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Entrepreneurship Education as Contested Curriculum: Teacher Mediation in Entrepreneurial Upper-Secondary Pathways in Brazilian Public Schools

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Abstract

This article addresses a central curriculum problem in contemporary upper-secondary reform: how entrepreneurship education becomes meaningful, contested and pedagogically enactable in public-school contexts marked by unequal institutional conditions. Focusing on Brazilian public upper-secondary reform, the study analyses how entrepreneurship education is curricularised and negotiated between policy discourse, teacher mediation and school conditions. The article challenges neutral and instrumental readings of entrepreneurship education by conceptualising it as a disputed curriculum object whose meaning depends on the conditions under which it is interpreted, mediated and assessed. The research combines documentary analysis of national and state curriculum materials with qualitative responses from 14 Rio de Janeiro public-school teachers directly involved in entrepreneurship-oriented upper-secondary pathways, 71.5% of whom had more than a decade of teaching experience. Drawing on Alain Fayolle's design-oriented approach to entrepreneurship education and Paulo Freire's critical pedagogy, the article develops the concept of the critical enactability gap: the distance between curriculum discourse that promises innovation, student agency and social relevance, and the pedagogical, institutional and assessment conditions required to enact these promises critically. The findings identify four tensions: partial curricular guidance without robust enactment mechanisms; territorial relevance without systematic contextualisation; active learning without assessment repertoires for complex competencies; and the coexistence of public-value and market-oriented meanings of entrepreneurship. The article contributes to curriculum studies by showing that entrepreneurship education becomes educationally meaningful only when pedagogical design, critical purpose, teacher agency and assessment conditions are institutionally aligned.

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Keywords: curriculum reform; entrepreneurship education; teacher agency; critical pedagogy; public schools; upper-secondary education

1. Introduction

Contemporary curriculum reforms increasingly rely on a vocabulary of innovation, flexibility, student agency and relevance to social life. Yet these terms do not become educational change by being inscribed in official documents. They are interpreted, selected, translated and sometimes resisted by teachers and schools working under specific institutional resources, assessment regimes, professional cultures, local histories and unequal conditions of work. The central curriculum question, therefore, is not only what reform texts prescribe, but how their meanings become pedagogically enactable in concrete school settings (Ball et al., 2012; Priestley et al., 2015).

Entrepreneurship education makes this curriculum problem especially visible because it carries competing educational, economic and civic meanings. In policy language, it can appear as an attractive response to youth unemployment, curricular disengagement, innovation agendas and demands for more active forms of learning. In school practice, however, it may assume divergent meanings. It can be reduced to business-plan training, employability discourse and individual adaptation to precarious labour markets, but it can also become a critical pedagogical practice through which students investigate local problems, produce collective solutions and reinterpret their relationship with territory, work, citizenship and public life. These possibilities are not inherent in the term entrepreneurship; they depend on curriculum mediation, pedagogical design and the social purposes attributed to learning (Fayolle, 2013; Fayolle & Gailly, 2008; Jones & Matlay, 2011; Neck & Greene, 2011).

In Brazil, the upper-secondary reform and the National Common Curricular Base created openings for flexible pathways, life projects, active methodologies and stronger connections between learning and students' futures. These curricular directions are consistent with global trends toward competency-based reforms, but they also raise questions about how flexibility, student agency, and innovation are interpreted in public systems marked by unequal resources and uneven institutional capacities. In the state of Rio de Janeiro, entrepreneurship education was incorporated into curricular components and pedagogical initiatives connected to public high schools, including the Project of Intervention and Entrepreneurship and teacher education materials developed through partnerships involving public institutions. These initiatives offer a strategic site for analysing how entrepreneurship education is curricularised in a public system marked by strong social and territorial inequalities (Brazil, Ministry of Education, 2018; SEEDUC-RJ & Universidade Federal Fluminense, 2023; Ball et al., 2012; Priestley et al., 2015).

The article addresses the following research question: how is entrepreneurship education interpreted as a curriculum object by reform documents and public school teachers, and what tensions emerge when it is analysed through a Fayolle-Freire lens? The argument is that entrepreneurship education becomes curriculum in a strong educational sense only when pedagogical design, critical purpose and teacher agency are institutionally aligned. When this alignment is absent, reform language may celebrate student agency and innovation while leaving teachers to improvise the curriculum conditions required for critical enactment. This argument brings

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together Fayolle's concern with the pedagogical design of entrepreneurship education and Freire's insistence that education must be dialogical, critical and ethically oriented toward human emancipation (Fayolle, 2013; Fayolle & Gailly, 2008; Freire, 1992, 1996). The empirical component focuses on teachers working directly with entrepreneurship-oriented upper-secondary pathways, which makes their interpretations particularly relevant for understanding how this curriculum object is enacted from within the reform rather than judged from outside it.

The contribution of the study is threefold. Conceptually, it repositions entrepreneurship education as a contested curriculum object rather than a neutral instructional innovation. Empirically, it shows how teachers working inside entrepreneurship-oriented pathways interpret and dispute the purposes of this curriculum. Theoretically, it develops the notion of a critical enactability gap to explain why curricular innovation may remain symbolic when the conditions for critical pedagogical mediation are weak, uneven or poorly assessed (Ball et al., 2012; Priestley et al., 2015; Spillane et al., 2002).

The next section develops the theoretical framework by connecting curriculum enactment, entrepreneurship education and the Fayolle-Freire lens. The methodology then explains the qualitative design, corpus and analytical procedures. The findings present four curriculum tensions identified across documents and teacher responses, and the discussion reframes these tensions as problems of curriculum governance, teacher professional development and assessment.

2. Theoretical Framework

2.1 Curriculum reform, policy enactment and entrepreneurship education

Curriculum reform cannot be understood as the direct transfer of official documents into classroom practice. Curriculum is not only a prescribed text, but a social, institutional and pedagogical construction through which knowledge, values, identities and purposes are selected, interpreted and made teachable. This distinction is central to curriculum studies because it shifts the analytical focus from what policy documents announce to how curriculum is actually produced through professional judgement, institutional mediation and situated pedagogical work. Reform texts may introduce new competencies, pedagogical vocabularies and expected forms of student agency, but these only become curriculum when teachers and schools translate them into concrete learning experiences, assessment practices and organisational routines (Ball et al., 2012; Bernstein, 2000; Goodson, 1997; Pinar, 2012; Young, 2013).

The literature on policy enactment is particularly useful for analysing this process. Schools do not simply implement policies; they interpret, negotiate and recontextualise them in relation to institutional histories, available resources, leadership arrangements, professional cultures and students' lived realities. Enactment therefore involves both constraint and agency. Teachers make sense of reform language, connect it to existing practices, decide what counts as meaningful learning and determine how far official expectations can be sustained under local conditions. In unequal public systems, this process is especially consequential because the same policy vocabulary may generate very different curricular experiences depending on infrastructure, planning time, teacher preparation, assessment regimes and access to pedagogical support (Ball et al., 2012; Coburn, 2004; Priestley et al., 2015; Spillane et al., 2002).

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Teachers, in this view, are not policy recipients but curriculum-makers. They actively participate in constructing the meaning, sequence, emphasis and evidence of learning. Their agency is not merely individual will or professional creativity; it is ecological, emerging from the interaction between personal histories, available resources, institutional conditions and future-oriented educational purposes. This matters for analysing entrepreneurship education because the curriculum does not acquire meaning through official terminology alone. It becomes pedagogically meaningful only when teachers decide how entrepreneurship will be framed, what problems students will investigate, which forms of knowledge will be mobilised and how learning will be recognised as legitimate (Priestley et al., 2015; Biesta, 2015; Deng, 2021).

Curriculum-making is also inseparable from assessment. Reform discourse often celebrates agency, creativity, collaboration and problem-solving, but these aims remain fragile when schools lack credible ways of documenting and valuing such learning. Assessment is not a technical appendix to curriculum; it is one of the mechanisms through which certain forms of knowledge and agency become visible, durable and institutionally recognised. If complex competencies are named in policy but remain weakly assessed in practice, reform risks producing symbolic innovation rather than substantive curricular transformation (Biesta, 2015; Deng, 2021; Young, 2013).

On this basis, entrepreneurship education is analysed here not as a stable instructional field, but as a curriculum object whose meaning is produced through enactment. The Brazilian upper-secondary reform and the National Common Curricular Base created openings for flexible pathways, life projects, active methodologies and connections between school knowledge and students' futures. In Rio de Janeiro, these openings were translated into entrepreneurship-oriented curricular initiatives, including the *Projeto de Intervenção e Empreendedorismo*. The analytical issue, therefore, is not only whether entrepreneurship education appears in curriculum documents, but how it becomes teachable, assessable and ethically defensible in public-school contexts marked by unequal institutional conditions (Brazil, Ministry of Education, 2018; SEEDUC-RJ & Universidade Federal Fluminense, 2023; Ball et al., 2012; Priestley et al., 2015).

2.2 Entrepreneurship education as a normatively ambiguous curriculum object

The curricular meaning of entrepreneurship education is persistently ambiguous. International literature has increasingly moved beyond the narrow view that entrepreneurship education is only preparation for business creation. Contemporary approaches associate it with entrepreneurial learning, creativity, uncertainty, initiative, opportunity recognition, social value creation and learner-centred pedagogies. Fayolle and Gailly's contribution is decisive in this regard because they argue that entrepreneurship education requires explicit attention to aims, audiences, contents, methods and learning processes. Entrepreneurship education, from this perspective, is not reducible to teaching students how to start a business; it is a pedagogical field whose meaning depends on the design choices through which learning is organised (Fayolle, 2013; Fayolle & Gailly, 2008; Fayolle & Gailly, 2015; Jones & Matlay, 2011; Neck & Greene, 2011; Rae, 2006).

However, this broader understanding does not eliminate the political ambiguity of entrepreneurship education, especially when it enters compulsory public schooling. In public upper-secondary education, entrepreneurship may be framed as a resource for student autonomy, social participation and situated problem-solving, but it may

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also be absorbed by employability discourse, individual self-responsibilisation and adaptation to precarious labour markets. The same curricular vocabulary of initiative, flexibility, life project and student agency may therefore support either democratic formation or market-oriented adjustment. The curriculum question is not whether entrepreneurship education is innovative, but what kind of subject, agency and social relationship it helps to produce (Komulainen et al., 2011; Fayolle, 2013; Freire, 1996).

In unequal public systems, this ambiguity is not merely conceptual; it becomes pedagogical and political. When students face social vulnerability, territorial inequality and restricted opportunities, entrepreneurship education may unintentionally shift responsibility for structural insecurity onto young people themselves. In this case, the curriculum may teach students to manage scarcity rather than question the conditions that produce it. Conversely, when mediated critically, entrepreneurship education may enable students to investigate local problems, mobilise interdisciplinary knowledge, recognise cultural and territorial resources, deliberate collectively and create public value. These possibilities are not inherent in the term entrepreneurship; they depend on curriculum mediation, teacher judgement, institutional support and assessment practices capable of recognising critical and collective learning (Freire, 1992, 1996; Ball et al., 2012; Priestley et al., 2015).

For curriculum studies, entrepreneurship education is therefore best understood as a contested curriculum object. It is contested because its meaning is not fixed by policy documents, entrepreneurship literature or school projects alone. It is produced through disputes over purpose, knowledge, pedagogy, assessment and public value. It is also a curriculum object because these disputes become concrete in decisions about what is taught, how students participate, which problems are legitimised, how teachers mediate learning and what evidence counts as educationally meaningful. This positioning allows the analysis to move beyond a simple opposition between neoliberal entrepreneurship and emancipatory pedagogy. The central issue is how entrepreneurship education is curricularised and under what conditions it can become critically enactable (Pinar, 2012; Goodson, 1997; Biesta, 2015; Young, 2013).

2.3 A Fayolle-Freire lens for analysing critical enactability

The Fayolle-Freire lens developed here works less as a theoretical synthesis than as a productive tension. Fayolle contributes a design grammar for entrepreneurship education, making visible the alignment between aims, learners, pedagogical methods and evidence of learning. His work helps identify whether entrepreneurship education is structured as technical training, experiential learning, reflexive formation or social value creation. This is essential for curriculum analysis because it prevents entrepreneurship education from remaining a vague discourse of innovation and requires attention to the architecture through which learning is actually organised (Fayolle & Gailly, 2008; Fayolle, 2013; Rae, 2006).

Freire interrupts any purely technical use of this design grammar by asking whose agency is being developed, toward what social purposes and under which conditions of inequality. For Freire, education is never neutral. It either contributes to adaptation to existing structures or supports learners in reading the world critically and acting upon it through dialogue, conscientisation and praxis. A Freirean reading of entrepreneurship education therefore questions whether students are being trained to adapt individually to scarcity or invited to interpret contradictions, deliberate collectively and participate in transforming their realities. Freire provides the

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ethical-political criterion that Fayolle's design-oriented approach alone does not fully supply (Freire, 1992, 1996, 2000).

The analytical value of bringing Fayolle and Freire together lies precisely in what each perspective makes visible and what each leaves partially unresolved. Fayolle clarifies the pedagogical design of entrepreneurship education, but his framework may not fully expose how entrepreneurial discourse can individualise responsibility in unequal societies. Freire clarifies the emancipatory direction of education, but his work does not specify the particular curricular architecture of entrepreneurship learning, including projects, competencies, teacher mediation and assessment. Together, these perspectives show that entrepreneurship education is neither emancipatory nor instrumental by definition. It becomes one or the other through the alignment, or misalignment, between pedagogical design, critical purpose, teacher agency and institutional conditions (Fayolle & Gailly, 2008; Freire, 1996; Neck & Greene, 2011; Priestley et al., 2015).

The central concept developed from this lens is the critical enactability gap. We define the critical enactability gap as the distance between curriculum reforms that prescribe student agency, innovation and social relevance, and the pedagogical, institutional and assessment conditions that make such agency critically teachable, practicable and recognisable as curriculum. Unlike general notions of implementation gap, this concept foregrounds the specifically curricular and normative nature of the problem. The issue is not only whether teachers implement a reform, but whether the reform constructs the conditions through which critical agency can be designed, mediated, assessed and sustained in public schools (Ball et al., 2012; Coburn, 2004; Spillane et al., 2002; Biesta, 2015).

The concept also extends teacher agency literature by showing that agency is not only a matter of professional capacity or local interpretation. In the case of entrepreneurship education, teacher agency involves the governance of curriculum purpose. Teachers must decide whether entrepreneurship will be enacted as market adaptation, life-project pedagogy, territorial inquiry, cultural expression, civic participation or social transformation. These decisions are pedagogical, but they are also ethical and political. They require more than teacher commitment; they require curriculum materials, professional formation, planning time, institutional support and assessment tools aligned with complex forms of learning (Priestley et al., 2015; Freire, 1996; Fayolle, 2013).

This framework guides the empirical analysis by examining four interconnected dimensions: curricular purpose, pedagogical design, territorial contextualisation and assessment/enactability. The first dimension asks what purpose entrepreneurship education serves in public upper-secondary schooling. The second examines how entrepreneurial learning is organised as curriculum practice. The third investigates how the curriculum connects with students' lived realities, local cultures and territorial inequalities. The fourth analyses what forms of evidence make entrepreneurial learning visible and sustainable. Together, these dimensions allow the article to examine entrepreneurship education as a contested curriculum object whose critical potential depends on the alignment between design, purpose, mediation and institutional conditions (Fayolle & Gailly, 2008; Freire, 1992; Bardin, 2011; Bowen, 2009).

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Table 1 summarises the analytical framework used to guide the documentary analysis and the coding of teacher responses, linking each curriculum question to the contributions of Fayolle and Freire and to the empirical indicators examined in the study.

Table 1. Analytical framework for analysing entrepreneurship education as contested curriculum

Analytical dimension	Curriculum question	Fayolle contribution	Freire contribution	Empirical indicators
Curricular purpose	What purpose does entrepreneurship education serve in public upper-secondary schooling?	Distinguishes aims, audiences, methods and learning outcomes.	Interrogates whether the purpose is adaptive, dialogical or emancipatory.	Meanings attributed to entrepreneurship, life projects, work, citizenship and public value.
Pedagogical design	How is entrepreneurial learning organised as curriculum practice?	Emphasises project-based, experiential and learner-centred design.	Requires dialogue, problematisation and praxis rather than procedural activity.	References to active methodologies, projects, interdisciplinary work and teacher mediation.
Territorial contextualisation	How does the curriculum connect with students' lived realities and local inequalities?	Requires contextualised learning situations and situated problems.	Requires reading the world before acting upon it.	Use of local problems, community knowledge, territory, culture and inequality in projects.
Assessment and enactability	What evidence makes learning visible and sustainable?	Links pedagogy to intended learning outcomes and evidence.	Questions whether assessment recognises critical, civic and collective learning.	Assessment practices, teacher difficulties, institutional support and criteria for competencies.

Source: Prepared by the authors.

3. Methodology

The research was designed as a qualitative, interpretive and exploratory study of how entrepreneurship education is curricularised and enacted within Rio de Janeiro's public upper-secondary system. The focus is not programme impact, but the interpretation of curriculum meanings, tensions and enactment conditions. Since the article understands curriculum as a socially mediated practice rather than as a fixed policy text, the methodology combines documentary analysis with qualitative teacher responses in order to compare official curriculum discourse with practitioner interpretation (Ball et al., 2012; Bowen, 2009; Flick, 2018; Pinar, 2012).

The study is grounded in an interpretive epistemology. It assumes that curriculum reform becomes meaningful through the ways teachers read, translate, negotiate and adapt policy expectations within concrete school contexts. For this reason, the empirical focus is not on whether teachers implement entrepreneurship education exactly as prescribed, but on how they interpret its purposes, possibilities and constraints. This epistemological position is consistent with policy enactment and teacher agency literature, which understands educational reform as a situated process shaped by institutional conditions, professional judgement and local meanings (Priestley et al., 2015; Spillane et al., 2002).

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3.1 Data sources and corpus

The analysis drew on two complementary sources. The first source consisted of national and state curriculum documents related to Brazilian upper-secondary reform and to the incorporation of entrepreneurship education into public schooling. These included the National Common Curricular Base for upper-secondary education and the pedagogical materials associated with the *Componente Curricular Projeto de Intervenção e Empreendedorismo: Trilhas Empreendedoras para o Ensino Médio em Tempo Integral*, developed within the Rio de Janeiro public education context through institutional collaboration between SEEDUC-RJ and Universidade Federal Fluminense. These documents were selected because they define the official curricular vocabulary through which entrepreneurship education is framed, including references to life projects, active methodologies, student agency, flexible pathways, territorial relevance and teacher mediation (Brazil, Ministry of Education, 2018; SEEDUC-RJ & Universidade Federal Fluminense, 2023).

The second source consisted of qualitative responses from 14 public-school teachers working directly with entrepreneurship-oriented upper-secondary pathways in Rio de Janeiro state public schools. This inclusion criterion is analytically important: participants were not external observers of entrepreneurship education or teachers commenting on the reform from a distance, but professionals responsible for enacting it within the curriculum structure of public upper-secondary reform. Their responses therefore provide situated evidence of how entrepreneurship education is interpreted, adapted and contested by teachers working inside the reform process.

The use of documentary and teacher-response data allowed source triangulation between official curriculum discourse and practitioner interpretation. The purpose of this triangulation was not to produce statistical validation, but to identify convergences, omissions and tensions between what curriculum documents prescribe and how teachers involved in entrepreneurship pathways understand the conditions of enactment. This combination is methodologically relevant because curriculum reform operates simultaneously at the level of policy language, institutional mediation and professional interpretation (Bowen, 2009; Ball et al., 2012; Flick, 2018).

3.2. Participants' Profile

The empirical corpus included responses from 14 teachers working in public upper-secondary schools located in Magé, Guapimirim, Petrópolis, Sapucaia and Teresópolis, municipalities in the state of Rio de Janeiro. All participants taught classes connected to the entrepreneurship itinerary or entrepreneurship-oriented curricular pathway. This profile strengthens the empirical relevance of the corpus because the participants were directly involved in the curricularisation of entrepreneurship education and faced the practical task of transforming reform language into classroom activities, projects, assessment practices and pedagogical decisions (Ball et al., 2012; Priestley et al., 2015; Spillane et al., 2002).

The teacher group was interdisciplinary. Participants came from different areas of school knowledge, including languages, biology, arts, mathematics, history, geography, physical education, chemistry and philosophy. This disciplinary diversity is analytically important because entrepreneurship education in the upper-secondary reform is not confined to business education or management studies. It is interpreted across the curriculum by teachers who bring different epistemic traditions, pedagogical repertoires and understandings of public schooling to the

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enactment of entrepreneurship education (Fayolle & Gailly, 2008; Jones & Matlay, 2011; Pinar, 2012; Young, 2013).

The sample was predominantly composed of experienced professionals. Six respondents reported between 11 and 20 years of teaching experience and four reported more than 20 years, meaning that 71.5% of the respondents had more than a decade of professional experience. This profile gives the empirical material particular analytical weight. The concerns identified in the study cannot be reduced to the insecurity of novice teachers or to unfamiliarity with classroom practice. They express the situated judgement of experienced public-school practitioners who read entrepreneurship education through the institutional constraints, curricular expectations and social realities of public schooling (Priestley et al., 2015; Biesta, 2015; Coburn, 2004).

Table 2 presents the composition of the teacher corpus used in the empirical stage. The table is included not to claim statistical representativeness, but to make the qualitative corpus transparent and analytically interpretable. Two aspects are particularly relevant: all respondents worked with entrepreneurship-oriented upper-secondary pathways, and most were experienced public-school teachers. This profile strengthens the study because the responses come from professionals directly involved in the enactment of entrepreneurship education, rather than from external observers of the reform (Flick, 2018; Priestley et al., 2015).

Table 2. Teacher corpus used in the empirical stage

Variable	Category	n	%
Teaching experience	1–10 years	4	28.6
	11–20 years	6	42.9
	More than 20 years	4	28.6
Territory	Magé	5	35.7
	Teresópolis	3	21.4
	Petrópolis, Guapimirim and Sapucaia	6	42.9
Professional profile	Teachers from humanities, arts, natural sciences, languages and other school subjects	14	100
Curriculum involvement	Teachers working with entrepreneurship-oriented upper-secondary pathways	14	100

Source: Prepared by the authors.

3.3 Research instrument

Teacher data were generated through an electronic semi-structured questionnaire composed of closed descriptive questions and open-ended questions. The closed questions addressed teaching experience, disciplinary background, municipality, perceived clarity of curriculum guidance, implementation barriers, institutional support and difficulties in assessing competencies and collective projects. These responses were used descriptively to characterise the corpus and identify patterns in teachers' perceptions, without any claim of statistical inference. This use of descriptive data is consistent with exploratory qualitative designs in which

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closed responses help contextualise interpretive analysis rather than function as the primary basis for generalisation (Flick, 2018; Bardin, 2011).

The electronic semi-structured questionnaire invited teachers to explain how they understood entrepreneurship education, how they connected it to students' realities, what difficulties they faced in implementation, which competencies they associated with entrepreneurial learning, how they assessed student development and what purpose entrepreneurship education should serve in public upper-secondary schools. The instrument was designed to generate both descriptive patterns and qualitative evidence of teacher interpretation. This choice is coherent with the study's concern with curriculum enactment, since teachers' written responses make visible how policy language is interpreted, negotiated and translated into situated pedagogical meanings (Ball et al., 2012; Priestley et al., 2015; Spillane et al., 2002).

The electronic semi-structured questionnaire with closed and open-ended items was appropriate for the exploratory purpose of the study. It enabled the collection of comparable information across participants while also allowing teachers to formulate their own interpretations in written form. Its limitations are also clear. Unlike in-depth interviews, questionnaire responses do not allow the researcher to probe meanings interactively, ask follow-up questions or observe how participants elaborate their answers in dialogue. For this reason, the article treats the empirical material as situated qualitative evidence of teacher interpretation rather than as a comprehensive account of classroom enactment, in line with qualitative research principles that distinguish between interpretive depth, contextual evidence and claims of generalisability (Bowen, 2009; Flick, 2018; Bardin, 2011).

3.4 Analysis Procedures

The analysis followed a qualitative content analysis strategy. Documentary materials and teacher responses were examined in order to identify explicit meanings, implicit tensions and recurrent patterns related to curriculum purpose, pedagogical design, territorial contextualisation and assessment/enactability. Content analysis was appropriate because the study sought to interpret how entrepreneurship education is represented in curriculum documents and how these representations are understood, questioned and reworked by teachers involved in entrepreneurship pathways (Bardin, 2011; Bowen, 2009; Flick, 2018).

Coding combined deductive and inductive procedures. The initial coding frame was derived from the theoretical framework, particularly the four analytical dimensions presented in Table 1: curricular purpose, pedagogical design, territorial contextualisation and assessment/enactability. During repeated readings of the open responses, these categories were refined through attention to recurring empirical concerns, including partial curricular guidance, insufficient institutional support, difficulties in assessing complex competencies and resistance to business-centred meanings of entrepreneurship. This combination of theoretically informed coding and inductive refinement is consistent with qualitative content analysis, especially when the aim is to interpret both explicit meanings and latent tensions within textual data (Bardin, 2011; Flick, 2018; Bowen, 2009).

The analysis was conducted in five stages. First, the curriculum and policy documents were read to identify the official vocabulary through which entrepreneurship education is justified and operationalised. Second, the closed questionnaire responses were tabulated to describe the teacher corpus and identify descriptive patterns in relation

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to guidance, support, territorial relevance and assessment. Third, the open responses were coded in relation to the deductive categories derived from the theoretical framework. Fourth, the coded material was re-examined inductively to identify recurrent tensions that emerged from teacher responses. Fifth, documentary and teacher evidence were compared in order to interpret the gap between curriculum discourse and practitioner interpretation through the Fayolle-Freire lens. This staged procedure strengthens analytical transparency by making explicit how the study moved from corpus familiarisation to coding, comparison and theoretical interpretation (Bowen, 2009; Bardin, 2011; Fayolle & Gailly, 2008; Freire, 1996).

Direct quotations were selected when they illustrated recurrent patterns across the corpus rather than isolated opinions. The purpose of using quotations was not to present individual testimonies as representative of all teachers in Rio de Janeiro, but to show how experienced teachers working directly with entrepreneurship pathways articulate the tensions identified in the analysis. Quotations originally written in Portuguese were translated into English by the authors, prioritising semantic fidelity and conceptual clarity rather than literal word-for-word equivalence. This procedure is coherent with qualitative interpretive research, in which excerpts are used to evidence patterns of meaning while preserving the contextual and analytical integrity of participants' accounts (Flick, 2018; Bardin, 2011; Ball et al., 2012).

3.5 Methodological rigor and limitations

Methodological transparency was pursued through three procedures. First, the study combined document analysis and teacher-response data to compare policy discourse with practitioner interpretation. Second, closed responses were used descriptively to contextualise the corpus, while open responses were interpreted thematically. Third, the analytical categories were explicitly connected to the theoretical framework and organised around recurring tensions across the documentary and teacher-response materials. This procedure is consistent with qualitative research principles that emphasise transparency, coherence between theory and analysis, and the use of multiple sources to strengthen interpretive credibility (Bowen, 2009; Bardin, 2011; Flick, 2018).

The study does not claim statistical generalisation. Its contribution is analytical transferability: the Brazilian case is used to illuminate a broader curriculum problem concerning how innovation-oriented reforms depend on teacher mediation, assessment infrastructures and institutional support. The findings are therefore relevant beyond Rio de Janeiro not because they represent all public schools, but because they clarify tensions that may arise whenever entrepreneurship education is introduced into public-school curricula without sufficient attention to enactment conditions. This form of transferability is appropriate for qualitative and interpretive studies, in which the aim is not population-level inference, but the development of analytically meaningful insights that can inform understanding of comparable contexts (Flick, 2018; Ball et al., 2012; Priestley et al., 2015).

The study has limitations. The empirical corpus is exploratory and based on responses from 14 teachers. Although these teachers were directly involved in entrepreneurship-oriented upper-secondary pathways and most had extensive professional experience, the study does not include classroom observations, student interviews, school leadership perspectives or longitudinal evidence of implementation. The data therefore allow an analysis of teacher interpretation and curriculum tensions, but not a direct evaluation of pedagogical impact or student

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learning outcomes. Future studies should combine teacher interviews, classroom observation and student narratives to examine how the critical enactability gap operates in everyday classroom practice and how it shapes students' learning experiences over time (Flick, 2018; Spillane et al., 2002; Biesta, 2015).

3.6 Ethical considerations

This study used anonymised questionnaire responses from adult public-school teachers who voluntarily answered an educational research instrument. Participants were informed about the academic purpose of the study before answering the questionnaire. The questionnaire did not collect direct personal identifiers such as names, personal e-mails or school identifiers information, and all excerpts used in the article were anonymised as Teacher 1 to Teacher 14. The dataset was analysed in aggregated and anonymised form. The study did not involve students, classroom intervention, sensitive personal data or identifiable individual records.

3.7 Use of AI-assisted tools

The authors used ChatGPT, a large language model developed by OpenAI, during manuscript preparation for editorial and language-support purposes. The tool assisted with improving academic phrasing, English-language clarity, structural organisation, translation refinement, and the preparation of an editable conceptual figure. It was not used as a research method, did not generate empirical data, did not conduct autonomous analysis, did not produce or verify references independently, and did not replace the authors' theoretical interpretation or methodological judgement. All suggestions produced with AI assistance were reviewed, edited and validated by the authors. The authors take full responsibility for the manuscript's content, accuracy, integrity and originality. ChatGPT is not listed as an author.

4. Findings

This section presents four empirical tensions identified through the comparison between curriculum documents and teacher responses. Since all respondents were teachers working directly with entrepreneurship-oriented upper-secondary pathways, their responses are treated as situated accounts from professionals responsible for enacting entrepreneurship education within the reform structure, rather than as external opinions about the policy. Across the corpus, teachers neither simply accepted nor rejected entrepreneurship education. Instead, they reinterpret it through their professional judgement, disciplinary backgrounds and public-school conditions. Across the corpus, entrepreneurship education emerged as a curriculum object whose meaning depends on the relation between official guidance, territorial relevance, assessment practices and competing understandings of entrepreneurship (Ball et al., 2012; Fayolle & Gailly, 2008; Freire, 1996; Priestley et al., 2015).

4.1 Partial curricular guidance without robust enactment mechanisms

The first tension concerns the distance between curriculum prescription and enactment mechanisms. The documentary corpus presents entrepreneurship education through a reform vocabulary centred on teacher autonomy, student protagonism, flexible design, active methodologies and life projects. However, the teacher responses indicate that these curricular expectations are not always accompanied by sufficient operational guidance for classroom practice. Only one teacher considered the official documents clear, while eight considered them partially clear and five considered them unclear. In other words, 64.3% of the respondents

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perceived the guidance as only partially clear or unclear for daily pedagogical work (Ball et al., 2012; Priestley et al., 2015).

The relevance of this evidence lies in the position of the respondents within the reform, but professionals directly involved in entrepreneurship-oriented pathways. Their perception of partial guidance therefore reveals an enactment problem from within the curriculum itself. One teacher described the proposal as "imposed by the regional administration" (Teacher 1), while another argued that, because entrepreneurship education functions as part of a public policy, "the actors involved in its implementation should be present and heard during the formulation of guiding documents" (Teacher 3). These responses suggest that the problem is not simple teacher resistance to reform, but a perceived lack of participatory curriculum-making and professional deliberation (Ball et al., 2012).

The data also indicate that experienced teachers attempt to compensate for this lack of clarity through professional judgement. Since 71.5% of respondents had more than ten years of teaching experience, the corpus suggests that the enactment of entrepreneurship education depends heavily on teachers' accumulated pedagogical repertoire. Senior teachers appear to translate broad reform expectations into feasible activities by drawing on their knowledge of students, school routines and local constraints. However, this also reveals a structural vulnerability: when curriculum guidance is insufficient, enactment becomes dependent on individual professional effort rather than on stable institutional mechanisms (Priestley et al., 2015; Spillane et al., 2002).

Here, the critical enactability gap appears in its first layer: the gap between curricular expectations and the tools available for enactment. Reform documents may prescribe innovation, autonomy and student agency, but teachers still need concrete curricular tools, planning time, examples of pedagogical sequences, assessment criteria and institutional support to transform these principles into classroom practice. Without such mechanisms, entrepreneurship education risks becoming an attractive but unstable reform vocabulary whose meaning varies according to each teacher's capacity to interpret and operationalise it. This pattern is consistent with policy enactment literature, which shows that reforms become unstable when broad policy expectations are not supported by institutional resources, professional learning and shared interpretive frameworks (Ball et al., 2012; Coburn, 2004; Spillane et al., 2002).

4.2 Territorial relevance without systematic contextualisation

The second tension concerns the relationship between entrepreneurship education and students' territories. Teachers generally recognised that entrepreneurship education becomes more meaningful when connected to students' lived realities. In their responses, they associated entrepreneurial learning with local commerce, cultural projects, community problems, environmental issues, family economies, communication practices and forms of collective participation. This suggests that teachers do not understand entrepreneurship education only as a technical or economic component, but as a possible way of connecting school knowledge to students' social contexts (Freire, 1992, 1996; Fayolle & Gailly, 2008).

This connection was especially visible in responses that linked entrepreneurship education to culture, identity and community life. Teacher 14 argued that its purpose should be to "value talents and strengthen cultural identity" and called for greater appreciation of "local cultural expressions". The same teacher added that "art

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brings students very close to entrepreneurial proposals". Teacher 4 similarly defined an entrepreneurial attitude as the capacity to have "a questioning view" and to "look carefully at what happens around" the student. These statements expand the meaning of entrepreneurship education beyond business creation and reposition it as a curriculum practice grounded in territory, expression, observation and public value (Fayolle, 2013; Freire, 1996).

However, the data also show that territorial contextualisation remains weakly institutionalised. Teachers described lack of contextualised materials, limited resources, scarce time for interdisciplinary planning and insufficient institutional support. The contradiction is particularly visible in Teacher 14's response: the same teacher who emphasised cultural identity and local expression also identified "lack of funding for cultural projects" as a barrier. This indicates that territorial relevance is valued by teachers, but often depends on personal initiative rather than systematic curriculum infrastructure (Ball et al., 2012; Coburn, 2004).

This finding shows that territorial contextualisation cannot be reduced to the generic instruction to "connect learning to students' realities". For entrepreneurship education to become a meaningful curriculum practice, teachers need instruments for reading the territory, identifying local problems, mobilising community knowledge and transforming cultural repertoires into legitimate curricular content. In the absence of such support, territory becomes a rhetorical promise rather than a structured pedagogical method. This reinforces Freire's argument that education must begin from learners' concrete worlds, while also confirming that contextualised entrepreneurship education requires deliberate pedagogical design rather than generic appeals to relevance (Freire, 1992, 1996; Fayolle & Gailly, 2008).

4.3 Active learning and fragile assessment of complex competencies

The third tension concerns assessment. Teachers strongly associated entrepreneurship education with creativity, critical thinking, collective work, participation, autonomy, responsibility, problem-solving and preparation for social and professional life. These competencies are consistent with the active and project-based orientation of the curriculum documents. However, assessment appeared as one of the most fragile dimensions of enactment. Four teachers considered it difficult to assess socio-emotional competencies and collective projects, eight considered it partially difficult and only two answered negatively. This means that 85.7% of the respondents recognised some degree of difficulty in assessing the kinds of learning most closely associated with entrepreneurship education (Biesta, 2015; Deng, 2021).

The open responses help explain this fragility. Teacher 2 stated that assessment should be "processual and multidimensional", focused "more on the development of competencies and attitudes than only on grades or final project outcomes". Teacher 3 used a similar formulation, also defending processual and multidimensional assessment. However, the same respondent identified "strong pressure for standardised exams and the lack of flexibility in school pedagogical projects" as barriers to inserting entrepreneurship as a transversal theme. Teacher 4 added that implementation is affected by "limitations of resources, time, cost, assessment difficulties, understanding and teacher resistance" (Fayolle & Gailly, 2008; Rae, 2006).

These responses show that assessment is not a secondary technical matter. It is part of the institutional grammar that determines whether active methodologies acquire curricular legitimacy. If entrepreneurship education claims to develop complex competencies, but schools lack shared criteria for documenting collaboration, creativity,

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civic engagement, territorial inquiry and reflexive agency, the curriculum risks reducing entrepreneurial learning to final presentations, isolated projects or participation marks. In that case, active learning remains pedagogically attractive but institutionally fragile (Biesta, 2015; Young, 2013).

This finding reveals the third layer of the critical enactability gap. The curriculum names complex forms of learning, but teachers lack stable assessment repertoires to make such learning visible, discussable and cumulative. The gap, therefore, is not only between policy and practice; it is also between expected competencies and recognised evidence of learning. Entrepreneurship education becomes difficult to sustain when the forms of agency it seeks to develop are not supported by credible formative assessment practices. This finding supports the view that curriculum reform must be analysed through pedagogy and assessment together, since what cannot be made visible through legitimate evidence of learning tends to remain peripheral in school practice (Biesta, 2015; Deng, 2021; Young, 2013).

4.4 Public-value meanings and market-oriented ambiguity

The fourth tension concerns the meaning of entrepreneurship itself. Teachers' responses reveal a strong public-value interpretation of entrepreneurship education. Many described its purpose as developing autonomy, creativity, student agency, self-esteem, critical consciousness, social participation, problem-solving and the capacity to create value in cultural, social and community contexts. This indicates that teachers do not reject entrepreneurship education as a curricular possibility. Rather, they contest narrow interpretations that reduce it to business creation, employability or individual adaptation to precarious labour conditions (Komulainen et al., 2011; Fayolle, 2013).

Several responses explicitly resisted a business-centred interpretation. Teacher 1 stated that entrepreneurship education in upper-secondary school "should not be confused with teaching students how to open businesses". Teacher 4 argued that entrepreneurship should be understood as "undertaking one's own life" and added that its teaching "cannot be limited to business creation". Teacher 13 similarly stated that entrepreneurship education "should not mean only opening businesses" and argued that public schools should "overcome a purely market-oriented view". These responses matter because they show that entrepreneurship education is not simply imported into public schools as a market vocabulary. It is reinterpreted, disputed and partially reoriented by teachers (Fayolle & Gailly, 2008; Freire, 1996).

The ambiguity also appears in the way teachers discuss value creation. Teacher 10 argued that entrepreneurship education should "reduce the focus on productivity and broaden the civic view". Teacher 3 stated that entrepreneurship education can create "financial, cultural or social" value and influence students' perception of individual and collective impact. These statements show that teachers recognise value creation, but do not restrict it to economic return. Instead, they associate it with civic formation, cultural recognition, social participation and collective agency (Freire, 1992, 1996; Ball et al., 2012).

This finding is where the Fayolle-Freire lens becomes most empirically visible. Teachers' responses confirm that entrepreneurship education can be read through different curriculum grammars: business preparation, life-project pedagogy, cultural expression, territorial inquiry, civic participation or social transformation. The central issue is therefore not whether entrepreneurship education should be present in public schools, but how its purposes are

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governed, mediated and assessed. Without explicit curriculum governance, the same reform vocabulary can support either public-value learning or individualising market adaptation. This ambiguity is well documented in critical debates on entrepreneurship education, especially in contexts where entrepreneurial discourse may either support social value creation or reinforce individualised responsibility for structural insecurity (Komulainen et al., 2011; Fayolle, 2013; Freire, 1996).

4.5 Synthesis of findings

Across the four tensions, entrepreneurship education appears as a curriculum object whose potential remains dependent on fragile enactment conditions. Teachers working directly with entrepreneurship-oriented pathways recognise the pedagogical potential of the field, especially when it is connected to student agency, local realities, culture, public value and collective problem-solving. At the same time, they identify the absence of the very conditions required to stabilise this potential as curriculum: clear guidance, participatory curriculum-making, contextualised materials, institutional support, planning time and assessment tools for complex competencies.

The empirical evidence therefore supports the concept of the critical enactability gap. The gap does not refer to a simple failure of implementation or to teacher resistance. It refers to the distance between a curriculum discourse that promises innovation, agency and social relevance and the concrete pedagogical, institutional and assessment conditions required to make these promises teachable, practicable and recognisable as curriculum. Table 3 summarises the main findings and their curriculum implications.

Table 3. Main findings and curriculum implications

Finding	Empirical evidence	Curriculum implication
Partial curricular guidance	Only 1 teacher considered documents clear; 8 considered them partially clear; 5 considered them unclear. Verbatims described the proposal as "imposed by the regional administration" and called for teachers to be heard in the formulation of guiding documents.	Curriculum reform must provide enactment tools and participatory processes, not only broad vocabulary of innovation and student agency.
Territorial relevance without systematic method	Teachers connected entrepreneurship education to local culture, community problems, identity, art and students' realities. Teacher 14 emphasised valuing talents, cultural identity and local cultural expressions, while also reporting lack of funding for cultural projects.	Territorial reading should become a structured curriculum practice supported by planning time, contextualised materials and resources.
Assessment fragility	4 teachers considered assessment difficult and 8 partially difficult. Teachers defended processual, multidimensional assessment but reported pressure from standardised exams and difficulties assessing competencies and collective projects.	Formative rubrics, portfolios and evidence of critical, collaborative and civic learning are necessary for curricular legitimacy.
Market ambiguity	Teachers explicitly rejected reducing entrepreneurship education to opening businesses and called for autonomy, social participation, cultural value, civic orientation and transformation.	Curriculum governance must distinguish public-value entrepreneurship from individualising market adaptation.

Source: Prepared by the authors.

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5. Discussion

5.1 Entrepreneurship education as contested curriculum

The analysis indicates that entrepreneurship education should not be approached merely as policy content to be implemented. This distinction is theoretically important. If entrepreneurship education is treated only as an implementation problem, the analysis tends to ask whether teachers apply the reform correctly. If it is treated as a curriculum problem, the analysis must ask what meanings of entrepreneurship are legitimised, what forms of student agency are cultivated, what knowledge is mobilised, and what evidence of learning becomes institutionally recognisable (Ball et al., 2012; Pinar, 2012; Young, 2013).

The critical enactability gap names this specifically curricular problem. It refers to the distance between reform discourse that promises innovation, student agency and social relevance, and the pedagogical, institutional and assessment conditions that make such agency critically teachable, practicable and recognisable as curriculum. This gap is not simply a failure of delivery. It is critical because it concerns the ethical and democratic direction of education; it is an enactability gap because the problem lies in the weak construction of the conditions through which teachers can transform broad reform principles into situated, assessable and socially meaningful learning experiences (Biesta, 2015; Coburn, 2004; Priestley et al., 2015).

This concept extends policy enactment literature by foregrounding the normative and evaluative dimensions of curriculum reform. Policy enactment theory explains that schools translate, reinterpret and negotiate policy under local conditions. However, entrepreneurship education adds a further layer: teachers are not only translating policy language into practice; they are also deciding whether entrepreneurship will be enacted as business preparation, life-project pedagogy, territorial inquiry, cultural expression, civic participation or social transformation. In this sense, the enactment of entrepreneurship education involves the governance of curriculum purpose, not only the adaptation of policy to practice (Fayolle & Gailly, 2008; Freire, 1996; Neck & Greene, 2011).

Figure 1 represents the conceptual model derived from the findings. It shows how entrepreneurship education becomes contested when reform discourse promises innovation, student agency and social relevance, but teachers encounter weak guidance, limited institutional support and fragile assessment conditions. The model also indicates that teacher mediation is the decisive point at which entrepreneurship education may be translated either into market adaptation or into public-value critical curriculum. The figure therefore does not merely summarise the findings; it visualises the theoretical contribution of the article, namely the critical enactability gap as a curriculum problem rather than a simple implementation failure (Ball et al., 2012; Coburn, 2004; Priestley et al., 2015; Spillane et al., 2002).

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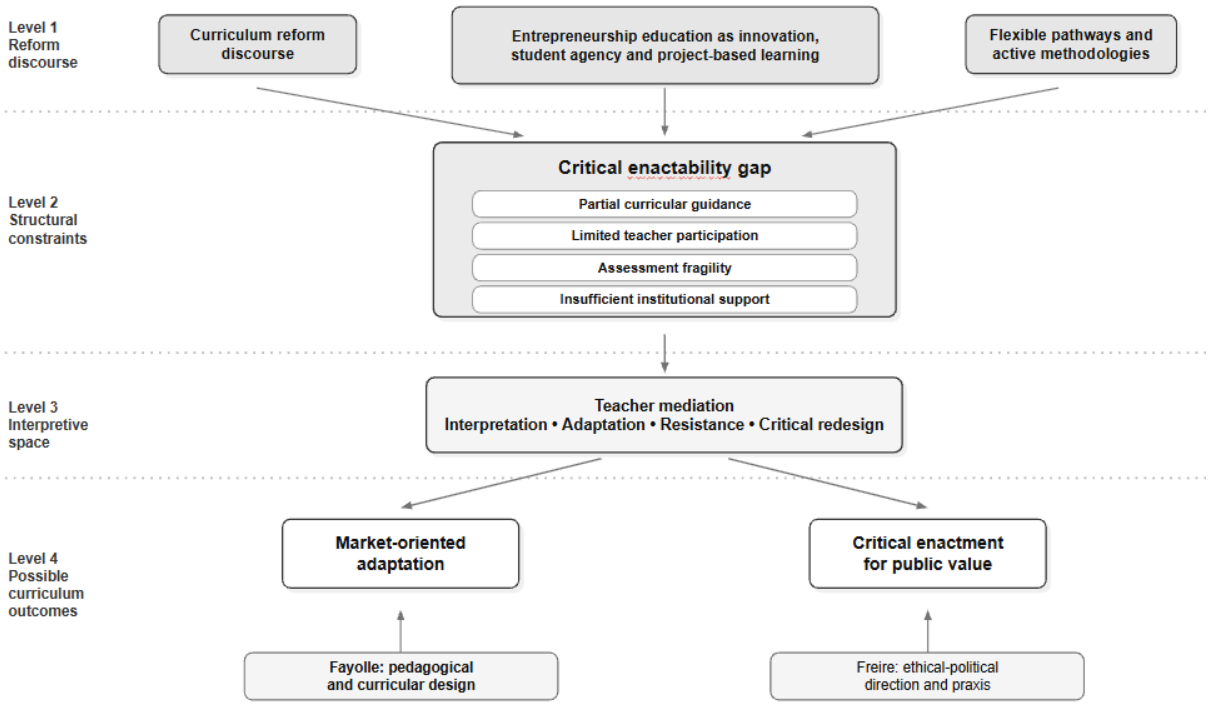


Figure 1. The critical enactability gap in entrepreneurship education as contested curriculum.
***Source**: Prepared by the authors based on the documentary and teacher-response analysis.*

The empirical material gives substance to the model. Teachers working directly in entrepreneurship-oriented upper-secondary pathways recognised the educational potential of entrepreneurship education, but they also identified the missing conditions required for its critical enactment: clearer curricular guidance, participatory curriculum-making, contextualised materials, interdisciplinary planning time, institutional support and assessment tools for complex competencies. The contribution of the study, therefore, is not to show that entrepreneurship education succeeds or fails, but to explain why its meaning remains unstable when reform discourse expands expectations without constructing the curricular infrastructure needed to sustain them.

5.2 The Fayolle-Freire lens and the governance of curriculum purpose

The Fayolle-Freire lens helps explain why entrepreneurship education cannot be judged only by its presence in curriculum documents or by the adoption of active methodologies. Fayolle's contribution makes the pedagogical architecture of entrepreneurship education visible. His work directs attention to aims, audiences, methods, learning processes and evidence of learning. This is essential because entrepreneurship education cannot become curriculum through generic references to innovation, creativity or student agency. It requires coherent design, explicit purposes and alignment between learning activities and assessment (Fayolle, 2013; Fayolle & Gailly, 2008).

Freire's contribution interrupts any purely technical reading of this design. From a Freirean perspective, the central question is not only how entrepreneurship education is taught, but what kind of agency it cultivates and for what social purpose. In unequal public-school contexts, this question is decisive. A curriculum may use the language of autonomy and protagonism while encouraging students to adapt individually to precarious conditions. Conversely, entrepreneurship education may become a critical pedagogical practice when students

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are invited to read their territories, identify collective problems, deliberate with others and produce responses oriented toward public value (Freire, 1992, 1996, 2000).

The theoretical strength of combining Fayolle and Freire lies in the tension between design and emancipation. Fayolle prevents critical pedagogy from remaining abstract by requiring attention to curricular architecture, methods and evidence of learning. Freire prevents entrepreneurship education from becoming a neutral technique by questioning the ethical and political direction of entrepreneurial agency. The study shows that neither perspective is sufficient alone. Fayolle without Freire may produce well-designed entrepreneurial learning that remains politically naive. Freire without Fayolle may offer a powerful emancipatory horizon without specifying how entrepreneurship education can be organised, mediated and assessed as curriculum (Fayolle & Gailly, 2008; Freire, 1996; Neck & Greene, 2011).

The teacher responses make this tension empirically visible. Teachers did not simply reject entrepreneurship education as market ideology, nor did they accept it uncritically as innovation. They reinterpreted it as autonomy, cultural expression, territorial inquiry, civic participation, social value and critical formation. This suggests that public-school teachers are not merely implementers of reform. They are curriculum actors who negotiate the meaning of entrepreneurship education in relation to their students, territories, disciplines and institutional constraints. Their mediation is therefore the site where the curriculum either reproduces market adaptation or becomes a public-value educational practice (Priestley et al., 2015; Ball et al., 2012; Fayolle, 2013).

5.3 Teacher agency as curriculum mediation, not individual heroism

The findings also contribute to debates on teacher agency. Teacher agency appears in the study as the central condition through which entrepreneurship education becomes pedagogically meaningful. Teachers decide how to interpret curriculum documents, how to connect entrepreneurial learning to students' realities, how to balance active methodologies with school routines, and how to resist narrow business-centred interpretations. Their responses reveal conceptual sophistication: they distinguish entrepreneurship from opening businesses, productivity from civic formation, generic projects from territorial relevance, and participation from meaningful student agency (Priestley et al., 2015; Ball et al., 2012).

However, the study also shows that teacher agency should not be romanticised. In many reform contexts, teachers are praised as autonomous professionals while being left to compensate for weak curricular guidance, limited resources and fragile assessment structures. This produces a paradox: the reform depends on teacher agency but does not always construct the institutional conditions required for that agency to become sustainable, equitable and collectively supported. When this happens, innovation becomes dependent on individual commitment rather than on public curriculum governance (Coburn, 2004; Spillane et al., 2002).

This distinction matters because heroic narratives of teacher agency can obscure structural responsibility. If entrepreneurship education becomes meaningful only because some teachers mobilise their own experience, creativity and local knowledge, the reform remains vulnerable to discontinuity and inequality. Schools with experienced and engaged teachers may produce rich projects, while schools with fewer resources, less planning time or weaker institutional support may experience the same curriculum as fragmented and superficial. Teacher

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agency is therefore necessary, but insufficient. It must be supported by curriculum materials, professional development, collaborative planning structures and assessment repertoires (Priestley et al., 2015; Biesta, 2015).

For this reason, professional development in entrepreneurship education should not be organised as short technical training. It should be conceived as sustained curriculum formation. Teachers need opportunities to examine competing meanings of entrepreneurship, analyse local inequalities, design interdisciplinary projects, construct formative assessment criteria and deliberate collectively about the public purposes of schooling. Such formation must integrate Fayollean design and Freirean critique: teachers need to know how to design entrepreneurial learning experiences and how to judge whether these experiences serve democratic, dialogical and socially meaningful educational purposes (Fayolle & Gailly, 2008; Freire, 1996; Priestley et al., 2015).

5.4 Assessment as a condition of curricular legitimacy

One of the most important findings of the study is that assessment is not a secondary operational issue. It is a condition of curricular legitimacy. Entrepreneurship education is frequently associated with creativity, collaboration, autonomy, initiative, social participation and problem-solving. Yet these forms of learning remain unstable when teachers lack shared criteria, instruments and institutional recognition for assessing them. What cannot be assessed with credibility often remains peripheral, even when it is strongly valued in reform discourse (Biesta, 2015; Deng, 2021; Young, 2013).

This problem is especially relevant to active methodologies. Projects, seminars, debates, portfolios and collaborative activities may create meaningful learning opportunities, but they do not automatically produce curriculum transformation. Their educational value depends on whether they are connected to clear purposes, reflective processes and evidence of learning. If assessment focuses only on final products, presentations or simulated enterprises, entrepreneurship education may reproduce performance-oriented and market-centred logics. If assessment includes inquiry, dialogue, collaboration, reflexivity and social meaning, it becomes more consistent with a critical curriculum orientation (Fayolle & Gailly, 2008; Rae, 2006).

A curriculum-oriented assessment framework for entrepreneurship education would need to include at least four dimensions. The first is problem formulation, understood as students' capacity to identify, justify and contextualise a relevant territorial or social problem. The second is inquiry, referring to students' capacity to collect information, listen to community voices and interpret context. The third is collaborative design, involving the construction of feasible, ethical and collectively developed responses. The fourth is reflexive agency, understood as students' capacity to analyse what they learned, how their understanding changed and what limits remain.

This assessment architecture would make entrepreneurship education visible as curriculum rather than as an occasional project. It would also protect the critical purpose of the field. By assessing processes of inquiry, collaboration and reflection, schools can recognise forms of learning that are not reducible to business planning or individual performance. In this sense, assessment becomes one of the mechanisms through which the Fayolle-Freire lens is made practical: Fayolle contributes the demand for alignment between aims, methods and evidence, while Freire contributes the demand that evidence recognise dialogue, critical consciousness and collective praxis (Freire, 1996; Fayolle, 2013).

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5.5 Implications for curriculum policy and public-school reform

The findings have direct implications for curriculum policy. Entrepreneurship education should not be introduced into public-school systems merely as a component, slogan or innovation vocabulary. It requires a curriculum architecture capable of defining public purposes, supporting teacher mediation, guiding territorial inquiry and legitimising complex evidence of learning. Without this architecture, entrepreneurship education risks becoming either symbolic reform language or a vehicle for individualising responsibility for structural social problems (Ball et al., 2012; Priestley et al., 2015).

For policy makers, this means that curriculum documents should move beyond broad references to flexibility, protagonism and life projects. They should provide enactment tools: examples of interdisciplinary sequences, protocols for territorial diagnosis, guidance for community-based projects, formative rubrics, criteria for assessing collaborative learning and models of teacher collaboration. Such tools should not prescribe practice mechanically, but should provide enough structure to prevent autonomy from becoming abandonment (Coburn, 2004; Spillane et al., 2002).

For schools, the study suggests the need to create collective spaces where teachers can deliberate on the meaning of entrepreneurship education. Because teachers from different disciplines interpret entrepreneurship through different pedagogical traditions, interdisciplinary planning is not optional. It is a condition for transforming entrepreneurship education into a curriculum practice connected to knowledge, territory and public value. Without collective planning, entrepreneurship education may become a series of isolated activities dependent on individual teachers rather than a coherent curricular experience (Ball et al., 2012; Priestley et al., 2015).

For partnerships involving universities, public agencies, third-sector organisations or business-support institutions, the study points to the importance of public curriculum governance. External partnerships may enrich entrepreneurship education, but they also carry risks when their purposes are not explicit. In public-school systems, partnerships must be governed by equity, democratic participation, teacher agency and the public value of curriculum. The language of innovation is not enough. The central question is whether partnerships strengthen the school's capacity to produce critical, contextualised and assessable learning (Goodson, 1997; Pinar, 2012).

5.6 International relevance of the Brazilian case

Although the study focuses on Rio de Janeiro, the argument is not limited to Brazil. Many education systems are adopting innovation-oriented reforms that emphasise competencies, flexibility, student agency, interdisciplinary projects and connections between schooling and contemporary social life. These reforms often rely on teachers to enact complex curricular expectations while underestimating the institutional, professional and assessment conditions required to sustain them. The Brazilian case is therefore analytically relevant because it makes visible a broader international dilemma: curriculum reforms may expand the language of agency faster than they build the conditions for agency to be taught, practised and assessed (Biesta, 2015; Deng, 2021; Young, 2013).

Entrepreneurship education is a particularly revealing site for examining this dilemma because it condenses multiple tensions of contemporary schooling. It brings together employability, creativity, life projects, social participation, innovation, territorial relevance and public value. It can be read as a market-oriented response to uncertain futures or as a critical pedagogy for collective problem-solving. The difference between these

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outcomes is not determined by the term entrepreneurship itself, but by the curriculum conditions under which it is enacted.

The international contribution of this study lies in showing that entrepreneurship education should be analysed as a problem of curriculum-making. Its significance depends on how teachers, institutions and assessment systems mediate the relationship between reform discourse and pedagogical practice. The concept of the critical enactability gap offers a transferable analytical tool for examining similar reforms in other contexts where innovation-oriented curriculum policies promise student agency without fully constructing the conditions required for critical enactment (Ball et al., 2012; Priestley et al., 2015; Spillane et al., 2002).

6. Conclusion

This article has argued that entrepreneurship education should be understood not as a marginal topic of business education, but as a contested curriculum object through which broader tensions of contemporary reform become visible. The Brazilian public upper-secondary case shows that innovation-oriented curriculum reforms may expand the language of agency, flexibility, active learning and social relevance while leaving unresolved the pedagogical, institutional and assessment conditions required for critical enactment. The concept of the critical enactability gap captures this unresolved space between curricular promise and curricular possibility (Ball et al., 2012; Priestley et al., 2015).

The study's theoretical contribution lies in connecting entrepreneurship education, curriculum enactment and critical pedagogy through a Fayolle-Freire lens. Fayolle makes visible the need for coherent pedagogical design, including aims, methods, learning processes and evidence of learning. Freire makes visible the ethical and political direction of that design, asking whether education cultivates adaptation to existing inequalities or critical participation in transforming them. Together, these perspectives show that entrepreneurship education becomes educationally significant only when curriculum design, teacher agency, public governance and assessment are aligned with democratic purposes (Fayolle & Gailly, 2008; Freire, 1996).

The empirical contribution lies in showing how teachers working directly within entrepreneurship-oriented upper-secondary pathways interpret and contest the meaning of entrepreneurship education from inside the reform process. The responses of 14 experienced public-school teachers indicate that entrepreneurship education is not simply accepted as market-oriented policy discourse or rejected as inappropriate for public schooling. Instead, teachers reinterpret it through their professional judgement, disciplinary backgrounds and territorial realities. They associate entrepreneurship education with autonomy, creativity, cultural expression, critical thinking, social participation and public problem-solving, while also identifying partial guidance, insufficient support, fragile assessment repertoires and the persistence of market-oriented ambiguity.

These findings have implications for curriculum policy and practice. If entrepreneurship education is to function as a legitimate curriculum practice in public schools, it cannot depend only on broad reform vocabulary or on individual teacher effort. It requires clearer enactment tools, participatory curriculum-making, sustained teacher professional development, interdisciplinary planning, territorial diagnosis, contextualised materials and formative assessment frameworks capable of recognising complex competencies. In this sense, the central policy

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challenge is not merely to include entrepreneurship education in the curriculum, but to govern its purposes, practices and evidence of learning in ways consistent with public value and democratic formation.

These contributions must be read in light of the study's exploratory design. Its empirical corpus is exploratory and based on responses to a semi-structured questionnaire with closed and open-ended items from 14 teachers, rather than classroom observations, student interviews or longitudinal implementation data. The findings therefore do not claim statistical generalisation or direct evidence of student learning outcomes. Their contribution is analytical transferability: the Brazilian case illuminates a broader curriculum problem faced by education systems that introduce innovation-oriented reforms without fully constructing the professional, institutional and evaluative conditions required for critical enactment (Biesta, 2015; Deng, 2021; Young, 2013).

Future research should examine how entrepreneurship education is enacted in classroom practice, how students interpret its meanings, and how school leaders and policy actors mediate its institutional conditions. Comparative studies across schools, territories and public education systems could deepen understanding of when entrepreneurship education becomes market adaptation, symbolic reform language or critical curriculum practice. Such studies are necessary if entrepreneurship education is to move beyond the promise of innovation and become a public educational practice capable of linking student agency, territorial realities and democratic transformation.

Ethics statement

This study used anonymised questionnaire responses from adult public-school teachers who voluntarily answered an educational research instrument after being informed about the academic purpose of the study. The questionnaire did not collect direct personal identifiers such as names, personal e-mails or school identifiers. The data were analysed in aggregated and anonymised form. The study did not involve students, minors, classroom intervention, sensitive personal data or identifiable individual records.

Contribuição de autoria

Sany da Silva Motta: conceptualization; investigation; methodology; data curation; formal analysis; writing – original draft; writing – review and editing; visualization.

Leandro Brettas Torturella: conceptualization; methodology; formal analysis; validation; writing – review and editing.

Ricardo César da Silva Guabiroba: supervision; conceptualization; methodology; formal analysis; validation; writing – review and editing.

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Research Data Availability Statement

The research data supporting the findings of this study consist of public and institutional curriculum documents and anonymised questionnaire responses from adult public-school teachers. The curriculum and policy documents cited in the manuscript are publicly available or institutionally accessible, as indicated in the references. Due to ethical and privacy considerations, the full teacher-response dataset is not publicly available, since even anonymised qualitative responses may contain contextual information that could allow indirect identification of participants or schools. Anonymised excerpts and aggregated descriptive information are presented in the manuscript. Additional information about the documentary corpus may be requested from the corresponding author, subject to ethical restrictions and institutional access conditions.

Ethics statement

This study derives from a research project involving intervention and data collection with human participants. The project was submitted to and approved by the Research Ethics Committee of the responsible institution, in accordance with Brazilian ethical standards for research involving human participants, especially Resolution No. 466/2012 and Resolution No. 510/2016 of the Brazilian National Health Council. Institutional authorisation for conducting the research in the public-school context was granted through administrative process SEI-030001/002086/2026.

Ethical procedures aimed at protecting participants' autonomy, confidentiality and rights were ensured. Free and Informed Consent Forms were applied to adult participants involved in the research. When applicable, assent forms and consent forms signed by legal guardians were used for underage students. Anonymity and confidentiality of the collected information were guaranteed, as well as the participants' right to withdraw from the research at any time without any prejudice.

In this article, the empirical material analysed consists specifically of anonymised questionnaire responses from adult public-school teachers. The data were analysed in aggregated and anonymised form, and all excerpts used in the manuscript were identified only as Teacher 1 to Teacher 14.

Conflict of interest

The authors declare that they have no relevant financial or non-financial interests to disclose.

Use of AI-assisted tools

AI-assisted text revision was used only to improve readability, language, formatting, translation refinement and editorial consistency. The tool was not used as a research method, did not generate empirical data, did not conduct autonomous analysis, did not produce or verify references independently, and did not replace the authors' theoretical interpretation or methodological judgement. All suggestions produced with AI assistance were reviewed, edited and validated by the authors. The authors take full responsibility for the manuscript's content, accuracy, integrity and originality. ChatGPT is not listed as an author.

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References

Ball, S. J., Maguire, M., & Braun, A. (2012). How schools do policy: Policy enactments in secondary schools. Routledge.

Bardin, L. (2011). Análise de conteúdo. Edições 70.

Bernstein, B. (2000). *Pedagogy, symbolic control and identity: Theory, research, critique* (Rev. ed.). Rowman & Littlefield.

Biesta, G. (2015). What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education, 50*(1), 75–87. https://doi.org/10.1111/ejed.12109

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Brazil, Ministry of Education. (2018). *Base Nacional Comum Curricular: Ensino Médio*. Ministério da Educação. https://www.gov.br/mec/pt-br/cne/base-nacional-comum-curricular-bncc

Coburn, C. E. (2004). Beyond decoupling: Rethinking the relationship between the institutional environment and the classroom. Sociology of Education, 77(3), 211-244. https://doi.org/10.1177/003804070407700302

Deng, Z. (2021). Powerful knowledge, transformations and didaktik/curriculum thinking. British Educational Research Journal, 47(6), 1652-1674. https://doi.org/10.1002/berj.3748

Fayolle, A. (2013). Personal views on the future of entrepreneurship education. Entrepreneurship & Regional Development, 25(7-8), 692-701. https://doi.org/10.1080/08985626.2013.821318

Fayolle, A., & Gailly, B. (2008). From craft to science: Teaching models and learning processes in entrepreneurship education. Journal of European Industrial Training, 32(7), 569-593. https://doi.org/10.1108/03090590810899838

Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. Journal of Small Business Management, 53(1), 75-93. https://doi.org/10.1111/jsbm.12065

Flick, U. (2018). An introduction to qualitative research (6th ed.). SAGE.

Freire, P. (1992). Pedagogy of hope: Reliving pedagogy of the oppressed. Continuum.

Freire, P. (1996). Pedagogy of freedom: Ethics, democracy, and civic courage. Rowman & Littlefield.

Freire, P. (2000). *Pedagogy of the oppressed* (30th anniversary ed.). Continuum.

Goodson, I. F. (1997). The changing curriculum: Studies in social construction. Peter Lang.

Jones, C., & Matlay, H. (2011). Understanding the heterogeneity of entrepreneurship education: Going beyond Gartner. Education + Training, 53(8/9), 692-703. https://doi.org/10.1108/00400911111185026

Komulainen, K., Naskali, P., Korhonen, M., & Keskitalo-Foley, S. (2011). Internal entrepreneurship: A Trojan horse of the neoliberal governance of education? Finnish pre- and in-service teachers' implementation of and resistance towards entrepreneurship education. *Journal for Critical Education Policy Studies, 9*(1), 341–374.

Neck, H. M., & Greene, P. G. (2011). Entrepreneurship education: Known worlds and new frontiers. Journal of Small Business Management, 49(1), 55-70. https://doi.org/10.1111/j.1540-627X.2010.00314.x

Pinar, W. F. (2012). What is curriculum theory? Routledge.

SciELO Preprints - This document is a preprint and its current status is available at: https://doi.org/10.1590/SciELOPreprints.16499

Priestley, M., Biesta, G., & Robinson, S. (2015). Teacher agency: An ecological approach. Bloomsbury Academic.

Rae, D. (2006). Entrepreneurial learning: A conceptual framework for technology-based enterprise. Technology Analysis & Strategic Management, 18(1), 39-56. https://doi.org/10.1080/09537320500520494

SEEDUC-RJ & Universidade Federal Fluminense. (2023). Componente curricular Projeto de Intervenção e Empreendedorismo: Trilhas Empreendedoras para o Ensino Médio em Tempo Integral. Universidade Federal Fluminense. https://empreendedorismonoensinomedio.uff.br/wp-content/uploads/sites/608/2023/04/Componente_Curricular_Projeto_de_Intervencao_e_Empreendedorismo_UFF-SEEDUCRJ.pdf

Spillane, J. P., Reiser, B. J., & Reimer, T. (2002). Policy implementation and cognition: Reframing and refocusing implementation research. Review of Educational Research, 72(3), 387-431. https://doi.org/10.3102/00346543072003387

Young, M. (2013). Overcoming the crisis in curriculum theory: A knowledge-based approach. *Journal of Curriculum Studies, 45*(2), 101–118. https://doi.org/10.1080/00220272.2013.764505

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