

**FROM SOCIAL INNOVATION TO PUBLIC POLICY: CO-PRODUCTION,
EVALUATION, AND THE INSTITUTIONALIZATION OF FULL-TIME EDUCATION
THROUGH THE MACETE SOCIAL TECHNOLOGY IN SANTA LUZIA DO ITANHY,
BRAZIL**

**DA INOVAÇÃO SOCIAL À POLÍTICA PÚBLICA: COPRODUÇÃO, AVALIAÇÃO E
INSTITUCIONALIZAÇÃO DA EDUCAÇÃO EM TEMPO INTEGRAL POR MEIO DA
TECNOLOGIA SOCIAL MACETE EM SANTA LUZIA DO ITANHY, BRASIL**

**DE LA INNOVACIÓN SOCIAL A LA POLÍTICA PÚBLICA: COPRODUCCIÓN,
EVALUACIÓN E INSTITUCIONALIZACIÓN DE LA EDUCACIÓN DE TIEMPO
COMPLETO A PARTIR DE LA TECNOLOGÍA SOCIAL MACETE EN SANTA
LUZIA DO ITANHY, BRASIL**

DOI: 10.54899/dcs.v23i95.7142

Submitted: 8/21/2026

Approved: 9/14/2026

Published on: 9/21/2026

Raí Thales da Silva Gomes

Master's Degree in Regional Development
Institution: Universidade Federal de Sergipe

Danilo Alves Santiago

Master's student in Applied Economics
Institution: Universidade Federal de Sergipe

Alberto Serafim Neto

Undergraduate Student in the Mathematics Education Program
Institution: Universidade Federal de Sergipe

Rayanne Chagas Barbosa

Master's student in Religious Studies
Institution: Universidade Federal da Paraíba

Flávio Silva de Souza

Master's Degree in Professional Education
Institution: Universidade Estadual de Santa Cruz

ABSTRACT

Implementing full-time education in small municipalities requires more than extending the school day: it demands a contextualized curriculum, teacher education, institutional coordination, and evaluation. This article analyzes the partnership between the Municipal Department of Education of Santa Luzia do Itanhy, Sergipe, Brazil, and MACETE (Mathematics, Arts, Sciences, Entrepreneurship, Technology, and Ethics), a social technology developed by The Human Project, inspired by the STEAM approach and structured through Challenge-Based Learning. A mixed-method case study was conducted using institutional documents, implementation records, and ex post evaluation data from 98 students attending two full-time schools. The documentary analysis included the syllabus for diversified curricular components and Opinion No. 02/2025 of the Municipal Council of Education. The social-emotional competencies and school retention scales showed adequate internal consistency ($\alpha = 0.80$ and $\alpha = 0.83$). Significant differences were found between early and later grades, as well as a strong correlation between the two dimensions ($r = 0.75$; $p < 0.001$). Although the results do not support causal inference, they provide evidence for improving the policy. The experience represents co-production between government and the third sector, transforming territorially grounded social innovation into public capacity, curricular reference, and institutional learning.

Keywords: full-time education; collaborative governance; public policies; social technology; educational evaluation.

RESUMO

A implementação da Educação em Tempo Integral em municípios de pequeno porte exige mais do que a ampliação da jornada: demanda currículo contextualizado, formação docente, coordenação institucional e avaliação. Este artigo analisa a parceria entre a Secretaria Municipal de Educação de Santa Luzia do Itanhy (SE) e o MACETE (Matemática, Artes, Ciências, Empreendedorismo, Tecnologia e Ética), tecnologia social do The Human Project inspirada na abordagem STEAM e estruturada pela Aprendizagem Baseada em Desafios. Realizou-se estudo de caso de abordagem mista, com análise de documentos institucionais, registros de implementação e dados de avaliação ex post de 98 estudantes de duas escolas em tempo integral. A análise documental incluiu a ementa dos componentes curriculares diversificados e o Parecer nº 02/2025 do Conselho Municipal de Educação. Conforme analisado, as escalas de competências socioemocionais e permanência escolar apresentaram consistência interna adequada ($\alpha = 0,80$ e $\alpha = 0,83$). Verificaram-se diferenças significativas entre anos iniciais e finais e correlação forte entre as dimensões ($r = 0,75$; $p < 0,001$). Os resultados não autorizam inferência causal, mas oferecem evidências para o aperfeiçoamento da política. Conclui-se que a experiência configura coprodução entre poder público e terceiro setor, convertendo inovação social territorializada em capacidade pública, referência curricular e aprendizagem institucional.

Palavras-chave: educação integral; governança colaborativa; políticas públicas; tecnologia social; avaliação educacional.

RESUMEN

La implementación de la educación de tiempo completo en municipios pequeños exige más que ampliar la jornada: requiere currículo contextualizado, formación docente, coordinación institucional y evaluación. Este artículo analiza la alianza entre la Secretaría Municipal de Educación de Santa Luzia do Itanhy, Sergipe, Brasil, y MACETE (Matemáticas, Artes, Ciencias, Emprendimiento, Tecnología y Ética), tecnología social de The Human Project inspirada en el enfoque STEAM y estructurada mediante el Aprendizaje Basado en Desafíos. Se realizó un estudio de caso con enfoque mixto, basado en documentos institucionales, registros de implementación y datos de una evaluación ex post de 98 estudiantes de dos escuelas de tiempo completo. El análisis documental incluyó el programa de los componentes curriculares diversificados y el Dictamen n.º 02/2025 del Consejo Municipal de Educación. Las escalas de competencias socioemocionales y permanencia escolar mostraron consistencia interna adecuada ($\alpha = 0,80$ y $\alpha = 0,83$). Se identificaron diferencias significativas entre los años iniciales y finales, además de una correlación fuerte entre ambas dimensiones ($r = 0,75$; $p < 0,001$). Aunque los resultados no permiten inferencias causales, ofrecen evidencias para perfeccionar la política. La

experiencia configura una coproducción entre el poder público y el tercer sector, convirtiendo la innovación social territorializada en capacidad pública, referencia curricular y aprendizaje institucional.

Palabras clave: educación integral; gobernanza colaborativa; políticas públicas; tecnología social; evaluación educativa.

1 INTRODUCTION

The extension of the school day and the consolidation of full-time education have been among the main challenges facing Brazilian education policy in recent decades. Although national legislation has advanced in recognizing students' holistic development as a right, implementation continues to require technical, pedagogical, and administrative capacities that municipal education systems do not always possess, particularly in small municipalities marked by financial constraints, territorial inequalities, and limited technical and administrative structures.

In this context, public policy implementation extends beyond the mere enactment of regulations or the expansion of instructional hours. As the literature on public policy implementation emphasizes, the effectiveness of government action depends on the capacity of the actors involved to translate policy guidelines into concrete practices adapted to local specificities and sustained by permanent mechanisms for monitoring, institutional learning, and continuous improvement.

This article adopts that perspective to analyze the experience developed in Santa Luzia do Itanhy, a municipality in southern Sergipe State, Brazil. Characterized by a predominance of rural and riverside territories and traditional communities, the municipality expanded the implementation of its full-time education policy between 2023 and 2025, requiring new curricular, methodological, and organizational frameworks capable of responding to the specificities of its educational context.

One milestone in this process was the collaborative development of the syllabus for the diversified curricular components of full-time education, jointly produced by the technical staff of the Municipal Department of Education and the MACETE social technology. The document was subsequently reviewed by the Municipal Council of Education, which approved the MACETE methodology as an official reference for implementing holistic education across the municipal school system. The Opinion recognizes its consistency with Brazil's National Common Curricular Base (BNCC), the principles of holistic education, active learning methodologies, and the educational needs of the territory. It also recommends planned implementation, continuing

professional development, ongoing monitoring, and incorporation into each school's Political-Pedagogical Project.

Alongside implementation of the methodology, an evaluation strategy was developed to generate evidence for improving the public policy. The ex post evaluation involved 98 students enrolled in two municipal schools participating in the initiative and focused on two dimensions considered strategic to holistic education: social-emotional competencies and school retention. The findings indicated satisfactory psychometric consistency for the scales, statistically significant differences between the groups assessed, and a strong association between social-emotional competencies and interest in remaining at school. These results generated relevant information for monitoring, planning, and educational management decision-making.

Accordingly, this article examines how the partnership between the Municipal Department of Education of Santa Luzia do Itanhhy and the MACETE social technology contributed to implementing the municipality's full-time education policy. Particular attention is given to co-production between the third sector and government, the institutionalization of pedagogical innovation, and the role of evaluation as an instrument for strengthening education policy.

Rather than merely describing a successful experience, the article discusses a collaborative governance model that may inform other Brazilian municipalities, especially those facing similar challenges in implementing full-time education. By connecting social innovation, curriculum development, teacher professional development, normative institutionalization, and evidence-based evaluation, the MACETE case shows how cooperation between organized civil society and government can expand the institutional capacities of municipal education systems and contribute to more contextualized, sustainable, and results-oriented public policies.

2 THEORETICAL FRAMEWORK

2.1 PUBLIC POLICY, COLLABORATIVE GOVERNANCE, AND SOCIAL TECHNOLOGIES

2.1.1 Implementation as a strategic stage of public policy

In recent decades, the field of public policy has substantially broadened its understanding of the factors that shape the success or failure of government action. Whereas scholarship long concentrated on policy formulation and decision-making, implementation is now recognized as an equally decisive stage. It is during implementation that the objectives set out in policy documents encounter actual conditions of delivery, available institutional capacities, and territorial specificities.

Implementation is not a mechanical stage: frontline professionals interpret and adapt policy guidelines to the concrete conditions of public service delivery (Lipsky, 1980). In full-time education, this mediation is decisive because extending educational time without reconstructing curricula, spaces, and relationships may simply reproduce the existing school model rather than ensure students' holistic development (Moll *et al.*, 2012; Arroyo, 2012).

This understanding is especially relevant in education. Implementing full-time education requires curriculum reorganization, redefinition of school time and space, continuing teacher professional development, production of instructional materials, stronger pedagogical management, and permanent monitoring mechanisms. The policy's effectiveness therefore depends on coordination among different levels of government, technical teams, education professionals, and partner institutions.

At the same time, recent studies of public governance show that complex social problems can rarely be addressed by government alone. The growing complexity of educational demands has encouraged collaborative models capable of bringing different organizations together to develop shared solutions.

The experience analyzed in this article is situated precisely within this space. Full-time education in Santa Luzia do Itanhy was neither implemented exclusively by the Municipal Department of Education nor delegated to the third sector. Instead, a collaborative strategy mobilized complementary competencies to strengthen municipal

policy while preserving the government's central role in decision-making and in the institutionalization of change.

2.1.2 Collaborative governance and public policy co-production

Transformations in public administration over recent decades have strengthened governance models characterized by cooperation among organizations and social sectors. In contrast to centralized approaches, collaborative governance recognizes that complex public problems require sustained dialogue, shared responsibilities, and the collective construction of solutions.

Collaborative governance encompasses arrangements in which public agencies and non-state actors participate in deliberative processes oriented toward public goals. In the formulation of Ansell and Gash (2008, p. 544), "public agencies directly engage non-state stakeholders in a collective decision-making process." Co-production deepens this relationship: for Ostrom (1996, p. 1073), "inputs from individuals who are not 'in' the same organization are transformed into goods and services."

Extending this discussion, Emerson and Nabatchi (2015) argue that collaborative governance depends on institutional capacities capable of sustaining long-term relationships among organizations. Such capacities include mutual trust, shared objectives, coordination mechanisms, joint knowledge production, and continuous learning.

Within this framework, co-production requires the active participation of different actors in planning, design, implementation, monitoring, and evaluation. The OECD (2011, p. 32) underscores this breadth by defining it as "planning, designing, delivering and evaluating public services which draw on direct input from citizens, service users and civil society organisations."

The relationship between the Municipal Department of Education and the MACETE social technology reflects this perspective. The role of the third sector was not limited to isolated pedagogical activities. Rather, it involved jointly constructing the full-time education curriculum, developing the syllabus for diversified curricular components, producing instructional materials, conducting professional development processes, providing technical support to school teams, and designing evaluation mechanisms to monitor the public policy.

These actions show that the civil society organization's contribution was integrated into government planning, strengthening the institutional capacities of the municipal school system without replacing the responsibilities of public administration. The experience therefore goes beyond conventional service provision and approaches contemporary conceptions of public policy co-production.

2.1.3 Social technologies and context-responsive educational innovation

The concept of social technology¹ became established in Brazil as an alternative to conventional approaches to innovation, emphasizing solutions that are collectively developed, appropriated by communities, and oriented toward social transformation. Unlike conventional technologies, which are often developed in industrial or corporate settings, social technologies emerge through interaction among scientific knowledge, local knowledge, and community participation.

From the Brazilian perspective, social technology combines knowledge, participation, and territorial appropriation, with the potential for reapplication without erasing local specificities (Dagnino, 2014). In MACETE, this orientation engages with problem-posing pedagogy and critical readings of place and territory (Freire, 2019), while structuring Challenge-Based Learning through the phases Engage, Investigate, and Act (Apple INC., 2011; Mello; Almeida Neto; Petrillo, 2023).

In education, social technologies play a strategic role by offering methodologies capable of addressing concrete territorial demands and promoting pedagogical innovation without departing from the principles of public education. They are therefore understood not merely as instructional tools, but as strategies for institutional strengthening, particularly when connected to public policy.

Their distinctive contribution, however, does not lie solely in the methodological proposal. Throughout the implementation of full-time education in Santa Luzia do Itanhhy, the social technology assumed functions related to strengthening the institutional capacities of the municipal school system, contributing to curriculum development, technical assistance, material production, pedagogical support, and results monitoring.

¹ In this article, social technology is understood as a sociotechnical solution developed with the participation of relevant actors and oriented toward social transformation, combining knowledge, collective appropriation, and the potential for context-sensitive reapplication; see Dagnino (2014).

This movement becomes even clearer in the methodology's official recognition by the Municipal Council of Education as a reference for full-time education in the municipal school system. The Opinion highlights its consistency with the BNCC, the principles of holistic education, active learning methodologies, and territorial needs. It further recommends planned implementation, continuing professional development, ongoing monitoring, and incorporation into schools' Political-Pedagogical Projects.

2.2 THE COLLABORATIVE DEVELOPMENT OF FULL-TIME EDUCATION IN SANTA LUZIA DO ITANHY

2.2.1 The municipal context of full-time education

Implementing full-time education is one of the major contemporary challenges of educational management in Brazilian municipalities. Although national guidelines establish principles for students' holistic development, their realization depends on local systems' capacity to build contextualized curricula, reorganize school time and space, promote continuing teacher professional development, and establish permanent pedagogical monitoring mechanisms. The challenge is even greater in small municipalities, where budget constraints, small technical teams, and territorial specificities require innovative solutions to ensure educational quality.

Santa Luzia do Itanhy, located on the southern coast of Sergipe State, exemplifies this context. With a substantial presence of rural, riverside, and Quilombola communities, the municipality has a sociocultural diversity that challenges standardized curriculum models and reinforces the need for education policies capable of engaging with territories and students' lived experiences.

Beyond extending the time students spend at school, the municipality sought to build a new curricular organization capable of promoting contextualized, interdisciplinary, and socially meaningful learning. It was within this context that the partnership between the Municipal Department of Education and the MACETE social technology began.

2.2.2 The partnership between SEMESLI and the MACETE social technology

The MACETE social technology (Mathematics, Arts, Sciences, Entrepreneurship, Technology, and Ethics), developed by the civil society organization The Human Project (THP)², had already been promoting pedagogical innovation in the municipality before the official implementation of full-time education. Its growing collaboration with the Municipal Department of Education of Santa Luzia do Itanhy (SEMESLI) progressively expanded the initiative's role: in addition to pedagogical practices, the team began providing the technical assistance required for policy formulation and implementation.

The partnership brought together curriculum development, continuing professional development, joint planning, production of contextualized instructional materials, pedagogical support, and evaluation. SEMESLI retained responsibility for policy direction and administrative decisions, while MACETE mobilized methodological knowledge and territorial experience. This was therefore not a delegation of public policy to the third sector, but a sharing of competencies oriented toward a common public objective. The arrangement reflects collaborative governance and co-production: organizations with different responsibilities participate in developing, implementing, monitoring, and improving responses to a complex public problem.

2.2.3 The collaborative development of the curriculum syllabus

One of the partnership's central actions was the development of the syllabus for the diversified curricular components of full-time education. The process brought together managers, SEMESLI's technical staff, and professionals associated with MACETE to connect national and local guidelines with the needs of the schools and territories served.

The syllabus organized curricular components and practices around MACETE's methodological principles, the integration of Mathematics, Arts, Sciences, Entrepreneurship, Technology, and Ethics, and the Engage, Investigate, and Act phases of Challenge-Based Learning. It also sought to ensure alignment with the

² Institutional website of The Human Project (THP): <https://thehumanproject.org.br>.

National Common Curricular Base, holistic development, interdisciplinarity, and recognition of local knowledge.

The case broadens the understanding of curriculum development as an exclusively internal responsibility of the state. Without diminishing government's decision-making authority, the experience shows that structured interaction with civil society can add technical and territorial knowledge to policy instruments. The syllabus thus resulted from a process of joint production and was subsequently submitted to public validation bodies.

2.2.4 From pedagogical innovation to public policy institutionalization

Many innovative experiences developed by third-sector organizations remain confined to the duration of individual projects or to the schools directly served. After the curricular proposal and professional development activities had been developed, the methodology was submitted to the Municipal Council of Education of Santa Luzia do Itanhhy.

Opinion No. 02/2025 represents an institutional milestone in this trajectory. In reviewing the proposal, the Council concluded that the MACETE methodology was consistent with the principles of holistic education, aligned with the National Common Curricular Base, compatible with active learning methodologies, and capable of strengthening pedagogical practices contextualized to the municipality. The document also recognized that the proposal promotes inquiry, experimentation, creativity, collaborative work, and social-emotional competencies. It recommended planned implementation, continuing professional development for education professionals, adaptation of pedagogical materials, curricular organization aligned with the methodology, ongoing results monitoring, and incorporation of the proposal into schools' Political-Pedagogical Projects.

From a public policy perspective, this represents the incorporation of a social technology into the official instruments used by the municipality to implement full-time education. This point is particularly significant because it shows that the third sector's role was not confined to parallel projects outside public policy. Knowledge produced through the experience was appropriated by public administration and converted into an official reference for curriculum organization, teacher professional development, and pedagogical support across the municipal school system.

3 METHODOLOGY

3.1 RESEARCH DESIGN

This mixed-method case study, with a predominantly qualitative design complemented by quantitative analysis, examines the implementation of the municipal full-time education policy in Santa Luzia do Itanhy, Sergipe. This methodological choice rests on the understanding that public policy implementation is a complex phenomenon whose analysis requires the articulation of multiple sources of evidence, including institutional documents, administrative records, implementation observations, and indicators generated through evaluation instruments.

The qualitative dimension draws on action research, understood as the production of knowledge associated with intervention and the participation of the actors involved (Thiollent, 2011). The study is also grounded in Brazil's national framework for full-time and holistic education, particularly the Federal Constitution, the National Education Guidelines and Framework Law, the BNCC, and the Full-Time School Program (Brazil, 1988, 1996, 2018, 2023).

The study therefore does not seek solely to assess the effectiveness of a pedagogical methodology. Rather, it examines how a social technology developed in cooperation with the Municipal Department of Education contributed to strengthening institutional capacities related to curriculum planning, continuing teacher professional development, pedagogical support, and the production of evidence for public management.

3.2 RESEARCH CONTEXT

Santa Luzia do Itanhy comprises urban, rural, riverside, and Quilombola communities whose territorial specificities require contextualized practices and continuing teacher professional development. The partnership under study encompassed five integrated areas: collaborative development of the curriculum syllabus; professional development and planning with municipal education professionals; technical assistance to SEMESLI and the schools; production and adaptation of pedagogical materials; and implementation monitoring supported by evaluative evidence.

The process received formal recognition from the Municipal Council of Education, which approved the MACETE methodology as a reference for full-time education in the municipal school system and recommended planned implementation, continuing professional development, adaptation of materials, curricular alignment, monitoring, and incorporation into schools' Political-Pedagogical Projects.

3.3 SOURCES OF EVIDENCE

The study drew on official documents from the Municipal Department of Education; Opinion No. 02/2025 of the Municipal Council of Education; the syllabus for diversified curricular components; technical implementation records; professional development materials; pedagogical monitoring records; and an anonymized database of student evaluation data. Triangulation connected policy formulation, implementation, institutionalization, and monitoring.

3.4 IMPLEMENTATION EVALUATION

Rather than focusing exclusively on academic achievement, the evaluation examined dimensions considered strategic to the consolidation of holistic education, particularly social-emotional development and students' retention in school.

The evaluation involved 98 students regularly enrolled in two municipal schools participating in the full-time education policy, located in the communities of Bom Viver and Pedra Furada. The group comprised students in Grades 1 through 9 and was divided into two analytical segments: the early years of elementary education (Grades 1-5) and the later years (Grades 6-9).

3.5 INSTRUMENTS

The evaluation used a structured questionnaire comprising two sets of indicators, completed by students as a self-assessment. The first was the Social-Emotional Competencies Scale, which addressed manifestations of collaboration, responsibility, and creativity related to students' school experience. The second was the School Retention Scale, comprising five items designed to measure attachment,

motivation to continue studying, sense of belonging, and interest in remaining at school.

Internal consistency was estimated using Cronbach's alpha. The Social-Emotional Competencies Scale yielded $\alpha = 0.80$ and the School Retention Scale $\alpha = 0.83$, values considered adequate for the proposed analytical use. Interpretation followed customary parameters for brief scales, including inter-item correlations between 0.20 and 0.40 and corrected item-total correlations of at least 0.30 (Briggs; Cheek, 1986; Nunnally; Bernstein, 1994).

The indicators represent students' own perceptions rather than direct measures of achievement or causal effects. This distinction frames the findings as evidence for monitoring implementation.

3.6 ANALYTICAL PROCEDURES

The analysis was organized around two complementary dimensions. Qualitatively, documents and records were examined and categorized according to evidence related to curriculum formulation, interinstitutional cooperation, pedagogical implementation, institutionalization, and monitoring. Triangulation made it possible to compare formal prescriptions with records of the implementation process.

Quantitatively, the analysis calculated descriptive statistics for the indicators, internal consistency of the scales, differences between students in the early and later grades, and the correlation between social-emotional competencies and school retention. The findings were integrated with documentary evidence and interpreted as inputs for planning and policy improvement, without attributing causal effects to MACETE.

4 RESULTS AND DISCUSSION

4.1 FROM PEDAGOGICAL INNOVATION TO STRONGER INSTITUTIONAL CAPACITIES

The literature on public policy implementation emphasizes that the effectiveness of government action depends on the institutional capacity built throughout implementation. Beyond providing financial resources or enacting regulations,

implementation requires coordination mechanisms, knowledge production, professional development, and the strengthening of the structures responsible for policy delivery.

From the perspective of collaborative governance, the experience reveals a sharing of competencies between government and the third sector. The Municipal Department retained responsibility for policy direction, while the MACETE social technology contributed specialized technical knowledge related to pedagogical innovation, curriculum development, and implementation monitoring. This interaction expanded the municipal system's capacity to address the challenges of implementing full-time education in a territory characterized by sociocultural diversity and the presence of rural, riverside, and Quilombola communities.

A major milestone was the collaborative development of the syllabus for diversified curricular components and its subsequent approval by the Municipal Council of Education. The Opinion recognizes the MACETE methodology as compatible with the National Common Curricular Base, the principles of holistic education, and active learning methodologies. It recommends adoption by the municipal school system, continuing professional development, permanent monitoring of results, and incorporation of the proposal into schools' Political-Pedagogical Projects.

This institutional recognition demonstrates that an innovation developed within civil society was appropriated by the public education system and transformed into an official reference for policy implementation. The process extends beyond the conventional logic of social projects and constitutes the institutionalization of innovation.

4.2 BUILDING PEDAGOGICAL CAPACITIES FOR HOLISTIC EDUCATION

Another aspect observed during implementation was the strengthening of pedagogical capacities within the municipal school system. Implementing full-time education required common methodological frameworks capable of guiding teachers across curricular components and school contexts.

Building pedagogical capacity went beyond the provision of instructional resources. It involved continuous institutional learning through which teachers, school leadership teams, and Department technical staff collectively developed solutions to

challenges arising during policy implementation. This dynamic is consistent with the principle that “pedagogy should be organized around the principles of cooperation, collaboration, and solidarity” (UNESCO, 2021, p. 4) and reinforces the importance of collaborative environments capable of sustaining change over time.

4.3 EVALUATION AS A PUBLIC POLICY MONITORING INSTRUMENT

The study involved 98 students enrolled in two municipal schools participating in the full-time education policy. It used two scales with satisfactory psychometric consistency: one measuring social-emotional competencies and another examining school retention. Both achieved reliability coefficients considered adequate for educational research ($\alpha = 0.80$ and $\alpha = 0.83$, respectively).

4.4 EVIDENCE GENERATED BY THE EVALUATION

Analysis of the operational indicators showed that 61.8% of students in the early grades met the criterion for social-emotional development, compared with 36.7% in the later grades. Similarly, 67.6% of students in the early grades reported a high level of interest in remaining at school, compared with 20.0% in the later grades. The differences were statistically significant, suggesting that the dimensions examined manifest differently across students' school trajectories.

Another notable finding was the strong positive correlation between social-emotional competencies and school retention ($r = 0.75$). Analytically, students reporting higher levels of collaboration, responsibility, and creativity also tended to express greater interest in remaining at school. Although the cross-sectional design does not support causal claims, the strength of the association indicates that these dimensions should be considered jointly in monitoring full-time education.

4.5 IMPLICATIONS FOR EDUCATIONAL MANAGEMENT

The evaluation's main contribution lies not only in identifying differences among student groups, but especially in producing information capable of supporting public management decisions. Likewise, the association between social-emotional competencies and school retention reinforces the importance of education policies that

integrate cognitive and social-emotional dimensions rather than restricting their focus to conventional academic achievement.

In Santa Luzia do Itanhy, incorporating evaluation into implementation represents an important step toward consolidating a culture of evidence-informed management. The experience shows that social technologies can contribute not only to pedagogical innovation, but also to the development of monitoring and evaluation mechanisms that improve education policy and strengthen its long-term sustainability.

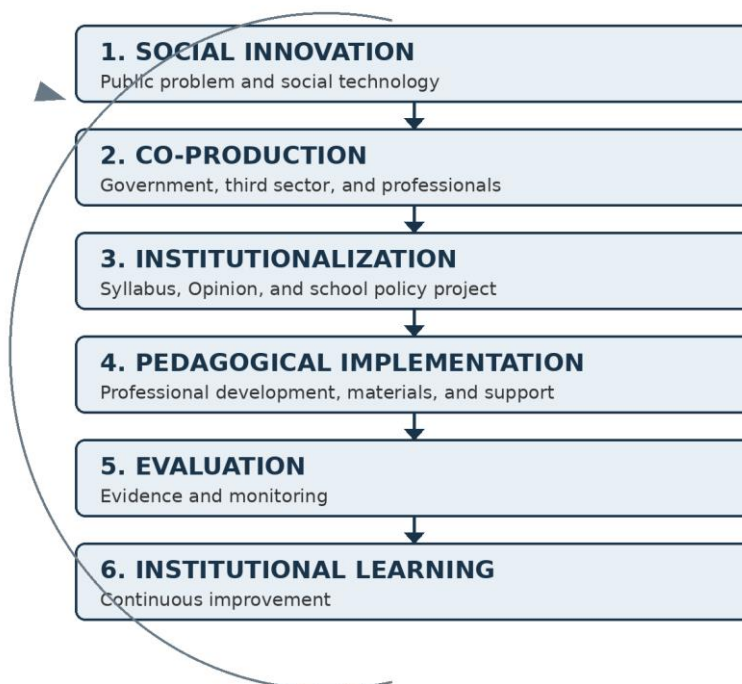
4.6 A THEORETICAL PROPOSITION FOR THE COLLABORATIVE IMPLEMENTATION OF FULL-TIME EDUCATION

The findings allow the analysis to move beyond a description of the experience developed in Santa Luzia do Itanhy. Although the literature recognizes the importance of collaborative governance, co-production, and social technologies in strengthening public policy, analytical models explaining how these elements interact during the municipal implementation of education policy remain scarce.

The experience shows that full-time education was not implemented as a linear sequence of administrative actions, but as a dynamic process of institutional construction in which different organizations shared technical, pedagogical, and managerial competencies around a common public objective. This trajectory supports an analytical model that synthesizes the principal movements observed in the study.

Termed the Collaborative Implementation Model for Educational Public Policies (CIMEPP; MICPPE in the original Portuguese), this framework organizes implementation into six interdependent dimensions understood as a continuous cycle of institutional strengthening.

Figure 1. Collaborative Implementation Model for Educational Public Policies (CIMEPP).



Collaborative Implementation Model for Educational Public Policies
Source: Prepared by the authors based on the case study.

4.7 FIRST DIMENSION: SOCIAL INNOVATION

The process begins with the development or identification of a social technology capable of responding to specific public problems. In the case analyzed, MACETE provided a methodology oriented toward curriculum integration, Challenge-Based Learning, and recognition of educational territories.

4.8 SECOND DIMENSION: CO-PRODUCTION

The second dimension concerns the relationship between government and a civil society organization.

4.9 THIRD DIMENSION: INSTITUTIONALIZATION

The third movement occurs when knowledge produced through co-production becomes part of the official instruments of public administration.

4.10 FOURTH DIMENSION: PEDAGOGICAL IMPLEMENTATION

Once institutionalized, the policy requires permanent operational mechanisms.

4.11 FIFTH DIMENSION: EVIDENCE-BASED EVALUATION.

Implementation produces information that must be systematized.

4.12 SIXTH DIMENSION: INSTITUTIONAL LEARNING.

The final stage involves using the evidence generated to improve the public policy continuously.

This study's main contribution is to demonstrate that social technologies can perform functions extending beyond methodological innovation by strengthening state capacity in the implementation of education policy. The proposed model is neither prescriptive nor universal; rather, it offers an analytical framework that may inform future research and initiatives in municipal systems with similar characteristics.

For small municipalities, CIMEPP suggests a sequence of management questions: Which territorial problem calls for innovation? Which competencies can be co-produced without transferring state responsibility? Through which instruments will the solution be institutionalized? How will teachers and schools be supported? What evidence will be generated? How will that evidence return to planning? Reapplication requires territorial adaptation, clear agreements on responsibilities, participation by school communities, and preservation of public authority over the policy.

5 CONCLUSION

This study analyzed the experience developed in Santa Luzia do Itanh, Sergipe, focusing on the partnership between the Municipal Department of Education and the MACETE social technology. Rather than concentrating solely on pedagogical practices, it examined how a social technology developed within the third sector can

strengthen the implementation, institutionalization, and monitoring of municipal public policy.

The process culminated in the methodology's institutional recognition by the Municipal Council of Education, which approved its use as a reference for full-time education across the municipal school system. This recognition represents an important milestone because it demonstrates the incorporation of a social technology into the official instruments used by government to guide municipal education policy.

Joint analysis of the institutional documents, implementation process, and evaluation findings indicates that the experience's principal contribution lies not only in adopting an innovative pedagogical methodology. Its central feature is the construction of a collaborative implementation model in which government and organized civil society share knowledge, responsibilities, and institutional capacities around common public objectives.

The findings also illuminate the role of social technologies in public policy implementation. Traditionally understood as methodologies designed to address specific social problems, social technologies can also strengthen institutions when connected to government-led planning, professional development, monitoring, and evaluation. This perspective broadens the concept's analytical reach and suggests new avenues for future research.

The study has limitations. The quantitative evaluation was restricted to two schools and used indicators related to social-emotional competencies and school retention; it did not address other relevant dimensions, such as academic achievement, students' longitudinal trajectories, or school management indicators. Furthermore, because the ex post evaluation was based on students' perceptions, the findings must be interpreted in light of this design and do not support causal inferences regarding policy effects. These limitations do not diminish the relevance of the evidence generated. Instead, they indicate directions for future studies that broaden the scope of evaluation, incorporate longitudinal analysis, employ mixed methods, and compare different municipal contexts.

The experience developed in Santa Luzia do Itanhy makes an important contribution to the national debate on full-time education. At a time when many municipalities struggle to translate policy guidelines into consistent pedagogical practices, the case shows that cooperation between government and the third sector can strengthen institutional capacities, generate curricular innovation, consolidate

professional development processes, and produce evidence for educational decision-making. More than an experience report, the study demonstrates that education policies can be constructed collaboratively, contextually, and on the basis of evidence, thereby expanding their prospects for sustainability and social transformation.

REFERENCES

ANSELL, Chris; GASH, Alison. Collaborative governance in theory and practice. **Journal of Public Administration Research and Theory**, Oxford, v. 18, n. 4, p. 543-571, 2008. DOI: 10.1093/jopart/mum032.

APPLE INC. Challenge Based Learning: a classroom guide. Cupertino: Apple, 2011. Available at: <https://www.challengebasedlearning.org/>. Accessed: 30 July 2026.

ARROYO, Miguel G. O direito a tempos-espacos de um justo e digno viver. In: MOLL, Jaqueline *et al.* **Caminhos da educação integral no Brasil**. Porto Alegre: Penso, 2012. p. 33-45.

BRASIL. **Constituição da República Federativa do Brasil de 1988**. Brasília, DF: Presidência da República, 1988.

BRASIL. **Lei nº 9.394, de 20 de dezembro de 1996**. Estabelece as diretrizes e bases da educação nacional. Diário Oficial da União: Brasília, DF, 23 dez. 1996.

BRASIL. **Lei nº 14.640, de 31 de julho de 2023**. Institui o Programa Escola em Tempo Integral. Diário Oficial da União: Brasília, DF, 1 ago. 2023.

BRASIL. Ministério da Educação. **Base Nacional Comum Curricular**. Brasília, DF: MEC, 2018.

BRIGGS, Stephen R.; CHEEK, Jonathan M. The role of factor analysis in the development and evaluation of personality scales. **Journal of Personality**, v. 54, n. 1, p. 106-148, 1986. DOI: 10.1111/j.1467-6494.1986.tb00391.x.

CONSELHO MUNICIPAL DE EDUCAÇÃO DE SANTA LUZIA DO ITANHY. **Parecer nº 02/2025**. Autoriza a execução da metodologia MACETE na rede municipal de ensino. Santa Luzia do Itanhy, 25 nov. 2025.

DAGNINO, Renato. **Tecnologia social**: contribuições conceituais e metodológicas. Campina Grande: EDUEPB, 2014.

EMERSON, Kirk; NABATCHI, Tina. **Collaborative governance regimes**. Washington, DC: Georgetown University Press, 2015.

FREIRE, Paulo. **Pedagogia da autonomia**: saberes necessários à prática educativa. São Paulo: Paz e Terra, 2019.

LIPSKY, Michael. **Street-level bureaucracy**: dilemmas of the individual in public services. New

York: Russell Sage Foundation, 1980.

MELLO, Cleyson de Moraes; ALMEIDA NETO, José Rogério Moura de; PETRILLO, Regina Pentagna. **Para compreender a aprendizagem baseada em desafios**. São Paulo: Processo, 2023.

MOLL, Jaqueline *et al.* **Caminhos da educação integral no Brasil**: direito a outros tempos e espaços educativos. Porto Alegre: Penso, 2012.

NUNNALLY, Jum C.; BERNSTEIN, Ira H. Psychometric theory. 3. ed. New York: McGraw-Hill, 1994.

OECD. **Together for better public services**: partnering with citizens and civil society. Paris: OECD Publishing, 2011. DOI: 10.1787/9789264118843-en.

OSTROM, Elinor. Crossing the great divide: coproduction, synergy, and development. **World Development**, v. 24, n. 6, p. 1073-1087, 1996. DOI: 10.1016/0305-750X(96)00023-X.

SANTA LUZIA DO ITANHY. Secretaria Municipal de Educação. **Ementa para componentes curriculares diversificados em conexão com a metodologia MACETE/THP**. Santa Luzia do Itanhy: SEMESLI, 2025.

SERAFIM NETO, Alberto *et al.* MACETE: tecnologia social de apoio a professores de educação em tempo integral em Santa Luzia do Itanhy, Sergipe. In: **EDUCAÇÃO e transformação social: práticas, pesquisas e reflexões para um mundo em mudança**. [S. l.]: Científica Digital, 2026. DOI: 10.37885/260121121.

THIOLLENT, Michel. **Metodologia da pesquisa-ação**. 18. ed. São Paulo: Cortez, 2011.

UNESCO. **Reimagining our futures together**: a new social contract for education. Paris: UNESCO, 2021. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000379707>. Accessed: 21 August 2026.