.3102/0034654316630383>
- Leithwood, K. (2021). A review of evidence about equitable school leadership. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080377>
- Luban, D. (2020). What Is Spontaneous Order? *American Political Science Review*, 114(1), 68–80. <https://doi.org/10.1017/S0003055419000625>
- 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. <https://www.jstor.org/stable/42748322>
- 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>
- Machado, J., & Formosinho, J. (2016). Equipas educativas e comunidades de aprendizagem. *Revista Portuguesa de Investigação Educacional - Escolas, Melhoria e Transformação*, 16, 11–31. <https://doi.org/https://doi.org/10.34632/investigacaoeducacional.2016.3419>
- McMahon, A. (2017). *School of Social Science Essay Guide Planning , Research and Writing*. January, 1–17. https://social-science.uq.edu.au/files/1725/EssayWritingGuide_SocSci.pdf
- Mincu, M. (2022). Why is school leadership key to transforming education? Structural and cultural assumptions for quality education in diverse contexts. *Prospects*, 52(3–4), 231–242. <https://doi.org/10.1007/s1125-022-09625-6>
- Mogren, A., Gericke, N., & Scherp, H. Å. (2019). Whole school approaches to education for sustainable development: a model that links to school improvement. *Environmental Education Research*, 25(4), 508–531. <https://doi.org/10.1080/13504622.2018.1455074>
- Morin, E. (2003). *E Dgar M Orin a Cabeça Bem-Feita* (8ª). Bertrand Brasil.
- Müller, J. W. (2021). Education and inspirational intuition - Drivers of innovation. *Heliyon*, 7(9), e07923. <https://doi.org/10.1016/j.heliyon.2021.e07923>
- Nakamura, J., & Csikszentmihalyi, M. (2002). The Concept of Flow. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 89–105). Oxford University Press.
- Nóvoa, A. (2009). Educação 2021: Para uma história do futuro António Nóvoa. *Revista Iberoamericana De Educación*, 1–18. <https://repositorio.ul.pt/handle/10451/670>
- Nóvoa, A. (2019). Os Professores e a sua Formação num Tempo de Metamorfose da Escola. *Educação & Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>
- O'Shea, C. (2021). Distributed leadership and innovative teaching practices. *International Journal of Educational Research Open*, 2(November), 100088. <https://doi.org/10.1016/j.ijedro.2021.100088>
- Pacheco, J. A. (2019). *Inovar para Mudar a Escola* (1ª). Porto Editora.
- Pan, H. L. W., & Chen, W. Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration and Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- Pathak, D. P., & Mishra, S. (2019). *Assessment of Organisational Climate through Innovative Behaviour of the teachers*. 11(3). <https://doi.org/10.18311/gjeis/2019>
- Pina, R., Cabral, I., & Alves, J. M. (2015). Principal's Leadership on Students' outcomes. *Procedia - Social and Behavioral Sciences*, 197(February), 949–954. <https://doi.org/10.1016/j.sbspro.2015.07.279>
- Portz, J. (2021). "Next-Generation" Accountability? Evidence From Three School Districts. *Urban*

- Education*, 56(8), 1297–1327. <https://doi.org/10.1177/0042085917741727>
- Quintana, C. F., Lourenço, P., & Orengo, V. (2019). *Trust, psychological safety and viability in work groups: team psychological safety as a mediator between team trust and team viability* [Universidade de Coimbra]. <https://doi.org/10.13140/RG.2.2.23297.40801>
- Redman, P., & Maples, W. (2017). *Good Essay Writing: A Social Sciences Guide*. SAGE Publications, Lda.
- Rogers, E. M. (2003). *Everett_M* (5th ed.). Free Press.
- Santos Guerra, M. (2002). Como um espelho – Avaliação qualitativa das escolas. In J. Azevedo (Ed.), *AVALIAÇÃO DAS ESCOLAS – Consensos e Divergências* (pp. 11–31). Asa.
- Santos Guerra, M. (2017, April 18). Innobar o morir. *El Diario de La Educación*. <https://eldiariodelaeducacion.com/2017/04/18/innovar-o-morir/>
- Schleicher, A. (2018). What makes high-performing school systems different. In *World Class: How to Build a 21st-Century School System* (pp. 61–137). OECD Publishing. <https://doi.org/10.1787/9789264300002-3-en>
- Schumpeter, J. (1997). *Os Economistas* (M. . Trad. Possas (ed.)). Editora Nova Cultural.
- Serra, L., Alves, J., & Soares, D. (2023). Mapping Innovation in educational contexts: drivers and barriers. *International Journal of Innovation and Learning, in press*. <https://doi.org/10.1504/IJIL.2024.10054841>
- Shirley, D., Hargreaves, A., & Washington-Wangia, S. (2020). The sustainability and unsustainability of teachers' and leaders' well-being. *Teaching and Teacher Education*, 92. <https://doi.org/10.1016/j.tate.2019.102987>
- Song, J. H., Kim, W., Chai, D. S., & Bae, S. H. (2014). The impact of an innovative school climate on teachers' knowledge creation activities in Korean schools: The mediating role of teachers' knowledge sharing and work engagement. *KEDI Journal of Educational Policy*, 11(2), 179–203. <https://doi.org/10.22804/kjep.2014.11.2.003>
- Straub, R., & Vilsmaier, U. (2020). Pathways to educational change revisited– controversies and advances in the German teacher education system. *Teaching and Teacher Education*, 96, 103140. <https://doi.org/10.1016/j.tate.2020.103140>
- 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>
- Torres, L. L. (2005). Cultura organizacional no contexto escolar: o regresso à escola como desafio na reconstrução de um modelo teórico. *Ensaio: Avaliação e Políticas Públicas Em Educação*, 13(49), 435–451. <https://doi.org/10.1590/s0104-40362005000400003>
- United Nations, (2023). *Report on the 2022 Transforming Education Summit* (Issue January). https://www.un.org/sites/un2.un.org/files/report_on_the_2022_transforming_education_summit.pdf
- Walder, A. M. (2014). The concept of pedagogical innovation in higher education. *Education Journal*, 3(3), 195–202. <https://doi.org/10.11648/j.edu.20140303.22>
- Walder, A. M. (2017). Pedagogical Innovation in Canadian higher education: Professors' perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, 54, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>
- Wang, S. (2019). School heads' transformational leadership and students' modernity: the multiple mediating effects of school climates. *Asia Pacific Education Review*, 20(3), 329–341. <https://doi.org/10.1007/s12564-019-09575-3>
- Weick, K. E. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 19. <https://doi.org/https://doi.org/10.2307/2391875>
- 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>
- Yuan, L., Nguyen, T. T. N., & Vu, M. C. (2018). Transformational leadership and its impact on performance: The role of psychological capital and collectivism. *ACM International Conference Proceeding Series*, 18–27. <https://doi.org/10.1145/3180374.3181325>
- Zamir, S. (2019). The polymeric model of school evaluation in the era of accountability. *Quality*

- Assurance in Education*, 27(4), 401–411. <https://doi.org/10.1108/QAE-06-2018-0070>
- Zhu, J., Yao, J., & Zhang, L. (2019). Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety. *Asia Pacific Education Review*, 20(4), 657–671. <https://doi.org/10.1007/s12564-019-09584-2>

Apêndice 1

Itens do questionário mobilizados para o ensaio do referencial de inovação

Dimensão 2. Práticas profissionais

V1: *O professor como inovador pedagógico que personaliza experiências pedagógicas que permitem responder à diversidade.*

- It.1.** A maioria dos professores usa / Eu uso recursos digitais construídos pelos próprios em aplicativos informáticos (ex. thinglink, nearpod...).
- It.2.** A maioria dos professores, nos últimos três anos, tem / Eu tenho experimentado novas metodologias / estratégias de ensino-aprendizagem
- It.3.** Os professores procuram / Eu procuro novos métodos e estratégias para realizar o ensino-aprendizagem.
- It.4.** Gosto de experimentar estratégias e novos métodos nas minhas aulas.
- It.5.** Sinto-me animado quando sou confrontado com a possibilidade de realização de novas atividades ou experiências educativas.
- It.6.** Assumo, de moto próprio, riscos no que respeita a opções pedagógico-didáticas.
- It.7.** Envolver-me em grupos/redes de aprendizagem com professores de outras escolas ou elementos de outras instituições.
- It.8.** Os professores mostram-se recetivos / Eu mostro-me recetivo a novas abordagens pedagógicas.
- It.9.** Os professores valorizam /Eu valorizo os colegas inovadores.
- It.10.** Os professores aceitam / Eu aceito bem as mudanças e/ou reformas.

V2: *Interação, colaboração e trabalho de equipa como base de um trabalho que se sustenta na intervenção*

- It.1.** Incentivo os meus pares a adotarem novas formas de realização do ensino-aprendizagem.
- It.2.** Assumo, com os pares, riscos no que respeita a opções pedagógico-didáticas.
- It.3.** O trabalho colaborativo decorre num clima de confiança inter-relacional.
- It.4.** O trabalho colaborativo promove o envolvimento dos professores nas dinâmicas de escola.
- It.5.** Os professores organizam-se numa perspetiva de apoio interpares.
- It.6.** Os professores realizam trabalho colaborativo na escola.
- It.7.** Os professores constroem em conjunto materiais didáticos.
- It.8.** Os professores realizam trabalho pedagógico em equipas multidisciplinares.
- It.9.** Os professores realizam trabalho em equipa disciplinares.
- It.10.** Os professores observam aulas dos pares.

V3: *Renovação de gramática escolar generativa como base de uma cultura que coloca o aluno no centro do processo de ensino aprendizagem.*

- It.1** A maioria dos professores recorre / Eu recorro a metodologias ativas de ensino-aprendizagem (ex. aprendizagem baseada em problemas, estudo de caso, gamificação, sala invertida...).
- It.2.** A maioria dos professores assume / Eu assumo o papel de moderador e facilitador da aprendizagem dos seus alunos.
- It.3.** Os professores ensinam / Ensino em conjunto com outros professores, como uma equipa, na mesma sala de aula.
- It.4.** Os alunos trabalham em projetos que exigem pelo menos uma semana para a sua conclusão.
- It.5.** Os alunos trabalham em grupo para encontrar soluções para um problema ou tarefa.
- It.6.** Os alunos podem transitar entre turmas, em certas disciplinas, durante períodos definidos.
- It.7.** Os alunos são envolvidos em atividades de ensino-aprendizagem que implicam a fusão de turmas ou grupos de alunos.
- It.8.** Os alunos realizam atividades interdisciplinares.
-

Dimensão 3 Lideranças

V1: Capacidade de inspirar e mobilizar ação interdependente, tendo por base uma visão coletiva estratégica comum de escola.

It.1. As lideranças intermédias tornam / Eu torno claro para os professores a intencionalidade subjacente aos objetivos e estratégias definidas para a ação educativa.

It.2. As lideranças criam / Crio condições para a participação dos professores na tomada decisão sobre a orientação e o planeamento estratégico de escola.

It.3. As lideranças incentivam / Incentivo os professores a adotarem novas formas de realização do ensino/aprendizagem.

It.4. As lideranças incentivam / Incentivo os professores a participarem em experiências pedagógicas.

It.5. As lideranças valorizam e dão / Valorizo e dou visibilidade a práticas exemplares e/ou de inovação pedagógica.

V2: Foco na aprendizagem dos alunos e na resposta à diversidade / inclusão.

It.1. Os resultados da autoavaliação são usados pelas lideranças para sustentar as decisões pedagógicas.

It.2. Crio condições para que grupos de alunos transitem entre turmas, em determinadas disciplinas, durante certos períodos.

It.3. Crio condições para que os alunos, nas várias disciplinas, possam realizar atividades com recurso às TIC.

It.4. Fomento a realização de atividades interdisciplinares, criando condições que possibilitem a realização conjunta do ensino/aprendizagem pelos professores.

It.5. Crio condições para a realização conjunta de atividades de ensino/aprendizagem por turmas diferentes.

It.6. Ajusto as rotinas e estruturas de escola visando intervenções diferenciadas para os alunos.

It.7. A visão de escola influencia o trabalho que os professores desenvolvem na sala de aula.

V3: Fomento de um clima de confiança e envolvimento de suporte ao desenvolvimento do capital social e individual e da própria inovação pedagógica.

It.1. As lideranças fomentam / Fomento nos professores um espírito de entre ajuda, criando condições para a sua existência.

It.2. As lideranças fomentam / Fomento a criação de bancos de recursos na escola.

It.3. As lideranças incentivam / Incentivo a criação de redes internas de apoio e aprendizagem entre docentes.

It.4. As lideranças fomentam / Fomento a criação de espaços, tempos, atividades ou redes de partilha de experiências inovadoras entre professores.

It.5. As lideranças incentivam / Incentivo o trabalho colaborativo entre professores, gerando oportunidades para sua realização.

It.6. Os professores estão motivados para realizar as intervenções previstas no plano de melhoria.

Dimensão 4. Autoavaliação

V1: Consistência e responsividade aos desafios organizacionais sob o pressuposto da melhoria organizacional contínua.

It.1. A visão de escola sustenta a estratégia definida para a autoavaliação de escola.

It.2. A EAA adapta e/ou constrói novas formas de análise da realidade educativa.

It.3. A EAA orienta a sua ação para a identificação de fatores promotores e condicionadores do sucesso educativo.

It.4. A EAA orienta a sua ação para a identificação de áreas que carecem de mudança de orientação e de áreas a consolidar.

It.5. A EAA monitoriza as dinâmicas de trabalho colaborativo realizado pelos professores.

V2: Foco nos processos de ensino aprendizagem (opções organizacionais e pedagógicas) a par dos resultados.

It.1. A EAA produz informação sobre as práticas pedagógicas implementadas na escola.

It.2. Os professores aceitam mais facilmente novos projetos ou experiências pedagógicas quando a EAA difunde informação relativa ao seu impacto.

It.3. Os professores inovam a sua ação em função dos resultados da autoavaliação de escola.

It.4. A EAA monitoriza experiências educativas implementadas na escola.

V3: Autoavaliação participada/ partilhada e fomentadora de reflexão.

It.1. O Diretor mobiliza / Mobilizo a análise e o debate sobre os resultados da autoavaliação pelas lideranças intermédias.

It.2. O Diretor incentiva / Incentivo a análise e o debate sobre os resultados da autoavaliação pelas lideranças intermédias com os professores.

It.3. Faço sugestões sobre áreas ou atividades a monitorizar pela EAA.

It.4. Os professores refletem em conjunto sobre os resultados da autoavaliação de escola.

It.5. Os Coordenadores de Departamento e de Grupo reflete / Eu reflito sobre os resultados da autoavaliação com as demais lideranças intermédias

Dimensão 5 Culturas organizacionais

V1: *Cultura de avaliação transversal enquanto suporte ao capital decisional.*

It.1. Identifico, juntamente com as lideranças intermédias, / Os professores identificam os fatores promotores e condicionadores do sucesso educativo com base no conhecimento produzido pela EAA.

It.2. Identifico, juntamente com as lideranças intermédias, / Os professores identificam áreas que carecem de mudança de orientação e áreas a consolidar com base no conhecimento produzido pela EAA.

It.3. Sustento as decisões e a ação estratégica de escola no conhecimento produzido pela EAA.

It.4. Defino, juntamente com as lideranças intermédias, o plano de formação docente e não docente com base no conhecimento produzido pela EAA.

It.5. Considero, juntamente com as lideranças intermédias, no planeamento da ação estratégica de escola, os resultados da avaliação externa da IGEC.

It.6. Valorizo a atividade desenvolvida pela EAA.

V2: *Cultura de interdependência organizacional com enfoque na melhoria contínua e na inovação.*

It.1. Existe uma visão comum de escola partilhada pela maioria dos professores.

It.2. As lideranças trabalham concertadamente para operacionalizar a visão de escola.

It.3. Os Coordenadores de Departamento / Grupo envolvem os professores num trabalho orientado para uma visão comum de escola.

It.4. Trabalho para consolidar a visão de escola e facilitar a operacionalização da missão de escola.

It.5. Fomento o sentido de missão nos professores tendo por referência as metas e finalidades de escola.

It.6. As lideranças e os professores trabalham em conjunto por referência a planos de melhoria.

It.7. As lideranças e os professores trabalham em conjunto por referência a planos de inovação.

V3: *Cultura de aprendizagem organizacional assente na cooperação e que valorize a responsabilidade, a liberdade e a inovação.*

It.1. O Diretor dinamiza / Dinamizo rotinas de trabalho que facilitam a existência de uma ideia global de pedagogia partilhada por professores e lideranças.

It.2. Os professores consideram os dados da avaliação interna de escola para procurar e realizar formação profissional.

It.3. Os professores partilham novas ideias/conhecimentos com os colegas.

It.4. O trabalho em equipa contribui para o desenvolvimento profissional dos professores.

Bibliografia Geral

- Acar Güvendir, M., & Özer Özkan, Y. (2022). Item Removal Strategies Conducted in Exploratory Factor Analysis: A Comparative Study. *International Journal of Assessment Tools in Education*, 9(1), 165–180. <https://doi.org/10.21449/ijate.827950>
- 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>
- Ahlquist, J.S. & Breunig, C. (2012). Model-based clustering and typologies in the social sciences. *Political Analysis*, Vol. 20, No. 1, pp.92–112, DOI: 10.1093/pan/mpr039.
- Altun, B., & Yengin Sarkaya, P. (2020). The actors of teacher supervision. *Journal of Human Sciences*, 17(1), 284–303. <https://doi.org/10.14687/jhs.v17i1.5880>
- Albuquerque, P. D., Ferreira, A. G. & Barreira, C. M. F. (2020). Interdependência entre domínios na avaliação externa para a melhoria dos “resultados” em duas organizações escolares, *Revista Brasileira de Educação*, 25, pp. 1–24. doi: 10.1590/s1413-24782020250022.
- Alves, J. M. (2021). Uma gramática generativa e transformacional para gerar outra escola. In *Mudança em movimento – Escolas em tempos de Incerteza* (pp. 25–48). Católica Editora. <https://www.uceditora.ucp.pt/pt/digital/3077-mudanca-em-movimento.html>
- Alves, J. M., & Cabral, I. (2019). Texto de enquadramento e reflexão acerca do estudo sobre escolas, lideranças e ensino. In M. C. Roldão (Ed.), *Quem lidera o ensino e a aprendizagem nas escolas? Um estudo de caso múltiplo sobre lideranças pedagógicas*. (pp. 13–34). Fundação Manuel Leão.
- Alves, J. M., & Cabral, I. (2021). No regresso à escola – Reimaginar e praticar uma gramática generativa e transformacional. In J. Matias Alves & I. Cabral (Eds.), *NO REGRESSO À ESCOLA – Reimaginar e praticar uma gramática generativa e transformacional* (pp. 4–20). Faculdade de Educação e Psicologia da UCP. <https://www.researchgate.net/publication/354403069>
- Alves, J. M., Cabral, I., & Bolívar, A. (2020). Lideranças, gestão escolar e melhoria das escolas: recomendações para o desenvolvimento das políticas educativas. In I. Cabral & J. M. Alves (Eds.), *Gestão escolar e melhoria das escolas* (1ª, pp. 143–180). Fundação Manuel Leão.
- Amorim, S., Cabral, I. & Alves, J.M. (2019). Culturas escolares, lideranças e resultados: apresentação de resultados de um estudo duplo. In Cabral, I. et al. (Eds.): *Educação, Territórios e Desenvolvimento Humano: Atas do III Seminário Internacional*, Universidade Católica Portuguesa, Faculdade de Educação e Psicologia, Centro de Estudos em Desenvolvimento Humano, Porto, Portugal, 18–19 July, pp.231–252 [online] <http://hdl.handle.net/10400.14/31393>.
- Andrews, D., & Conway, J. M. (2020). Leadership for Ongoing Sustainability of Whole School Improvement. *Leading & Managing*, 26(1), 128–129. <https://search.informit.org/doi/10.3316/informit.437744412395345>
- 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). <https://doi.org/10.1080/2331186X.2022.2064407>
- Arar, K., Tamir, E., & Abu-Hussain, J. (2019). Understanding reforms, school reactions to major changes: the case of Israel. *Journal of Educational Administration and History*, 51(4), 402–418. <https://doi.org/10.1080/00220620.2019.1624511>
- Arbeiter, J., & Bučar, M. (2021). Transformative Education, Bridging Education for Change. In *European Union*. <https://doi.org/10.13140/RG.2.2.30182.96322>
- 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. <https://doi.org/10.15345/iojes.2020.03.014>
- Augustine-Shaw, D., Hachiya, R. F. & Miller, T. N. (2017). Leadership for change, Quandaries of School Leadership: Voices from Principals in the Field. doi: 10.1007/978-3-319-59120-9_12.
- Avidov-Ungar, O., & Forkosh-Baruch, A. (2018). Professional identity of teacher educators in the

- digital era in light of demands of pedagogical innovation. *Teaching and Teacher Education*, 73, 183–191. <https://doi.org/10.1016/j.tate.2018.03.017>
- Azevedo, J. (2016). *Há uma brecha no dique: “Horizonte 2020” - Descrição do projeto de inovação educacional dos colégios jesuítas da Catalunha*. Fundação Manuel Leão.
- Aydemir, A. (2021). Social Innovation And Lateral Thinking Tendencies Of Preservice Social Studies Teachers. *International Journal of Progressive Education*, 17(3), 0–1. <https://doi.org/10.29329/ijpe.2021.346.16>
- 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>
- Bak, H. U., Jin, M. H., & McDonald, B. D. (2022). Unpacking the Transformational Leadership-Innovative Work Behavior Relationship: The Mediating Role of Psychological Capital. *Public Performance and Management Review*, 45(1), 80–105. <https://doi.org/10.1080/15309576.2021.1939737>
- Bardin, L. (2009). *Análise de conteúdo* (4ª). 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>
- Barroso, J. (2022). *Administração e política educacional. um percurso de investigação* (Issue June). Instituto de Educação da Universidade de Lisboa.
- Bartee, R. (2007). Education Leadership as ‘Capital’ for a Diverse School Setting: Understanding the Dynamics of Social and Symbolic Capital as Exemplars of Successful Leadership Strategies. *Advances in Educational Administration*, 10, 179–194. [https://doi.org/10.1016/S1479-3660\(07\)10011-1](https://doi.org/10.1016/S1479-3660(07)10011-1)
- Bartz, A. E. (1999). *Basic Statistical Concepts*. Upper Saddle River, NJ: Prentice-Hall.
- Barzanò, G. (2009). *Culturas de liderança e lógicas de responsabilidade* (1ª). Fundação Manuel Leão.
- Baydar, F., & Cetin, M. (2021). The Model of Relationships between Intellectual Capital, Learning Organizations, and Innovation-Oriented Organizational Structures in Educational Organizations. *Eurasian Journal of Educational Research*, 21(94), 265–294. <https://doi.org/10.14689/ejer.2021.94.12>
- 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*, 0123456789. <https://doi.org/10.1007/s10833-021-09435-1>
- Bellibaş, M. Ş., Gümüş, S., & Kılınç, A. Ç. (2020). Principals supporting teacher leadership: The effects of learning-centred leadership on teacher leadership practices with the mediating role of teacher agency. *European Journal of Education*, 55(2), 200–216. <https://doi.org/10.1111/ejed.12387>
- Biesta, G. (2012). Boa educação na era da mensuração. *Cadernos de Pesquisa*, 42(147), 808–825. <https://doi.org/10.1590/S0100-15742012000300009>
- Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teachers and Teaching: Theory and Practice*, 21(6), 624–640. <https://doi.org/10.1080/13540602.2015.1044325>
- 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>
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quifonez, H. R., & Young, S. L. (2018). Best Practices for Developing and Validating Scales for Health, Social, and Behavioral Research: A Primer. *Frontiers in Public Health*, 6(June), 1–18. <https://doi.org/10.3389/fpubh.2018.00149>
- Bocconi, S., Kampylis, P., & Punie, Y. (2013). Framing ICT-enabled Innovation for Learning: The case of one-to-one learning initiatives in Europe. *European Journal of Education*, 48(1), 113–130. <https://doi.org/10.1111/ejed.12021>

- Bolívar, A. (2001). Los centros educativos como organizaciones que aprenden: una mirada crítica. *Contexto Educativo: Revista Digital de Investigación y Nuevas Tecnologías*, August, 4.
- Bolívar, A. (2009). De “la escuela no importa” a la escuela como unidad base de mejora. *Punto Edu*, 15, 28–33.
- 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>
- Brunsson, N. (2006). *A Organização da Hipocrisia Diálogo, Decisão e Acção nas Organizações*. Asa.
- Brunsson, N. (2014). The Irrational Organization: Irrationality as a Basis for Organizational Action and Change. *M@n@gement*, 17(2), 141. <https://doi.org/10.3917/mana.172.0141>
- Cabral, I., & Alves, J. M. (2016). Um modelo integrado de promoção do sucesso escolar (MIPSE) - a voz dos alunos. *Revista Portuguesa de Investigação Educacional*, 16 (Escolas Melhorias e Transformação), 81–113. <https://doi.org/10.1645-4006>
- Cabral, I., & Alves, J. M. (2017). Ensaio breve para reinventar as práticas de escolarização. In I. Cabral & J. Matias Alves (Eds.), *Da Construção do Sucesso Escolar, uma Visão Integrada* (pp. 7–10). Fundação Manuel Leão.
- Cao, C., Shang, L., & Meng, Q. (2020). Applying the Job Demands-Resources Model to exploring predictors of innovative teaching among university teachers. *Teaching and Teacher Education*, 89, 103009. <https://doi.org/10.1016/j.tate.2019.103009>
- Cardoso, A. (1997). *Educação e inovação*. Millenium, 1984.
- Carmine, E. G., & Zeller, R. A. (1974). On establishing the empirical dimensionality of theoretical terms: An analytical example. *Society for Political Methodology*. On Establishing the Empirical Dimensionality of Theoretical Terms: An Analytical Example Author(s): Edward G. Carmine and Ric. *Oxford Journals: Oxford University Press*, 1(4). <http://www.jstor.org/stable/25791395>
- Castro, H., & Alves, J. M. (2013). Avaliação de escolas: o gerenciamento da imagem ao serviço da legitimação. *Revista Portuguesa de Investigação Educacional*, 13, 49–82. <https://doi.org/10.34632/investigacaoeducacional.2013.3389>
- Cerna, L. (2014). *Edu/ceri/cd(2014)17. Centre for Educational Research and Innovation (Ceri) Governing Board*, pp.1–38.
- Chandra, P., Tomitsch, M., & Large, M. (2020). Innovation education programs: a review of definitions, pedagogy, frameworks and evaluation measures. *European Journal of Innovation Management*, 24(4), 1268–1291. <https://doi.org/10.1108/EJIM-02-2020-0043>
- 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>
- Cheong, M., Spain, S.M., Yammarino, F.J. & Yun, S. (2016). Two faces of empowering leadership: enabling and burdening. *Leadership Quarterly*, Vol. 27, No. 4, pp.602–616, DOI: 10.1016/j.leaqua.2016.01.006.
- Cochran-Smith, M. (2021). Rethinking teacher education: The trouble with accountability. *Oxford Review of Education*, 47(1), 8–24. <https://doi.org/10.1080/03054985.2020.1842181>
- Çoğaltay, N., & Boz, A. (2022). Influence of school leadership on collective teacher efficacy: a cross-cultural meta-analysis. *Asia Pacific Educ. Rev.* <https://doi.org/https://doi.org/10.1007/s12564-022-09754-9>
- Constantinides, M. (2022). High-stakes accountability policies and local adaptation: exploring how school principals respond to multiple policy demands. *School Leadership and Management*,

- 42(2), 170–187. <https://doi.org/10.1080/13632434.2021.2016687>
- Conway, J. M., & Andrews, D. (2016). A school wide approach to leading pedagogical enhancement: An Australian perspective. *Journal of Educational Change*, 17(1), 115–139. <https://doi.org/10.1007/s10833-015-9258-0>
- Córdoba-Pachón, J. R., Mapelli, F., Taji, F. N. A. Al, & Donovan, D. M. (2021). Systemic Creativities in Sustainability and Social Innovation Education. *Systemic Practice and Action Research*, 34(3), 251–267. <https://doi.org/10.1007/s11213-020-09530-z>
- Coutinho, C. P. (2020). *Metodologias de investigação em Ciências Sociais e Humanas* (2ª). Edições Almedina, S.A.
- Croizier, M. (1979). *On ne change pas la société par décret*. Bernard Grasset.
- Croizier, M., & Friedberg, E. (1977). *L'acteur et le système*. Editions du Seuil.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/https://doi.org/10.1007/BF02310555>
- Cuenca, P. O., Solís, M. E., Guerrero, J. L., Rayón, A. E., Martínez, C., Téllez, L., & Hernández, B. (2006). Modelo de Innovación Educativa. Um Marco para la Formación y el Desarrollo de una Cultura de la Innovación. *Ier. Congreso Internacional Innovación Educativa - La Cultura de La Innovación En La Educación*, 1–20.
- Da'as, R., Schechter, C., & Qadach, M. (2020). School Leaders' Cognitive Complexity: Impact on the Big 5 Model and Teachers' Organisational Citizenship Behavior. *Journal of School Leadership*, 30(5), 398–423. <https://doi.org/10.1177/1052684619896535>
- Dahler-larsen, P. (2014). Constitutive effects of performance indicators. *Public Management Review*, 16(7), 969–986.
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A review on leadership and leadership development in educational settings. *Educational Research Review*, 27(January 2018), 110–125. <https://doi.org/10.1016/j.edurev.2019.02.003>
- Day, C. (2017). Leadership as a Way. *Profesorado*, 21(2), 21–26. https://doi.org/10.1007/978-981-10-3549-4_7
- Day, G. S., & Shea, G. (2020). Changing the Work of Innovation: A Systems Approach. *California Management Review*, 63(1), 41–60. <https://doi.org/10.1177/0008125620962123>
- Delors, J., Al-Mufti, I., Amagi, I., Carneiro, R., Chung, F., Geremek, B., Gorham, W., Kornhauser, A., Manley, M., Quero, P. M., Savané, M.-A., Singh, K., Stavenhagen, R., Suhr, W. M., & Nanzhao, Z. (1998). Educação: um tesouro a descobrir. Relatório para a UNESCO da Comissão Internacional sobre Educação para o Séc. XXI. In *Unesco da Comissão Internacional sobre Educação*. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Educação:+um+tesouro+a+descobrir.+Relatório+para+a+UNESCO+da+Comissão+Internacional+sobre+Educação+para+o+século+XXI#0>
- DeMatthews, D. (2014). Principal and Teacher Collaboration: An Exploration of Distributed Leadership in Professional Learning Communities. *International Journal of Educational Leadership and Management*, 2(2), 176–206. <https://doi.org/10.4471/ijelm.2014.16>
- DeMatthews, D. (2015). Clearing a Path for Inclusion Distributing Leadership in a High Performing Elementary School. *Journal of School Leadership*, 25(November 2015), 1000–1039.
- Demirtas, O. & Karaca, M. (2020). *A Handbook of Leadership Styles*, Cambridge Scholars Publishing, Newcastle upon Tyne.
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., Savoy, S. M., & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship*, 39(2), 155–164. <https://doi.org/10.1111/j.1547-5069.2007.00161.x>
- 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. <http://dx.doi.org/10.15517/aie.v15i2.18960>

- Dimmock, C. (2011). *Leadership, Capacity Building and School Improvement Concepts, themes and impact* (1st ed.). Routledge. <https://doi.org/10.4324/9780203817452>
- Dischner, S. (2015). Organizational structure, organizational form, and counterproductive work behavior: A competitive test of the bureaucratic and post-bureaucratic views. *Scandinavian Journal of Management*, 31(4), 501–514. <https://doi.org/10.1016/j.scaman.2015.10.002>
- diZerega, G. (1989). Democracy As A Spontaneous Order. *Critical Review*, 3(2), 206–240. <https://doi.org/10.1080/08913818908459563>
- 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. *Starter Paper on Inspection and Innovation*, 1–8. <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* (No. 015). <http://eprints.ncrm.ac.uk/842/>
- Ehren, M. C. M., & Visscher, A. J. (2006). Towards a theory on the impact of school inspections. *British Journal of Educational Studies*, 54(1), 51–72. <https://doi.org/10.1111/j.1467-8527.2006.00333.x>
- Elken, M., & Vukasovic, M. (2019). *The Looseness of Loose Coupling: The Use and Misuse of “Loose Coupling” in Higher Education Research*. October, 53–71. <https://doi.org/10.1108/s2056-375220190000005005>
- Ellis, V., Steadman, S., & Trippstad, T. A. (2019). Teacher education and the GERM: policy entrepreneurship, disruptive innovation and the rhetorics of reform. *Educational Review*, 71(1), 101–121. <https://doi.org/10.1080/00131911.2019.1522040>
- Ellison, S. (2009). Hard-Wired for Innovation? Comparing Two Policy Paths toward Innovative Schooling. *International Education*, 39(1), 30–48.
- Espuny, M. T., Cunha, R. S., Cabral, I., & Alves, J. M. (2020). Giving voice to problems faced by school leaders in Portugal. *School Leadership and Management*, 40(4), 352–372. <https://doi.org/10.1080/13632434.2020.1719400>
- European Commission. (2019). *Directorate-General for Education, Youth, Sport and Culture, Key competences for lifelong learning*. <https://doi.org/https://data.europa.eu/doi/10.2766/569540>
- Eurostat. (2018). *Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation*. <http://doi.org/10.1787/9789264304604-en>
- Eyal, O. (2009). Degeneracy, resilience and free markets in educational innovation. *Systems Research and Behavioral Science*, 26(4), 487–491. <https://doi.org/10.1002/sres.940>
- Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education*, 2(1). <https://doi.org/10.1080/2331186X.2015.1018698>
- Figueiredo, A. D. (2020). The renewed human dimension of the school in the digital era. *EDUCA - International Catholic Journal of Education*, 6(January 2020), 168–176. <https://www.researchgate.net/publication/353669761>
- Fink, D. (2010). *The Succession Challenge - Building and Sustaining Leadership Capacity through Succession Management*. SAGE Publications. <https://doi.org/10.4135/9781446251706>
- Fonseca, J.R.S. (2013). Clustering in the field of social sciences: that is your choice. *International Journal of Social Research Methodology*, Vol. 16, No. 5, pp.403–428, DOI: 10.1080/13645579.2012.716973.
- 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>
- Friedberg, E. (1995). *O poder e a regra: dinâmicas da acção organizada*. Instituto Piaget.

- Fuad, D. R. S. M., Musa, K., & Hashim, Z. (2022). Innovation culture in education: A systematic review of the literature. *Management in Education*, 36(3), 135–149. <https://doi.org/10.1177/0892020620959760>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- 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. (2020). System change in education. *American Journal of Education*, 126(4), 653–663. <https://doi.org/10.1086/709975>
- Fullan, M., Quinn, J., Drummy, M., & Gardner, M. (2020). *Education Reimagined: The Future of Learning*. <http://aka.ms/HybridLearnigPaper>
- Fullan, M., Quinn, J., & Mceachen, J. (2017). *Deep Learning: Engage the World Change the World* (1st ed.). Thousand Oaks, CA: Corwin Press. <https://us.corwin.com/en-us/nam/deep-learning/book255374>
- Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analysis Archives*, 23(15), 1–18. <http://dx.doi.org/10.14507/epaa.v23.1998>
- Gao, Y., Zhao, X., Xu, X., & Ma, F. (2021). A study on the cross level transformation from individual creativity to organisational creativity. *Technological Forecasting and Social Change*, 171(June), 120958. <https://doi.org/10.1016/j.techfore.2021.120958>
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update*.
- Ghazinoory, S., Phillips, F., Afshari-Mofrad, M., & Bigdelou, N. (2021). Innovation lives in ecotones, not ecosystems. *Journal of Business Research*, 135(June), 572–580. <https://doi.org/10.1016/j.jbusres.2021.06.067>
- 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>
- Ghazinoory, S., Phillips, F., Afshari-Mofrad, M., & Bigdelou, N. (2021). Innovation lives in ecotones, not ecosystems. *Journal of Business Research*, 135(June), 572–580. <https://doi.org/10.1016/j.jbusres.2021.06.067>
- 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>
- Gomes, L.A. de V., Facin, A.F.F. & Salerno, M.S. (2021). Managing uncertainty propagation in innovation ecosystems. *Technological Forecasting and Social Change*, June, Vol. 171, p.120945, DOI: 10.1016/j.techfore.2021.120945.
- Gonzales, M., & Roberts, M. (2019). Franchise model schools: rethinking educational practices and structures: *Development and Learning in Organizations*, 34(2), 41–44. <https://doi.org/10.1108/DLO-08-2019-0196>
- González-Falcón, I., García-Rodríguez, M. P., Gómez-Hurtado, I., & Carrasco-Macías, M. J. (2020). The importance of principal leadership and context for school success: insights from '(in)visible school.' *School Leadership and Management*, 40(4), 248–265. <https://doi.org/10.1080/13632434.2019.1612355>
- Goodson, I. (2000). Professional Knowledge, Professional Lives. *Studies in Education and Change*, Open University Press, Maidenhead.
- Goodson, I. (2001). 'Social histories of educational change. *Journal of Educational Change*, Vol. 2, No. 1, pp.45–63, DOI: 10.1023/A:1011508128957.
- Goodson, I. (2014). Context, curriculum and professional knowledge. *History of Education*, 43(6), 768–776. <https://doi.org/10.1080/0046760X.2014.943813>
- Green, C. A., Tindall-Ford, S. K., & Eady, M. J. (2020). School-university partnerships in Australia: a systematic literature review. *Asia-Pacific Journal of Teacher Education*, 48(4), 403–435. <https://doi.org/10.1080/1359866X.2019.1651822>

- Hall, R.D. & Rowland, C.A. (2016). Leadership development for managers in turbulent times. *Journal of Management Development*, Vol. 35, No. 8, pp.942–955, DOI: 10.1108/JMD-09-2015-0121.
- 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). <https://doi.org/10.3402/edui.v7.30115>
- Hannan, A. & Silver, H. (2000). *Innovating in Higher Education: Teaching, Learning, and Institutional Cultures*. Open University Press, Philadelphia.
- Hargreaves, A. (2007). *EBSCOhost: Sustainable Leadership and Development in Education: creating the future, c...* 42(2). <http://web.ebscohost.com.ezproxy.apollolibrary.com/ehost/detail?vid=5&hid=123&sid=5ff4bd16-e7cd-4f4f-b069-b5fba0c63d99@sessionmgr110&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ==#db=a9h&AN=25149963>
- Hargreaves, A. (2010). Presentism, individualism, and conservatism: The legacy of Dan Lortie's Schoolteacher: A sociological study. *Curriculum Inquiry*, 40(1), 143–154. <https://doi.org/10.1111/j.1467-873X.2009.00472.x>
- Hargreaves, A. (2012) 'Singapore: the fourth way in action?', *Educational Research for Policy and Practice*, Vol. 11, No. 1, pp.7–17, DOI: 10.1007/s10671-011-9125-6.
- 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., & Ainscow, M. (2015). The top and bottom of leadership and change. *Phi Delta Kappan*, 97(3), 42–48. <https://doi.org/10.1177/0031721715614828>
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital Transforming Teaching in Every School*. NY: Teachers College Press.
- Hargreaves, A., & Shirley, D. (2009). The fourth way: The inspiring future for educational change. In *The Fourth Way: The Inspiring Future for Educational Change*. <https://doi.org/10.4135/9781452219523>
- Hayek, F. (1979). *Law, Legislation and Liberty: A New Statement of the Liberal Principles of Justice and Political Economy*. Vol.3. Routledge.
- Hayek, F. (2018). *A constituição da liberdade* (J. C. Trad. Espada (ed.)). Edições 70.
- 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/eej.2007.6.3.198>
- Henriques, S., Abelha, M., Seabra, F., & Mouraz, A. (2020). Avaliação externa de escolas e inovação educativa. In J. A. Pacheco, J. C. Morgado, & J. R. Sousa (Eds.), *Avaliação institucional e inspeção: perspectivas teórico-conceptuais* (1ª, pp. 121–140). Porto Editora.
- Hitt, D. H., & Tucker, P. D. (2016). Systematic Review of Key Leader Practices Found to Influence Student Achievement: A Unified Framework. *Review of Educational Research*, 86(2), 531–569. <https://doi.org/10.3102/0034654315614911>
- Ho, D., & Lee, M. (2016). Capacity building for school development: current problems and future challenges. *School Leadership and Management*, 36(5), 493–507. <https://doi.org/10.1080/13632434.2016.1247040>
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60. <https://doi.org/10.21427/D7CF7R>
- Hopkins, E., Hendry, H., Garrod, F., McClare, S., Pettit, D., Smith, L., Burrell, H., & Temple, J. (2016). Teachers' views of the impact of school evaluation and external inspection processes. *Improving Schools*, 19(1), 52–61. <https://doi.org/10.1177/1365480215627894>
- Howaldt, J., Domanski, D., & Kaletka, C. (2016). Social innovation: Towards a new innovation paradigm. *Revista de Administracao Mackenzie*, 17(6), 20–44. <https://doi.org/10.1590/1678-69712016/administracao.v17n6p20-44>
- Hutt, M., & Lewis, N. (2021). Ready for reform? Narratives of accountability from teachers and

- education leaders in Wales. *School Leadership and Management*, 41(4–5), 470–487. <https://doi.org/10.1080/13632434.2021.1942823>
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2017). An Introduction to Statistical Learning. In Springer (Ed.), *Handbook of Quantile Regression* (8th ed.). <https://doi.org/10.1007/978-1-4614-7138-7>
- Janssen (2003). Innovative behaviour and job involvement at the price of conflict. *Journal of Occupational and Organizational Psychology*, Vol. 76, p.347, <https://doi.org/10.1348/096317903769647210>.
- Jones, M., Azorín, C., Chapman, C., & Harris, A. (2023). Leading professional networks: different perspectives. *School Leadership & Management*, 43(1), 1–7. <https://doi.org/10.1080/13632434.2023.2175564>
- Juwono, I. D., & Harly, T. H. (2017). Leadership Succession Impact on School Culture: A Case Study at a Faith-Based Secondary School in Indonesia. *International Journal of Information and Education Technology*, 7(3), 184–189. <https://doi.org/10.18178/ijiet.2017.7.3.863>
- Kaewsang-on, R., AL-Takhayneh, S. K., Jam, F. A., Chang, B. L., Pradana, M., & Mahmood, S. (2022). A three wave longitudinal study of school innovation climate and entrepreneurship teachers' acceptance to technology: Moderating role of knowledge sharing and knowledge hiding. *Frontiers in Psychology*, 13(October), 1–15. <https://doi.org/10.3389/fpsyg.2022.1028219>
- Kaiser, H. F., & Rice, J. (1974). Little Jiffy, Mark IV. *Educational and Psychological Measurement*, 34(1), 111–117. <https://doi.org/https://doi.org/10.1177/001316447403400115>
- Kalman, M., Summak, M. S., & Cimen, I. (2017). Principal Assignments in Limbo: A Qualitative Study on the Processes and Potential Outcomes of the Recent Principal Assignment Initiative in Turkey. *Educational Process: International Journal*, 6(1), 53–84. <https://doi.org/10.22521/edupij.2017.61.4>
- Kennedy, J. F., Roose, E., Luther, M., Jr, K., Susan, B., & Mandela, N. (2017). *Leadership as a Way*. *Profesorado*, 21(2), 21–26.
- Khalifa, M. A., Gooden, M. A., & Davis, J. E. (2016). Culturally Responsive School Leadership: A Synthesis of the Literature. *Review of Educational Research*, 86(4), 1272–1311. <https://doi.org/10.3102/0034654316630383>
- 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>
- Kılıçoğlu, G., & Kılıçoğlu, D. Y. (2021). Understanding organizational hypocrisy in schools: the relationships between organizational legitimacy, ethical leadership, organizational hypocrisy and work-related outcomes. *International Journal of Leadership in Education*, 24(1), 24–56. <https://doi.org/10.1080/13603124.2019.1623924>
- Kogabayev, T., & Maziliauskas, A. (2017). The definition and classification of innovation. *HOLISTICA – Journal of Business and Public Administration*, 8(1), 59–72. <https://doi.org/10.1515/hjbpa-2017-0005>
- 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>
- Krosnick, J. A., Holbrook, A. L., Berent, M. K., Carson, R. T., Michael Hanemann, W., Kopp, R. J., Mitchell, R. C., Presser, S., Ruud, P. A., Kerry Smith, V., Moody, W. R., Green, M. C., & Conaway, M. (2002). The Impact Of “No Opinion” Response Options On Data Quality Non-Attitude Reduction Or An Invitation To Satisfice? *Public Opinion Quarterly*, 66(3), 371–403. <https://doi.org/10.1086/341394>
- 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>
- Kurum, G., & Cinkir, S. (2019). An authentic look at evaluation in education: A school self-evaluation model supporting school development. In *Eurasian Journal of Educational Research* (Vol. 2019, Issue 83, pp. 253–286). <https://doi.org/10.14689/ejer.2019.83.12>
- Lacroix, E. (2020). Pedagogical Innovation: New Institutional Theory and Beyond Borders Experiential Learning Program. *Journal of Social Thought*, 4(1).
- Lambert, S.C. (2015). The importance of classification to business model research. *Journal of Business Models*, Vol. 3, No. 1, pp.49–61, DOI: 10.5278/ojs.jbm.v3i1.1045.
- Lambriex-Schmitz, P., Van der Klink, M.R, Beausaert, S., Bijker, M. & Segers, M. (2020). Towards successful innovations in education: development and validation of a multi-dimensional innovative work behaviour instrument. *Vocations and Learning*, Vol. 13, No. 2, pp.313–340, DOI: 10.1007/s12186-020-09242-4.
- Lee, A. N., Nie, Y., & Bai, B. (2020). Perceived principal's learning support and its relationships with psychological needs satisfaction, organisational commitment and change-oriented work behaviour: A Self-Determination Theory's perspective. *Teaching and Teacher Education*, 93, 103076. <https://doi.org/10.1016/j.tate.2020.103076>
- 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>
- Leadbeater, C. (2014). *The Frugal Innovator: Creating Change on a Shoestring Budget* (Vol. 13, Issue April). Palgrave Macmillan UK. <https://doi.org/10.1057/9781137335371>
- Leithwood, K. (2021). A review of evidence about equitable school leadership. *Education Sciences*, 11(8). <https://doi.org/10.3390/educsci11080377>
- Leithwood, K. and Earl, L. (2000). Educational accountability effects: an international perspective. *Peabody Journal of Education*, Vol. 75, No. 4, pp.1–18, DOI: 10.1207/S15327930PJE7504_1.
- Leithwood, K., & Jantzi, D. (2008). Linking Leadership to Student Learning: The Contributions of Leader Efficacy. *Educational Administration Quarterly*, 44(4), 496–528. <https://doi.org/10.1177/0013161X08321501>
- Leithwood, Kenneth, Louis, K. S., Anderson, S., Wahlstrom, K., Minnesota Univ., M. C. for A. R. and E. I., & Ontario Inst. for Studies in Education, T. (2004). How leadership influences student learning. Review of research. *The Wallace Foundation*. <https://doi.org/https://hdl.handle.net/11299/2035>.
- Lévesque, B. (2014). As inovações sociais podem contribuir para transformações, mas isso não é tão evidente. *Revista Ciências Em Debate*, 1(2), 179–199.
- Levy, Y., & Ellis, T. J. (2006). A Systems Approach to Conduct an Effective Literature Review in Support of Information Systems Research. *Informing Science Journal*, 9, 181–212. <http://www.inform.nu/Articles/Vol9/V9p181-212Levy99.pdf>
- Lillejord, S. (2020). From “unintelligent” to intelligent accountability. *Journal of Educational Change*, 21(1), 1–18. <https://doi.org/10.1007/s10833-020-09379-y>
- Lima, L. (1992). *A Escola como Organização e a Participação na Organização Escola* [Universidade do Minho]. <https://doi.org/ISBN 972-8098-24-3>
- Lima, L. C., & Torres, L. L. (2020). Políticas, dinâmicas e perfis dos agrupamentos de escolas em Portugal. 748–774. <https://doi.org/10.31447/as00032573.2020237.03>
- Lima, L. C. (2021). Democracy and education: Dewey in times of crisis in democratic education. *Education Policy Analysis Archives*, 29(August - December), 154. <https://doi.org/10.14507/epaa.29.5881>
- Luban, D. (2020). What Is Spontaneous Order? *American Political Science Review*, 114(1), 68–80. <https://doi.org/10.1017/S0003055419000625>
- 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. <https://www.jstor.org/stable/42748322>
- 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>
- Machado, J. (2018). Autonomia, currículo e liderança: na crista da onda de um paradoxo. In C. Palmeirão & J. M. Alves (Eds.), *Escola e mudança: construindo autonomia, flexibilidade e novas gramáticas de escolarização - os desafios essenciais* (1ª, pp. 9–19). Universidade Católica Portuguesa. <https://doi.org/10.34632/9789898835543>
- Machado, J., & Formosinho, J. (2016). Equipas educativas e comunidades de aprendizagem. *Revista Portuguesa de Investigação Educacional - Escolas, Melhoria e Transformação*, 16, 11–31. <https://doi.org/https://doi.org/10.34632/investigacaoeducacional.2016.3419>
- McMahon, A. (2017). *School of Social Science Essay Guide Planning , Research and Writing*. January, 1–17. https://social-science.uq.edu.au/files/1725/EssayWritingGuide_SocSci.pdf
- Madeira, J. & Duarte, J. (2018). Inspection and innovation: A new relationship with schools? *Revista Lusófona de Educação*, 42(42), pp. 45–58. doi: 10.24140/issn.1645-7250.rle42.03.
- Major, J., Tait-McCutcheon, S. L., Averill, R., Gilbert, A., Knewstubb, B., Mortlock, A., & Jones, L. (2020). Pedagogical Innovation in Higher Education. *International Journal of Innovative Teaching and Learning in Higher Education*, 1(3), 1–18. <https://doi.org/10.4018/ijitlhe.2020070101>
- 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>
- Maroy, C. & Dupriez, V. (2000). La régulation dans les systèmes scolaires. Proposition théorique et analyse du cadre structurel en Belgique francophone. *Revue Française de Pédagogie*, Vol. 130, pp.73–88, DOI: 10.3406/rfp.2000.1054 [online] http://www.persee.fr/web/revues/home/prescript/article/rfp_0556-7807_2000_num_130_1_1054.
- Matteucci, M., Guglielmi, D., & Lauermann, F. (2017). Teachers' Sense of Responsibility for Educational Outcomes and its Associations with Teachers' Instructional Approaches and Professional Wellbeing. *Social Psychology of Education*, 2, 275–298. <https://doi.org/https://doi.org/10.1007/s11218-017-9369-y>
- Mckenna, S., Garcia-Lorenzo, L., & Bridgman, T. (2010). Managing, managerial control and managerial identity in the post-bureaucratic world. *Journal of Management Development*, 29(2), 128–136. <https://doi.org/10.1108/02621711011019260>
- 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>
- Meirink, J. A., Imants, J., Meijer, P. C., & Verloop, N. (2010). Teacher learning and collaboration in innovative teams. *Cambridge Journal of Education*, 40(2), 161–181. <https://doi.org/10.1080/0305764X.2010.481256>
- Messina, G. (2001). Mudança e inovação educacional: notas para reflexão. *Cadernos de Pesquisa*, 114, 225–233. <https://doi.org/10.1590/s0100-15742001000300010>
- Midha, G. (2022). Meetings: school leadership infrastructure that creates sense. *International Journal of Leadership in Education*, 00(00), 1–26. <https://doi.org/10.1080/13603124.2022.2076287>
- Mincu, M. (2022). Why is school leadership key to transforming education? Structural and cultural assumptions for quality education in diverse contexts. *Prospects*, 52(3–4), 231–242. <https://doi.org/10.1007/s1125-022-09625-6>
- Mioduser, D., Nachmias, R., Tubin, D., & Forkosh-baruch, A. (2003). Analysis Schema for the Study of Domains. *Education and Information Technologies*, 8(1), 23–36. <https://doi.org/https://doi.org/10.1023/A:1023922207476>
- Mogren, A., Gericke, N., & Scherp, H. Å. (2019). Whole school approaches to education for sustainable development: a model that links to school improvement. *Environmental Education Research*, 25(4), 508–531. <https://doi.org/10.1080/13504622.2018.1455074>
- Monarca, H., & Fernández-González, N. (2016). El papel de la inspección educativa en los procesos de cambio. *Cadernos de Pesquisa*, 46(159), 212–233. <https://doi.org/10.1590/198053143374>

- Morin, E. (2002). *Os Sete Saberes para a Educação do Futuro*. (Tradução Ana Paula Viveiros). Edições Piaget.
- Morin, E. (2003). *E Dgar M Orin a Cabeça Bem-Feita* (8ª). Bertrand Brasil.
- Morin, E. (2009). *The seven necessary reforms of the 21st Century*. 1–7.
- Morin, E. (2010). *Eloge de la métamorphose*. Le Monde. https://www.lemonde.fr/idees/article/2010/01/09/eloge-de-la-metamorphose-par-edgar-morin_1289625_3232.html
- Morin, E. (2021). *Elogio da metamorfose*. Portal EcoDebate. <https://www.ecodebate.com.br/2010/01/12/elocio-da-metamorfose-artigo-de-edgar-morin/>
- Morrison, K. (2005). Structuration theory, habitus and complexity theory: Elective affinities or old wine in new bottles? *British Journal of Sociology of Education*, 26(3), pp. 311–326. doi: 10.1080/01425690500128809.
- Mufic, J. (2022). Discursive Effects of “Quality” Talk During a Quality Audit in Swedish Municipal Adult Education. *Scandinavian Journal of Educational Research*. doi: 10.1080/00313831.2022.2042844.
- Müller, J. W. (2021). Education and inspirational intuition - Drivers of innovation. *Heliyon*, 7(9), e07923. <https://doi.org/10.1016/j.heliyon.2021.e07923>
- 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>
- Nakamura, J., & Csikszentmihalyi, M. (2002). The Concept of Flow. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 89–105). Oxford University Press.
- Navarro-Corona, C. (2016). La transformación colectiva como única alternativa para el cambio sostenible en la escuela. *Revista Electronica de Investigacion Educativa*, Vol. 18, No. 2, pp.1–5.
- Nelson, M. J., Voithofer, R., & Cheng, S. L. (2019). Mediating factors that influence the technology integration practices of teacher educators. *Computers and Education*, 128(October 2018), 330–344. <https://doi.org/10.1016/j.compedu.2018.09.023>
- 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>
- Neto, R., & Cabral, I. (2021). *Entre as Palavras e a Ação Concreta. Crónica de uma Gestão Democrática da Organização Escolar*. 1–20.
- Nicholls, A., Simon, J., & Gabriel, M. (2015). Introduction: Dimensions of Social Innovation. In A. Nicholls, J. Simon, & M. Gabriel (Eds.), *New Frontiers in Social Innovation Research* (pp. 1–27). Palgrave Macmillan. <https://doi.org/Palgrave Macmillan>
- Nóvoa, A. (1995). *O IIE e a investigação educacional*. http://catalogo.ul.pt/F/?func=item-global&doc_library=ULB01&type=03&doc_number=00018233%0Ahttp://hdl.handle.net/10451/691
- Nóvoa, A. (2009). Educação 2021: Para uma história do futuro António Nóvoa. *Revista Iberoamericana De Educación*, 1–18. <https://repositorio.ul.pt/handle/10451/670>
- Nóvoa, A. (2019). Os Professores e a sua Formação num Tempo de Metamorfose da Escola. *Educação & Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>
- Nóvoa, A. (2019). Teachers and their education at a time of school metamorphosis. *Educacao and Realidade*, 44(3), 1–15. <https://doi.org/10.1590/2175-623684910>
- Nunes, I. S. (1989). Uma proposta para viabilizar a verdadeira inovação educativa. *Arquipélago. Ciências Sociais*, 3, 45–55. <http://hdl.handle.net/10400.3/5634>
- O'Brien, S., McNamara, G., O'Hara, J., Brown, M., & Skerritt, C. (2022). Teacher leadership in school self-evaluation: an approach to professional development. *Irish Educational Studies*, 1–16. <https://doi.org/10.1080/03323315.2022.2135568>
- O'Shea, C. (2021). Distributed leadership and innovative teaching practices. *International Journal*

- of *Educational Research Open*, 2(November), 100088.
<https://doi.org/10.1016/j.ijedro.2021.100088>
- OECD. (2010). *The OECD Innovation Strategy: Getting a Head Start on Tomorrow*.
<https://doi.org/10.1787/9789264083479-en>
- OECD (2011). *In Focus, PISA in focus*, no. 9. *School autonomy and accountability: Are they related to student performance?* Paris. doi: <https://doi.org/10.1787/5k9h362kcx9w-en>.
- OECD. (2015). *The Innovation Imperative Contributing to Productivity, Growth and Well-Being*.
<https://doi.org/10.1787/9789264239814-en>
- OECD. (2016). *Innovating Education and Education for Innovation: The Power of Technologies and Skills*. <http://dx.doi.org/10.1787/9789264265097-en>
- OECD. (2017). *Schools at the Crossroads of Innovation in Cities and Regions*.
- OECD (2018). *Education at a glance 2018: OECD indicators*. doi: <https://doi.org/10.1787/eag-2018-en>.
- OECD. (2018). *The Future of Education and Skills: Education 2030. OECD Education Working Papers*, 23. [http://www.oecd.org/education/2030/E2030 Position Paper \(05.04.2018\).pdf](http://www.oecd.org/education/2030/E2030%20Position%20Paper%20(05.04.2018).pdf)
- OECD. (2019). *OECD Future of Education and Skills 2030 - OECD Learning Compass: a Series of Concept Notes*. http://www.oecd.org/education/2030-project/contact/OECD_Learning_Compass_2030_Concept_Note_Series.pdf
- OECD. (2020). Back to the Future of Education - FOUR OECD SCENARIOS FOR SCHOOLING. In *Pmla* (Vol. 133, Issue 3).
- OECD (2020). *Developing a school evaluation framework to drive school improvement*. OECD Education Policy Perspectives, No.26(26).
- OCDE (2021) *Education Policy Outlook 2021: Shaping Responsive and Resilient Education in a Changing World*, Éditions OCDE, Paris, <https://doi.org/10.1787/75e40a16-en>.
- OECD. (2022). *OECD work on education & skills. Directorate for Education and Skills Education and Skills*. 22.
- OECD. (2023). *Equity and Inclusion in Education: Finding Strength through Diversity*.
<https://doi.org/10.1787/e9072e21-en>
- 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>
- Oolbekkink-Marchand, H. W., Hadar, L. L., Smith, K., Helleve, I., & Ulvik, M. (2017). Teachers' perceived professional space and their agency. *Teaching and Teacher Education*, 62, 37–46. <https://doi.org/10.1016/j.tate.2016.11.005>
- Orton, J. D., & Weick, K. E. (1990). Loosely Coupled Systems: A Reconceptualization. *Academy of Management Review*, 15(2), 203–223.
<https://doi.org/10.5465/amr.1990.4308154>
- Pacheco, J. A. (2019). *Inovar para Mudar a Escola* (1ª). Porto Editora.
- Pacheco, J. A., & Sousa, J. R. (2018). Políticas curriculares no período pós-LBSE (1996-2017). Ciclos de mudança na educação pré-escolar e nos ensinos básico e secundário. In J. A. Pacheco, M. C. Roldão, & M. T. Estrela (Eds.), *Estudos de currículo* (1ª, pp. 129–176). Porto Editora.
- Paltrinieri, L. (2017). Managing Subjectivity: Neoliberalism, Human Capital and Empowerment. *Fudan Journal of the Humanities and Social Sciences*, 10(4), 459–471.
<https://doi.org/10.1007/s40647-017-0200-0>
- Pan, H. L. W., & Chen, W. Y. (2021). How principal leadership facilitates teacher learning through teacher leadership: Determining the critical path. *Educational Management Administration and Leadership*, 49(3), 454–470. <https://doi.org/10.1177/1741143220913553>
- 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*. 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* (6ª). Edições Silabo.
- Pina, R., Cabral, I., & Alves, J. M. (2015). Principal's Leadership on Students' outcomes. *Procedia - Social and Behavioral Sciences*, 197(February), 949–954. <https://doi.org/10.1016/j.sbspro.2015.07.279>
- Polluveer, K. (2023). *Política de inovação - Fichas técnicas sobre a União Europeia*. www.europarl.europa.eu/factsheets/pt
- Portz, J. (2021). "Next-Generation" Accountability? Evidence From Three School Districts. *Urban Education*, 56(8), 1297–1327. <https://doi.org/10.1177/0042085917741727>
- Quintana, C. F., Lourenço, P., & Orengo, V. (2019). *Trust, psychological safety and viability in work groups: team psychological safety as a mediator between team trust and team viability* [Universidade de Coimbra]. <https://doi.org/10.13140/RG.2.2.23297.40801>
- Rechsteiner, B., Compagnoni, M., Wullschleger, A., Schäfer, L. M., Rickenbacher, A., & Maag Merki, K. (2022). Teachers involved in school improvement: Analyzing mediating mechanisms of teachers' boundary-crossing activities between leadership perception and teacher involvement. *Teaching and Teacher Education*, 116, 103774. <https://doi.org/10.1016/j.tate.2022.103774>
- Redman, P., & Maples, W. (2017). *Good Essay Writing: A Social Sciences Guide*. SAGE Publications, Lda.
- Rogers, E. M. (2003). *Everett_M* (5th ed.). Free Press.
- Roness, D. (2011). Still motivated? The motivation for teaching during the second year in the profession. *Teaching and Teacher Education*, Vol. 27, No. 3, pp.628–638, DOI: 10.1016/j.tate.2010.10.016.
- 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>
- Santos Guerra, M. (2002). Como um espelho – Avaliação qualitativa das escolas. In J. Azevedo (Ed.), *AVALIAÇÃO DAS ESCOLAS – Consensos e Divergências* (pp. 11–31). Asa.
- Santos Guerra, M. (2017, April 18). Innovar o morir. *El Diario de La Educación*. <https://eldiariodelaeducacion.com/2017/04/18/innovar-o-morir/>
- Sattayaraksa, T. & Boon-Itt, S. (2012). Leadership as a determinant of product innovation: a systematic review of the literature. *IEEE International Conference on Industrial Engineering and Engineering Management*, pp.677–682, DOI: 10.1109/IEEM.2012.6837825.
- Schillemans, T., & Bovens, M. (2011). The challenge of multiple accountability: does redundancy lead to overload? In M. J. Dubnick & H. G. Frederickson (Eds.), *Accountable Governance. Problems and Promises* (pp. 3–21). Routledge.
- Schleicher, A. (2018). What makes high-performing school systems different. In *World Class: How to Build a 21st-Century School System* (pp. 61–137). OECD Publishing. <https://doi.org/10.1787/9789264300002-3-en>
- Schumpeter, J. (1997). *Os Economistas* (M. . Trad. Possas (ed.)). Editora Nova Cultural.
- 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>
- Seabra, F., Henriques, S., Mouraz, A., Abelha, M., & Tavares, A. (2022). Schools' Strengths and Areas for Improvement: Perspectives From External Evaluation Reports. *Frontiers in Education*, 7(April). <https://doi.org/10.3389/educ.2022.868481>
- 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>

- Serra, L., Alves, J., & Soares, D. (2023). Mapping innovation in educational contexts: drivers and barriers. *International Journal of Innovation and Learning*, in press. <https://doi.org/10.1504/IJIL.2024.10054841>
- Shirley, D., Hargreaves, A., & Washington-Wangia, S. (2020). The sustainability and unsustainability of teachers' and leaders' well-being. *Teaching and Teacher Education*, 92. <https://doi.org/10.1016/j.tate.2019.102987>
- Simeonova, R., Parvanova, Y., Brown, M., & McNamara, G. (2020). A Continuum of Approaches to School Inspections: Cases from Europe. *Pedagogy*, 92(4), 487–507. <https://www.ceeol.com/search/article-detail?id=857814>
- Smith, R. (2018). καινοτομία: On the Greek Origins of Innovation. *Research Technology Management*, 61(6), 48–49. <https://doi.org/10.1080/08956308.2018.1516931>
- Smith, J. (2020). Community and contestation: a Gramscian case study of teacher resistance. *Journal of Curriculum Studies*, 52(1), 27–44. <https://doi.org/10.1080/00220272.2019.1587003>
- 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>
- Song, J. H., Kim, W., Chai, D. S., & Bae, S. H. (2014). The impact of an innovative school climate on teachers' knowledge creation activities in Korean schools: The mediating role of teachers' knowledge sharing and work engagement. *KEDI Journal of Educational Policy*, 11(2), 179–203. <https://doi.org/10.22804/kjep.2014.11.2.003>
- Song, K. O., & Choi, J. (2017). Structural analysis of factors that influence professional learning communities in Korean elementary schools. *International Electronic Journal of Elementary Education*, 10(1), 1–9. <https://doi.org/10.26822/iejee.2017131882>
- Sotiriou, S., Riviou, K., Cherouvis, S., Chelioti, E., & Bogner, F. X. (2016). Introducing Large-Scale Innovation in Schools. *Journal of Science Education and Technology*, 25(4), 541–549. <https://doi.org/10.1007/s10956-016-9611-y>
- Spector, P. E., Van Katwyk, P. T., Brannick, M. T., & Chen, P. Y. (1997). When two factors don't reflect two constructs: How item characteristics can produce artifactual factors. *Journal of Management*, 23(5), 659–677. <https://doi.org/10.1177/014920639702300503>
- Stefenberga, D. & Sloka, B. (2020). Regional development: the importance of the involvement of inhabitants. *Regional Formation and Development Studies*, Vol. 1, pp.112–121, DOI: <http://dx.doi.org/10.15181/rfds.v30i1.2039>.
- Straub, R., & Vilsmaier, U. (2020). Pathways to educational change revisited—controversies and advances in the German teacher education system. *Teaching and Teacher Education*, 96, 103140. <https://doi.org/10.1016/j.tate.2020.103140>
- Sugiyono. (2008). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. CV. Dr. P. (2008). Sugiyono, Metode Penelitian Kuantitatif Kualitatif dan R&D. CV. Alfabeta.
- Sujudi, N., Komariah, A., & Indonesia, U. P. (2020). Leadership Characteristics Era Disruption : *International Conference on Research of Educational Administration and Management (ICREAM)*, 400(Icream 2019), 276–279. <https://www.atlantispress.com/article/125933799.pdf>
- Taimalu, M., & Luik, P. (2019). The impact of beliefs and knowledge on the integration of technology among teacher educators: A path analysis. *Teaching and Teacher Education*, 79, 101–110. <https://doi.org/10.1016/j.tate.2018.12.012>
- TALIS. (2018). *Teaching and Learning International Survey: Insights and Interpretations*. http://www.oecd.org/education/talis/TALIS2018_insights_and_interpretations.pdf
- Tan, M. Y., & Hung, D. W. L. (2020). Models of innovation scaling in Singapore schools: process objects as multi-level role clusters and outcomes—a multiple case study approach. *Asia Pacific Education Review*, 21(4), 553–571. <https://doi.org/10.1007/s12564-020-09642-0>
- Tapsir, R., Pa, N. A. N., & Zamri, S. N. A. B. S. (2018). Reliability and Validity of the Instrument Measuring Values in Mathematics Classrooms. *Malaysian Online Journal of Educational Sciences*, 6(2), 37–47.

- 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. <https://www.jstor.org/stable/26973760>
- 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>
- Tintore, M., Cabral, I., Alves, J. M., & Cunha, R. S. (2022). *Management model, leadership and autonomy in Portuguese and Spanish public schools: A comparative analysis*. *Cogent Educations*, 9(1), 1-21. <https://doi.org/10.1080/2331186X.2022.2105553>
- 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, L. L. (2005). Cultura organizacional no contexto escolar: o regresso à escola como desafio na reconstrução de um modelo teórico. *Ensaio: Avaliação e Políticas Públicas Em Educação*, 13(49), 435–451. <https://doi.org/10.1590/s0104-40362005000400003>
- Torres, L. L., & Palhares, J. A. (2008). Cultura, formação e aprendizagens em contextos organizacionais. *Revista Crítica de Ciências Sociais*, 83, 99–120. <https://doi.org/10.4000/rccs.4579>
- 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.
- 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.
- Torres, L., & Alves, M. (2016). Nota introdutória ao núcleo temático - A Educação na Europa do Sul: Constrangimentos e Desafios em Tempos Incertos. *Revista Portuguesa de Educação*, 29(2), 255. <https://doi.org/10.21814/rpe.10275>
- Tyack, D., & Tobin, W. (1994). The “Grammar” of Schooling: Why Has it Been so Hard to Change? *American Educational Research Journal*, 31(3), 453–479. <https://doi.org/10.3102/00028312031003453>
- Tyunnikov, Y. S. (2017). Classification of innovation objectives set for continuing professional teacher development. *European Journal of Contemporary Education*, 6(1), 167–181. <https://doi.org/10.13187/ejced.2017.1.167>
- UNESCO. (2016). *Educação 2030: Declaração de Incheon e Marco de Ação para a implementação do Objetivo de Desenvolvimento Sustentável 4: Assegurar a educação inclusiva e equitativa de aprendizagem ao longo da vida para todos*. https://unesdoc.unesco.org/ark:/48223/pf0000245656_por
- UNESCO. (2017). *Accountability in education, meeting our commitment*. Global Education Monitoring Report. In UNESCO.
- UNESCO. (2019). *Framework for the Implementation of Education for Sustainable Development (Esd) Beyond 2019*. September. https://www.iau-hesd.net/sites/default/files/documents/unesco_esd2030_framework.pdf
- UNESCO. (2020). *Innovation technical and vocational education and training*. https://unevoc.unesco.org/pub/innovating_tvte_framework.pdf
- UNESCO. (2021). *Reimagining our futures together: a new social contract for education*. International Commission on the Futures of Education - UNESCO. <https://doi.org/978-92-3-100478-0>
- United Nations, U. (2023). *Report on the 2022 Transforming Education Summit* (Issue January). https://www.un.org/sites/un2.un.org/files/report_on_the_2022_transforming_education_summit.pdf
- Vaillant, D. (2019). Directivos y comunidades de aprendizaje docente: un campo en construcción

- (Directors and teacher learning communities: a field under construction). *Revista Eletrônica de Educação*, 13(1), 87. <https://doi.org/10.14244/198271993073>
- Vandeyar, S. (2017). The teacher as an agent of meaningful educational change. *Kuram ve Uygulamada Egitim Bilimleri*, 17(2), 373–393. <https://doi.org/10.12738/estp.2017.2.0314>
- Verger, A., Fontdevila, C. & Parcerisa, L. (2019). Constructing School Autonomy with Accountability as a Global Policy Model: A Focus on OECD's Governance Mechanisms. *Global Histories of Education*, pp. 219–243. doi: 10.1007/978-3-030-33799-5_11.
- Vermeulen, M., Kreijns, K., & Evers, A. T. (2020). Transformational leadership, leader–member exchange and school learning climate: Impact on teachers' innovative behaviour in the Netherlands. *Educational Management Administration and Leadership*, 48(5), 1–20. <https://doi.org/10.1177/1741143220932582>
- Villamor, M. R., Pecson, G., Arcilla, L., Bacus, J., Abando, A., Bigcas, B., & Quinco-cadosales, M. N. (2022). A Meta-Synthesis on School Leadership Succession: Groundwork For Effective Transition. 8(5), 61–72. <https://doi.org/10.5281/zenodo.6544657>
- von Schomberg, L., & Blok, V. (2021a). Technology in the Age of Innovation: Responsible Innovation as a New Subdomain Within the Philosophy of Technology. *Philosophy and Technology*, 34(2), 309–323. <https://doi.org/10.1007/s13347-019-00386-3>
- von Schomberg, L., & Blok, V. (2021b). The turbulent age of innovation. *Synthese*, 198(s19), 4667–4683. <https://doi.org/10.1007/s11229-018-01950-8>
- Walder, A. M. (2014). The concept of pedagogical innovation in higher education. *Education Journal*, 3(3), 195–202. <https://doi.org/10.11648/j.edu.20140303.22>
- Walder, A. M. (2017). Pedagogical Innovation in Canadian higher education: Professors' perspectives on its effects on teaching and learning. *Studies in Educational Evaluation*, 54, 71–82. <https://doi.org/10.1016/j.stueduc.2016.11.001>
- Walker, A., & Ko, J. (2011). Principal Leadership in an era of Accountability: A Perspective from the Hong Kong context. *School Leadership and Management*, 31(4), 369–392. <https://doi.org/10.1080/13632434.2011.606269>
- Walters, S., & Watters, K. (2017). Towards a global common good ? In *Adult Education Quarterly* (Vol. 67, Issue 3). <http://www.unesco.org/fileadmin/MULTIMEDIA/FIELD/Cairo/images/RethinkingEducation.pdf>
- Wang, S. (2019). School heads' transformational leadership and students' modernity: the multiple mediating effects of school climates. *Asia Pacific Education Review*, 20(3), 329–341. <https://doi.org/10.1007/s12564-019-09575-3>
- Watkins, M. W. (2018). Exploratory Factor Analysis: A Guide to Best Practice. *Journal of Black Psychology*, 44(3), 219–246. <https://doi.org/10.1177/0095798418771807>
- Weick, K. E. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 19. <https://doi.org/https://doi.org/10.2307/2391875>
- Wisetsat, C. & Nuangchalem, P. (2019). Enhancing innovative thinking of Thai pre-service teachers through multi-educational innovations. *Journal for the Education of Gifted Young Scientists*, Vol. 7, No. 3, pp.409–419, DOI: 10.17478/jegys.570748.
- 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>
- Wrigley, T., & Wormwell, L. (2016). Infantile Accountability: When Big Data Meet Small Children. *Improving Schools*, 19(2), 105–118. <https://doi.org/https://doi.org/10.1177/1365480216651520>
- Xhomara, N. (2018). Influence of school leadership style on effective teaching and teacher-student interaction. *Pedagogika*, 132(4), 42–62. <https://doi.org/10.15823/p.2018.132.3>
- Xiong, W. (2021). Identities and education: comparative perspectives in times of crisis. *Educational Review*. doi: 10.1080/00131911.2021.1957252.
- 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>

- Yim, J., Sullivan, D. W., & Baumann, H. M. (2020). Performance Management and Innovation: a Human Capital Perspective. *Academy of Management Annual Meeting Proceedings, 2000*. <https://doi.org/10.5465/AMBPP.2020.45>
- Young, M. C. M. (2013). *Standards for Educational Leaders: An Analysis Growth Model Comparison Study: A Summary of Results*. 160.
- Yuan, L., Nguyen, T. T. N., & Vu, M. C. (2018). Transformational leadership and its impact on performance: The role of psychological capital and collectivism. *ACM International Conference Proceeding Series*, 18–27. <https://doi.org/10.1145/3180374.3181325>
- Zamir, S. (2019). The polymeric model of school evaluation in the era of accountability. *Quality Assurance in Education*, 27(4), 401–411. <https://doi.org/10.1108/QAE-06-2018-0070>
- Zanella, L. C. H. (2017). Metodologia de Pesquisa 2013 2ª edição reimpressa. *Departamento de Ciências Da Administração/ UFSC*. http://arquivos.eadadm.ufsc.br/EaDADM/UAB_2014_2/Modulo_1/Metodologia/material_didatico/Livro texto Metodologia da Pesquisa.pdf
- Zhao, J., & de Pablos, P. O. (2009). School innovative management model and strategies: The perspective of organisational learning. *Information Systems Management*, 26(3), 241–251. <https://doi.org/10.1080/10580530903017781>
- 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>
- Zhu, J., Yao, J., & Zhang, L. (2019). Linking empowering leadership to innovative behavior in professional learning communities: the role of psychological empowerment and team psychological safety. *Asia Pacific Education Review*, 20(4), 657–671. <https://doi.org/10.1007/s12564-019-09584-2>
- Zijlmans, E. A. O., Tijnstra, J., van der Ark, L. A., & Sijtsma, K. (2019). Item-score reliability as a selection tool in test construction. *Frontiers in Psychology*, 9(JAN), 1–12. <https://doi.org/10.3389/fpsyg.2018.02298>
- Zygmunt, C., & Smith, M. R. (2014). Robust factor analysis in the presence of normality violations, missing data, and outliers: Empirical questions and possible solutions. *The Quantitative Methods for Psychology*, 10(1), 40–55. <https://doi.org/10.20982/tqmp.10.1.p040>

*Para ser grande, sê inteiro: nada
Teu exagera ou exclui.
Sê todo em cada coisa. Põe quanto és
No mínimo que fazes.
Assim em cada lago a lua toda
Brilha, porque alta vive.*

Ricardo Reis

FIM