

Fostering Educational Innovation through Collaborative Networks: The Case of Fundació Tr@ms

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Abstract

Educational innovation has become a central priority for teachers, schools, and school systems seeking to respond effectively to the social, technological, and cultural challenges of the 21st century. This paper presents a case study of Fundació Tr@ms, a non-profit educational organization based in Catalonia, Spain that promotes innovation, collaboration, and continuous improvement among a network of associated schools. Over the past 25 years, the Foundation has been using collaborative teacher networks, inter-school projects, international partnerships, professional development initiatives, and leadership support, to enact an improvement model that encourages educational transformation while fostering student-centered learning and global citizenship. The study examines the organizational structure, strategic initiatives, and approaches to impacting educational outcomes of Fundació Tr@ms, highlighting how collaborative approaches can be developed to support sustainable innovation in schools. The paper also discusses current challenges facing educational institutions and explores future directions for strengthening innovation ecosystems in education.

Keywords

Innovation, Collaborative Networks, Professional Development, School Leadership, Transformation, Internationalization, Educational Change, Spain

1. Introduction

Education systems worldwide are experiencing profound changes—driven primarily by external influences including technological advancements, globaliza-

tion, social transformation, and evolving labor market demands (e.g., Nieveen & Plomp, 2017). More than ever before, schools are expected to go beyond knowledge transmission to also develop a large set of skills, like critical thinking, creativity, collaboration, communication, and adaptability, that can make students work-force ready (OECD, 2018; UNESCO, 2021).

Research on educational improvement consistently emphasizes that sustainable innovation cannot be achieved through isolated initiatives. Instead, meaningful transformation requires collaboration among educators, distributed leadership, continuous professional learning, and strong institutional networks (Fullan, 2007; Stoll et al., 2006; Hargreaves & O'Connor, 2018).

Fundació Tr@ms was created in 2000 by five cooperative schools in Catalonia that shared a common concern: although digital technologies were beginning to enter classrooms, schools were largely working in isolation. Rather than developing separate innovation strategies, these institutions decided to create a collaborative network through which knowledge, resources, and educational experiences could be shared. Collaboration was therefore not a secondary characteristic of the organization but its founding principle.

Initially, the foundation focused primarily on supporting the pedagogical integration of information and communication technologies (ICT). As educational challenges evolved, the foundation's mission adapted to expand beyond technological innovation to embrace broader processes of educational transformation, including teacher professional development, school leadership, internationalization, collaborative research, pedagogical innovation, and organizational improvement.

The original network of schools has grown into a vibrant educational community dedicated to continuous improvement, and today it includes more than 2,000 teachers and over 20,000 students from 26 schools located throughout Catalonia and the Balearic Islands, autonomous communities in northeast Spain. Fundació Tr@ms brings together a network of publicly funded private schools (*escuelas concertadas*) across Catalonia. The network includes teacher cooperatives, family cooperatives, mixed cooperative models, and privately owned schools. While their governance structures vary, all member schools share a strong social mission and a commitment to providing high-quality, inclusive education. This shared educational purpose constitutes a fundamental criterion for membership and underpins the network's collaborative approach to innovation and school improvement. Today this network connects educators and administrators to work through challenges they face and to share solutions. Additionally, Fundació Tr@ms provides advisory and support services to schools that are at different stages of innovation and transformation processes. These services include strategic planning for innovation, professional development pathways, analyses of technological maturity, and guidance for leadership teams. This advisory dimension reinforces the foundation's role as a key partner in institutional improvement, in addition to facilitating a collaborative network.

In this paper, we present a case study of Fundació Tr@ms. We present what we think are fundamental details about the network, share ways that we have sup-

ported member schools, sought to keep the network sustainable and present some of the challenges experienced along the way. We focus on the question: *What can be learned from understanding the development of the Fundació Tr@ms network, including strengths and challenges, that can help other school leaders support innovative practices?* All of this is meant to share learnings with other educators who are on a similar path toward transforming their schools.

2. Educational Innovation and Transformation

The concepts of innovation and transformation are frequently used in educational discourse; yet they are rarely defined and are often used interchangeably (Campbell et al., 2026; Fullan, 2007; UNESCO, 2021). We argue that they represent distinct yet complementary processes that are important for us to distinguish.

Educational *innovation* generally refers to the introduction of new or adapted ideas, methodologies, technologies, or practices aimed at improving existing educational processes (Campbell et al., 2026; Fullan, 2007). Building from this, we argue that the role of Fundació Tr@ms is not to generate innovation directly within schools, but to enhance their innovative capacity by creating the organizational conditions that enable collaboration, professional learning, knowledge exchange and partnerships. This view is consistent with research highlighting the importance of intermediary organizations and networked collaboration in supporting educational change (Bryk et al., 2015; Rechsteiner et al., 2024). In this sense, the foundation acts as an intermediary organization that strengthens schools' ability to develop, adapt, and sustain educational innovation over time.

Educational *transformation*, by contrast, implies deeper and more systemic change. Transformation challenges traditional assumptions about teaching, learning, assessment, and school organization. It requires a reconfiguration of educational structures, cultures, and relationships in order to respond effectively to emerging social realities and future challenges (Fullan, 2007).

While innovation focuses on improving specific practices within existing systems, transformation seeks to redefine significant components of the educational paradigm. Successful educational transformation therefore depends on the capacity of institutions to create cultures of collaboration, experimentation, and continuous learning (Fullan, 2007; Senge, 2006; Hargreaves & O'Connor, 2018). As a more concrete illustrative example, while a teacher using a generative AI chatbot to review her students' writing might be an innovation, a related transformation would involve that same school shifting all of their assessments to be online and to leverage AI-based evaluation of student work.

Research on educational change consistently shows that merely introducing innovative practices does not automatically lead to educational transformation. Although teachers are often willing to experiment with new pedagogical approaches or technologies, sustaining these innovations and extending them beyond individual classrooms remains a significant challenge. Barriers such as limited time, insufficient professional support, organizational fragmentation, and the absence of collaborative structures frequently prevent isolated innovations from becoming

institutional practices (Fullan, 2007; Hargreaves & O'Connor, 2018). Similarly, students benefit most when innovation is experienced consistently across subjects and educational stages rather than through isolated initiatives led by individual teachers. Consequently, educational transformation requires organizational conditions that enable schools to coordinate efforts, build shared professional knowledge, and sustain continuous improvement over time.

Building on this distinction between innovation and transformation, Fundació Tr@ms, based in Catalonia region (Spain), understands educational innovation as a continuous process of organizational learning rather than the implementation of isolated projects or the simple adoption of new technologies or methodologies. Innovation and transformation are viewed as a collective endeavor that emerges through collaboration among schools, shared professional reflection, and the systematic exchange of knowledge and experience across the network.

Within this perspective, technology is regarded as an enabler of educational change rather than its primary objective. Digital tools are meaningful only when they support pedagogical improvement, strengthen collaboration, and respond to authentic educational needs (OECD, 2023). Consequently, innovation is sustained through iterative cycles in which educators collectively identify challenges, co-design solutions, evaluate whether outcomes address the goals—continuously refining their practices. In this sense, the ultimate target is not innovation itself but the long-term transformation of teaching, learning, and organizational culture through collaborative professional practice.

3. Methods

This study uses a descriptive case-study approach, with Fundació Tr@ms as the unit of analysis (Harrison et al., 2017). Using this approach, we cannot evaluate whether the Foundation directly produces specific educational outcomes. We seek to describe the Foundation's organizational model and illustrate how it does its best to support innovation and educational transformation across a network of schools.

The study is based primarily on internal Fundació Tr@ms documentation, including annual records and summaries, descriptions of educational programs and initiatives, organizational reports, professional-development activities, collaborative and inter-school projects, partnership materials, and publicly available information about the Foundation's work. For this paper, we focused mainly on documentation from the three most recent academic years, while also drawing on materials that provided relevant context about the Foundation's organizational development and continuity¹.

We reviewed and organized these materials to identify the principal areas of activity discussed in the case study: collaborative professional networks, inter-school projects, internationalization, professional development, leadership, and partnerships. We did not conduct a formal thematic analysis, systematic coding

¹Researchers who are interested in reviewing these records can contact the lead author with a request.

process, or independent evaluation. Instead, the documentary review was intended to provide a structured description of the Foundation's activities, organizational model, and areas of development.

The Foundation also collects feedback forms from participants through most of its activities and initiatives. These forms document participants' perceptions of positive aspects of activities, recommendations for improvement, and, in some cases, perceptions related to student participation and motivation, learning experiences, and competence development. Feedback from face-to-face and online network experiences was also considered as additional internal evidence of participants' experiences and perceptions.

Accordingly, the documentation provides evidence of participation, activities, organizational development, and continuity, but it does not permit conclusions about educational impact in the sense of a formal research evaluation. This limitation reflects the Foundation's primary focus on supporting students, educators, and school leaders through its ongoing work, with evaluation to date centered largely on internal learning and improvement. The Foundation recognizes this limitation and has recently begun exploring opportunities to develop more systematic, larger-scale data collection and evaluation.

4. The Fundació Tr@ms Model for Educational Innovation

4.1. Needs-Based Identification and Collaborative Planning

A defining characteristic of Fundació Tr@ms is that its strategic priorities and collaborative activities are driven by the evolving needs of member schools rather than by predefined programs. The foundation continuously identifies emerging educational needs at three interconnected levels: schools as organizations, teachers as professionals, and students as learners. Simultaneously, it considers the impact of broader societal and educational challenges, such as access to technologies, sustainability, artificial intelligence, and inclusion.

Needs identification is an ongoing and participatory process. At the beginning of each academic year, the Foundation collects information through questionnaires sent to school coordinators and directors. It also uses questionnaires with the different teacher departments and collaborative groups. Responses from these surveys are compiled into a spreadsheet, where Foundation leaders look at the topics receiving the greatest level of interest. When planning trainings and events, these results are considered together with the Foundation's strategic priorities.

However, the process is not limited to formal questionnaires. Fundació Tr@ms is very accessible to its schools, and schools frequently communicate needs or propose topics informally. For example, this includes gathering input during meetings, by email, and as part of the interactions the Foundation has when working with school teams in the network. The priorities are then discussed and agreed upon by the Foundation's management team and Board of Trustees.

Based on this evidence, Fundació Tr@ms designs and coordinates professional learning opportunities, collaborative projects, international partnerships, peda-

gogical visits, and innovation initiatives that respond directly to the needs identified by the network. This needs-based approach contributes to high levels of teacher engagement and institutional commitment, as participating schools perceive the proposed activities as relevant to their own educational contexts and priorities rather than externally imposed initiatives.

The collaborative actions described throughout this article should therefore be understood as the result of this continuous cycle of needs identification, co-design, implementation, and reflection, which constitutes one of the key organizational mechanisms through which Fundació Tr@ms works to strengthen schools' capacities to support innovation and achieve transformation.

The strategic direction of Fundació Tr@ms is developed through a collaborative governance model. The Board of Trustees, composed of principals and school leaders from the member schools, is responsible for defining the foundation's long-term strategic plan. This governance structure ensures that the network is led by the schools themselves, allowing strategic decisions to emerge from the collective experience and priorities of the educational institutions it serves. The strategic planning process is further enriched by the active participation of the pedagogical directors of the member schools through dedicated strategic reflection workshops. These collaborative sessions provide opportunities to analyze emerging educational challenges, review ongoing initiatives, identify future priorities, and collectively shape the foundation's strategic agenda. This shared decision-making process ensures that the strategic plan reflects both the institutional vision of the foundation and the evolving needs, expertise, and aspirations of the member schools, reinforcing the network's commitment to distributed leadership and collaborative educational improvement (Figure 1).



Source: Fundació Tr@ms.

Figure 1. Example of a pedagogical visit organized by Fundació Tr@ms at Paidós School. Classroom observations, collaborative reflection, and professional dialogue enable teachers to analyze innovative practices and consider their adaptation to different educational contexts.

4.2. Collaborative Professional Networks

A fundamental principle of Fundació Tr@ms is to foster collaborative learning among educators, school administrators, and associated school boards. Traditional educational systems often foster isolated professional practice, limiting opportunities for teachers to share experiences and learn from one another. A central element of the foundation's strategy is the creation of Collaborative Departments and research teams. These professional learning communities bring together teachers from different schools who share common interests, subjects, or educational objectives.

The collaborative departments function throughout the academic year and create opportunities for collective reflection and professional growth. By facilitating sustained interaction among educators, the foundation contributes to the development of a culture of shared responsibility and continuous improvement. An important characteristic of the collaborative departments is their dynamic nature. Rather than maintaining fixed structures based on the foundation's standardized practices, the professional learning groups evolve according to the emerging needs identified by member schools. Each academic year, teachers and school leaders collectively identify priority areas for innovation, leading to the creation, modification, or discontinuation of collaborative groups. As new educational challenges arise—for example, artificial intelligence, competency-based assessment, or digital well-being—new professional communities are established to explore these topics collaboratively. This flexible structure allows the network to remain responsive to constantly changing educational environments. A defining characteristic of these collaborative and research departments is that they are built upon the expertise of teachers across the network. Rather than relying on external experts, Fundació Tr@ms recognizes and mobilizes the professional knowledge of its member schools by empowering teachers with demonstrated experience and interest in specific areas to lead discussions, share effective practices, co-design resources, and support innovation initiatives. This approach demonstrates to teachers that they are knowledge creators and strengthens the collective professional capital of the network.

Examples of recent departments are:

- The Science Department promotes cooperation through practical scientific experiences, the exchange of teaching resources, and the implementation of shared methodologies.
- The Robotics and STEAM Department focuses on technological innovation and computational thinking.
- The International Department promotes intercultural learning, international collaboration, and the development of global competencies among students and teachers.

These are some examples of collaborative structures that the network utilizes to help facilitate educational innovation while also strengthening teacher capacity

and institutional learning. Although the Science, Robotics, and International Departments represent well-established examples, collaborative groups have addressed a wide range of educational areas throughout the foundation's history, including: Mathematics, Languages, Music, Arts Education, Physical Education, Early Childhood Education, Artificial Intelligence, School Leadership, Inclusion and Diversity, and Digital Competence.

Participation within these collaborative departments is based primarily on professional interest and authentic educational needs rather than administrative obligation. Teachers engage because they encounter similar classroom challenges and recognize the value of learning from colleagues working in different educational contexts. This voluntary participation contributes to the development of trust, professional ownership, and sustainable innovation. These groups of exchange can change membership and focus every year, if needed, enabling the organization to continuously respond to emerging educational challenges while maintaining high levels of teacher engagement.

Collaborative professional learning within Fundació Tr@ms extends beyond regular meetings of these departments, through structured opportunities for peer observation and leadership development. Pedagogical visits are based on a job-shadowing approach. Member schools open their classrooms and share educational practices, innovative methodologies, and successful responses to common challenges, allowing teachers and school leaders to observe authentic learning environments, exchange experiences, and reflect collectively on school improvement. These visits strengthen trust among schools while facilitating the transfer of effective practices across the network.

Leadership development is further supported through an annual residential program for school leadership teams. Held in a collaborative and reflective setting outside the participants' usual working environment, this two-day event combines professional learning, strategic dialogue, and collective reflection on emerging educational challenges. The program encourages school leaders to share experiences, discuss common priorities, and develop a shared vision for innovation and organizational improvement. By creating dedicated spaces for dialogue and reflection among leadership teams, Fundació Tr@ms attempts to reinforce distributed leadership and strengthen the collaborative culture that underpins the entire network.

An additional mechanism designed to strengthen collaborative innovation is the annual meeting of pedagogical leaders from each educational stage (Early Childhood, Primary, and Secondary Education, and Vocational Studies). These meetings bring together pedagogical coordinators from all member schools to reflect on emerging curricular developments, analyze shared educational challenges, and exchange effective practices. Through collaborative workshops and structured dialogue, participants co-design new pedagogical strategies, explore innovative teaching resources, and identify opportunities for joint action across the network. These annual meetings not only facilitate the dissemination of successful

practices but also contribute to building a shared pedagogical vision, strengthening professional relationships, and developing coherence in the implementation of educational innovation across schools.

Complementing these face-to-face collaborative initiatives, Fundació Tr@ms also offers a continuous program of needs-based online professional learning workshops for educators and school leaders. Topics emerge directly from the priorities identified by member schools, ensuring that professional learning remains responsive to authentic educational challenges rather than predetermined training agendas. Sessions typically combine contributions from invited experts with presentations by educators from member schools who share evidence-informed practices and lessons learned from their own innovation processes. This combination of external expertise, peer-led professional learning, and structured collective reflection enables participants not only to acquire new knowledge but also to critically examine their own practice and adapt successful approaches to their local contexts. In this way, the online workshops extend the collaborative learning community beyond physical meetings, reinforcing continuous professional dialogue and contributing to the development of a shared culture of educational improvement across the network.

4.3. Professional Development and Leadership

Beyond PLCs, the foundation offers a continuous program of professional development throughout the academic year, responding to the evolving needs of member schools through workshops, seminars, and collaborative learning opportunities. These activities foster peer learning, reflective practice, and the exchange of innovative educational approaches, contributing to the continuous improvement of teaching and leadership across the network.

This commitment to professional development culminates each July in the annual professional development days, which brings together educators from all member schools to reflect on current educational challenges, share experiences, and explore emerging pedagogical trends. In addition, every two years the foundation organizes a congress, one of its flagship events, attracting more than 1,000 educators from across Spain and abroad. Held over three days, the congress features internationally and nationally renowned keynote speakers, educational researchers, and school leaders alongside presentations of innovative practices developed within the Tr@ms network. A distinctive feature of the congress is that both teachers and students actively participate by presenting projects and sharing their educational experiences, reinforcing the foundation's commitment to collaborative knowledge creation and distributed educational leadership. The congress² also strengthens international partnerships by welcoming schools and educational professionals from different countries, creating opportunities for dialogue and collaboration beyond the local context (**Figure 2**).

²<https://www.youtube.com/watch?v=DD1mUMNXDZI>



Source: Fundació Tr@ms.

Figure 2. Celebration of the 25th Anniversary of Fundació Tr@ms. The anniversary symbolizes the long-term sustainability of a collaborative educational network that has evolved through sustained professional learning, distributed leadership and inter-school cooperation over twenty-five years.

4.4. Inter-School Projects and Student Collaboration

While the collaborative departments primarily serve as professional learning communities for teachers (Stoll et al., 2006), their potential influence extends far beyond professional development. These groups also function as incubators for inter-school educational innovation, where teachers collaboratively design, implement, and evaluate projects that are subsequently carried out across multiple schools. Through this process, professional collaboration is translated into authentic learning experiences that actively involve students from different educational institutions and, in many cases, from different educational stages. See **Table S1** for examples of these projects.

Fundació Tr@ms therefore promotes direct interaction among students through a wide range of collaborative projects that address real-world challenges such as environmental sustainability, scientific inquiry, social emotional learning, digital innovation, intercultural understanding and social responsibility. Working alongside peers from other schools, students develop communication, teamwork, creativity, critical thinking, and problem-solving skills while participating in project-based learning experiences that connect classroom learning with contemporary societal issues (OECD, 2018). These initiatives frequently culminate in joint exhibitions, scientific fairs, artistic performances, competitions, or public presentations, reinforcing both academic achievement and students' sense of belonging to a wider educational community.

Several flagship initiatives illustrate the potential of this collaborative model. The *Emusionat* project³, conceived by the Music Department, brought together teachers and students from different member schools to co-create an interdisciplinary artistic performance presented at the Girona Auditorium. Combining mu-

³<https://www.icsantjordi.org/que-es-emusionat/>

sic, theatre, and visual arts, the project explored social emotional education through the different stages of childhood and adolescence while demonstrating how collaborative curriculum design can generate meaningful educational experiences beyond individual school contexts. The Robotics and STEAM Departments have developed collaborative exhibitions in which students jointly designed a Smart City⁴ and participated in interdisciplinary STEAM showcases focused on addressing real-world technological challenges (Figure 3). In addition, the Early Childhood and Primary English Departments have co-designed online collaborative projects that promote authentic communication in English while fostering interaction among students from different schools.



Source: Fundació Tr@ms.

Figure 3. Teachers and students participating in the Fundació Tr@ms STEAM Fair. The annual exhibition provides an authentic setting for schools to showcase collaborative projects, share innovative educational practices, and celebrate student learning across the network.

A particularly representative example of this collaborative approach is the annual Research Projects Exhibition (Mostra de Treballs de Recerca), held at the Universitat Autònoma de Barcelona (UAB), one of the foundation's longest-running inter-school initiatives. Each year, the event engages more than 1200 students from member schools, while over 50 upper secondary students present outstanding research projects to an audience of peers, teachers, university representatives, and invited experts. Rather than focusing exclusively on the final outcomes, the exhibition encourages students to reflect on the research process itself by discussing the questions that guided their inquiry, the methodological decisions they made, the challenges they encountered, and the knowledge they constructed throughout the investigation. This shared learning environment promotes scientific literacy, critical thinking, communication skills, and academic confidence while providing younger students with authentic models of high-quality research. By transforming individual research projects into opportunities for collective learning, the exhibition strengthens the network's culture of collaboration and reinforces inquiry-based learning as a central component of educational innovation.

These examples demonstrate that collaboration within Fundació Tr@ms often follows a progression from teacher professional learning toward student-centered

⁴https://www.youtube.com/watch?v=aDK_mMFuNy8&t=11s

educational innovation. The collaborative departments are not merely forums for exchanging ideas but laboratories where educators co-create new pedagogical approaches, transform them into inter-school learning experiences, and continuously refine them through collective reflection. In this way, collaboration becomes a critical component behind teachers' professional growth, leading to what we think are innovative practices that catalyze transformations across the network.

5. Internationalization and Global Citizenship

Internationalization constitutes one of the strategic priorities of Fundació Tr@ms. In an increasingly interconnected world, students require competencies that enable them to understand diverse perspectives, communicate across cultures, and participate responsibly in global society.

The foundation promotes internationalization through educational partnerships, international projects, and cultural exchanges. Particular emphasis is placed on developing global competencies such as intercultural communication, critical thinking, empathy, collaboration, and social responsibility. By encouraging engagement with international partners and global issues, Fundació Tr@ms seeks to prepare students for active citizenship in a complex and interconnected world (OECD, 2020).

For Fundació Tr@ms, internationalization extends far beyond student mobility or participation in Erasmus+ programs run by the European Commission. It is understood as a comprehensive strategy for educational improvement through international collaboration, knowledge exchange, and participation in global innovation ecosystems. The foundation actively supports member schools throughout their internationalization processes by organizing professional development workshops, webinars, pedagogical exchanges, international projects, language exchange initiatives, and guidance for European cooperation programs. These activities enable teachers and school leaders to incorporate international perspectives into their educational practices in a way that also seems to strengthen their capacity for innovation.

The foundation has established long-term partnerships with universities, educational institutions, and international organizations that generate authentic learning opportunities for both teachers and students. One of its most significant international collaborations is with the Massachusetts Institute of Technology (MIT) International Science and Technology Initiatives (MISTI) through the Global Teaching Labs (GTL) program. Each year, undergraduate and graduate students from MIT undertake teaching placements in member schools, supporting STEAM education, computational thinking, and inquiry-based learning while gaining valuable international teaching experience. Beyond enriching classroom practice, the program promotes intercultural exchange and provides students and teachers with sustained opportunities to work alongside highly qualified international educators.

Fundació Tr@ms has also developed a broad international network of educa-

tional partners spanning Europe, Asia, Australia, and Latin America. These include organizations such as HundrED (Finland), Red Internacional de Innovación Educativa (RIIE, Spain and Latin America), MIT Spain, Nexus Education (UK), Hub School 21 (France), Grupo Ensinus (Portugal), CIEDA (Argentina), Smiles in Life (India), Learning Forward India (India), Goudriaan (Netherlands), Wensi Education (China), Autens (Denmark), and Future Classroom Lab (European Schoolnet, Belgium), together with collaborations with the School of Education at Indiana University (USA). These partnerships facilitate the exchange of innovative practices, joint professional learning activities, international conferences, research collaborations, and collaborative educational initiatives that continuously enrich the pedagogical work of member schools while connecting local innovation with the international educational community.

A central component of the foundation's international strategy is the Educational Transformation International (ETI) network, an international community of schools and educational organizations that promotes pedagogical exchange, collaborative research, and joint educational projects across different countries. Through ETI, schools participate in international dialogue, share successful educational practices, and develop collaborative initiatives that foster global citizenship while strengthening institutional capacity for innovation.

Fundació Tr@ms has participated in several Erasmus+ Cooperation Partnerships, including IVET, Most Value Play (MVP), and Co.De. (Co-Design Learning). These projects bring together educational organizations from different European countries to co-design innovative pedagogical approaches, develop educational resources, strengthen teachers' professional competences, and promote the exchange of knowledge across educational systems. Within these partnerships, mobility activities involve project partners and teachers from participating schools, facilitating the observation, adaptation, and transfer of innovative educational practices.

Complementing these European partnerships, teachers from member schools have participated in professional learning visits to Liechtenstein during the last three years. These visits included participation in the STEAM Education Fair and pedagogical visits to local schools, providing opportunities to observe innovative teaching practices, exchange experiences with European colleagues, and reflect on their transferability to the Catalan educational context.

Beyond institutional partnerships, the foundation actively promotes international research collaborations that contribute to the dissemination and critical analysis of its educational model. An example is its collaboration with Professor Adam Maltese, from the Indiana University School of Education, whose research focuses on STEM education, educational innovation, and teacher learning. This collaboration, developed through interviews, academic dialogue, and joint reflection on the Tr@ms model, has provided valuable opportunities to analyze the foundation's experience from an international research perspective and to connect its practices with the broader literature on collaborative educational innova-

tion and school improvement.

Fundació Tr@ms also plays an active role in supporting the internationalization of its member schools. The foundation provides guidance and professional learning opportunities related to initiatives such as eTwinning, Erasmus+ cooperation projects, teacher mobility, and Erasmus accreditation, helping schools strengthen their capacity to engage in international educational collaboration. Through its Internationalization Working Group, composed of the international coordinators from member schools, participants regularly exchange strategies, share experiences, and collaboratively explore ways to expand international partnerships, student and teacher exchanges, and global learning opportunities. These collaborative discussions also contribute to strengthening students' and teachers' global competence by integrating international and intercultural perspectives into school development and educational practice. Rather than centralizing international activities, Fundació Tr@ms empowers each member school to develop its own international strategy while benefiting from the collective knowledge, experience, and partnerships of the wider network.

Taken together, these international collaborations demonstrate that Fundació Tr@ms views internationalization not as an isolated program but as a strategic mechanism for organizational learning. By participating in international research, European cooperation projects, global educational networks, and partnerships with universities and innovation organizations, the foundation creates continuous opportunities for potential knowledge exchange, professional growth, and transformation. This outward-looking approach allows local innovation to benefit from global perspectives while simultaneously contributing Catalan educational experiences to the international educational community.

6. Focus on Sustainable Development and Social Responsibility

6.1. Inter-School Projects and Student Collaboration

The United Nations Sustainable Development Goals (SDGs) provide an important framework for contemporary educational innovation (UNESCO, 2021). Through interdisciplinary projects, professional development activities, and curriculum innovation, the foundation encourages schools to address themes such as environmental sustainability, social justice, equality, responsible consumption, and global citizenship. By connecting local educational initiatives with global challenges, the foundation promotes a vision of education that combines academic achievement with ethical responsibility and civic engagement. Many sustainability initiatives are designed and implemented collaboratively by multiple member schools rather than by individual institutions acting independently. This collaborative approach enables schools to exchange successful practices, develop interdisciplinary learning experiences, and engage students in authentic projects addressing the SDGs. Such cooperation reinforces the idea that global challenges require innovative and collective educational responses.

A representative example is the annual STEAM Fair, where students from different member schools present collaborative projects integrating science, technology, engineering, arts, and mathematics to develop innovative solutions to real-world problems. Beyond showcasing technical and scientific knowledge, the event promotes dialogue, teamwork, and the exchange of ideas across schools, fostering competencies closely related to SDG. In this way, collaborative innovation becomes not only a pedagogical strategy but also a vehicle for developing students' awareness of global challenges and their capacity to contribute to sustainable development.

6.2. Governance and Organizational Capacity for Sustainable Innovation

The longevity of Fundació Tr@ms is grounded in a governance model that combines strategic leadership with distributed responsibility across the network. As a non-profit organization, the foundation is governed by a Board of Trustees, which defines its strategic direction and ensures alignment with its educational mission. Day-to-day operations are coordinated by a lean professional team composed of the Executive Director, the Pedagogical Director, both of whom are active teachers with years of experience. These two are supported by a project manager responsible for the foundation's different strategic areas. This structure enables the effective planning, coordination, monitoring, and evaluation of a broad portfolio of educational initiatives while maintaining the flexibility required to respond to the evolving needs of member schools.

Rather than relying on a centralized hierarchical model, Fundació Tr@ms operates through distributed leadership, in which responsibilities are shared among the Board of Trustees, the foundation's professional staff, school leadership teams, and coordinators. Based on participant feedback, this collaborative governance model strengthens schools' sense of ownership, promotes shared decision-making, and improves the likelihood that innovative practices are shared and sustained through collective commitment rather than individual initiatives. Although the foundation operates with a relatively small professional staff, this distributed organizational structure enables it to coordinate a wide range of national and international projects while preserving close relationships with member schools. In this sense, organizational capacity emerges not from the size of the institution but from its ability to mobilize collaborative leadership, build trust across the network, and maintain a shared vision for continuous educational improvement.

A distinctive feature of the organizational model is the network of school coordinators. Each member school appoints a coordinator who acts as the main liaison between the school and the foundation, facilitating communication, coordinating local implementation, and encouraging teacher participation in collaborative projects and professional learning activities. This network creates a continuous flow of information between schools and the foundation, allowing needs to be identi-

fied and addressed efficiently.

The foundation also collaborates with universities, research institutions, businesses, and educational organizations. These partnerships provide access to expertise, resources, and opportunities for innovation that strengthen the overall educational ecosystem.

Beyond promoting sustainability as an educational objective, Fundació Tr@ms has also developed strategies to ensure its own long-term organizational sustainability. The foundation recognizes that sustaining collaborative innovation requires not only educational vision but also robust organizational structures, diversified funding mechanisms, and continuous adaptation to the evolving needs of member schools. Consequently, its sustainability strategy combines educational, financial, and institutional dimensions.

Several initiatives contribute to this long-term sustainability. First, the network continues to incorporate new member schools as long as current members feel they can maintain the quality standards and collaborative culture that characterize the organization. A second key element is systematic diagnosis of schools' emerging needs, which happens through continuous dialogue with member institutions. This regular assessment of needs helps the foundation identify priority challenges so it can design tailored projects, professional development opportunities, institutional mentoring and support services that respond directly to local educational contexts. At an individual level, the foundation can provide personalized educational services—including consultancy, targeted professional development and innovation support.

Fundació Tr@ms continuously reviews its network of educational partners and technology providers while actively establishing collaborations with organizations and companies committed to educational innovation and philanthropic initiatives. With an eye toward growth, the organization seeks to expand the implementation of the SMART School Seal at both national and international levels, positioning it as a framework for continuous school improvement rather than simply a certification process. The Seal is described more in Section 9.

Finally, the foundation actively pursues external funding opportunities through national grants and European collaborative projects, ensuring that innovative initiatives can be developed without relying exclusively on membership fees. Complementary services such as personalized coaching programs, specialized professional learning, and an accredited employment platform that connects schools with qualified educational professionals further reinforce the organization's sustainability while responding to the practical needs of its educational community.

Taken together, these strategies (see **Table S2**) demonstrate that the sustainability of collaborative educational networks depends not only on pedagogical innovation but also on adaptive governance, diversified funding, strategic partnerships, and the continuous creation of value for participating schools. The experience of Fundació Tr@ms illustrates how organizational sustainability can become a critical enabling condition for organizations that are attempting to initiate and

support long-term educational transformation.

7. The SMART School Seal: A Framework for Educational Innovation

One of the most significant initiatives developed by Fundació Tr@ms is the SMART School Seal, an accreditation framework designed to support and recognize educational innovation and excellence in schools. Created by Fundació Tr@ms and Grupo Integral, certified by the Open University of Catalonia (UOC), and supported by Caixa d'Enginyers, the framework aims to establish a common model for promoting educational quality and innovation from a holistic perspective.

Unlike accreditation systems that focus primarily on academic outcomes or administrative compliance, the SMART School Seal adopts a comprehensive approach to school development. The framework evaluates schools across several interconnected dimensions, including strategy and management, educational community, student development, relationships with society, and pedagogical methodologies. This multidimensional perspective reflects the complexity of contemporary educational transformation and recognizes that sustainable innovation requires alignment between organizational structures, leadership, teaching practices, and community engagement (**Figure 4**).

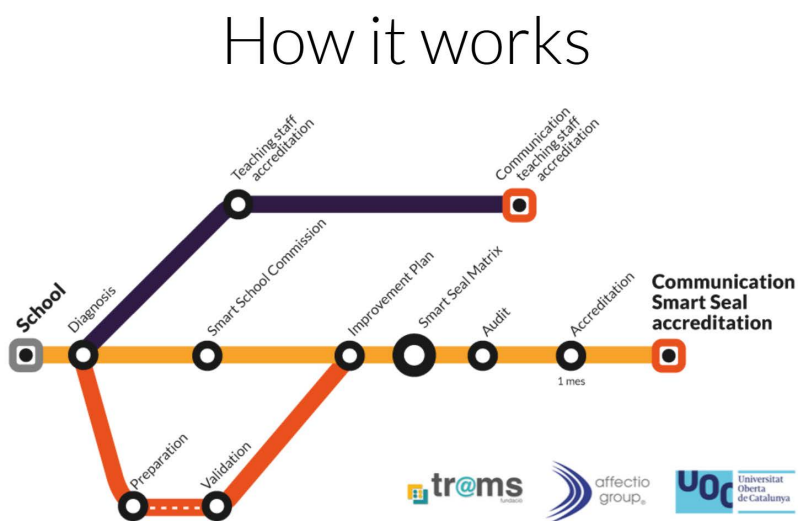


Figure 4. Roadmap of the smart school seal accreditation framework.

An important characteristic of the SMART School Seal is its emphasis on continuous improvement. Schools participate in a process that includes an initial diagnosis, expert guidance, implementation of improvement plans, external evaluation, and periodic renewal of accreditation. Through this process, the foundation combines assessment with professional support, reinforcing its role as both a network facilitator and a partner in institutional development.

The growing number of accredited schools ($n = 60$) suggests that the framework

has become a relevant reference for educational institutions seeking structured approaches to innovation and school improvement in Catalonia and beyond.

The SMART School Seal further illustrates how Fundació Tr@ms has moved beyond promoting isolated innovation projects towards developing comprehensive frameworks in an effort to support long-term educational transformation and quality improvement across schools.

8. Challenges and Future Perspectives

Fundació Tr@ms operates within a rapidly changing educational environment characterized by significant challenges. Technological transformation, social inequality, demographic changes, and the lasting effects of the COVID-19 pandemic continue to shape educational priorities and practices. Educational institutions must also address increasing demands for personalized learning, student well-being, and social emotional development.

At the same time, schools are increasingly trying to respond to growing expectations from families while facing increasing financial pressures and demographic decline. As a non-profit organization, Fundació Tr@ms must ensure its own long-term sustainability while remaining faithful to its mission of supporting schools through collaboration rather than competition. This requires continuously adapting its offerings to the evolving needs of member schools, strengthening a shared sense of belonging and collective responsibility across the network, and fostering trust among all stakeholders.

Emerging technologies such as artificial intelligence further accelerate the pace of change, making strategic foresight and organizational agility essential. Looking ahead, sustaining educational innovation will depend not only on technological advancement but also on maintaining a clear long-term vision, building resilient collaborative ecosystems, and reinforcing partnerships among schools, universities, policymakers, and community organizations.

9. Conclusion

In this paper we shared the case of Fundació Tr@ms as an example of an intermediary NGO that was created to support local schools to develop innovative practices and work toward transforming education. The case demonstrates that the Foundation's efforts to support sustainable educational innovation depends not only on the adoption of new technologies or methodologies but, more importantly, on the creation of collaborative cultures, professional learning communities, and shared visions for change. By connecting schools, universities, educational organizations, and other stakeholders, Fundació Tr@ms has worked for 25 years to build and develop an ecosystem where innovative practices emerge through dialogue, collective reflection, and the exchange of professional knowledge (see **Table 1**).

In our view, the experience also highlights that educational transformation is fundamentally a human process. Motivation, trust, shared leadership, and a

strong sense of belonging within the network are essential conditions for sustaining change over time. As schools face increasing social complexity, teacher workload, technological disruption, and growing demands for personalization and inclusion, collaborative networks may be able to provide the support structures needed to strengthen institutional resilience and foster continuous improvement.

Table 1. Fundació Tr@ms at a glance: Organizational indicators of a collaborative innovation network.

Dimension	Evidence	Contribution to Innovative Capacity Model
Network scope	25 years; 20,000+ students, 2000+ professionals across 26 member schools	Scale, maturity, sustainability of the network
Collaborative Departments & Research Network	~300 teachers in thematic departments/research groups	Sustains professional learning communities, cross-school exchange
School Innovation Coordinators	26 Tr@ms coordinators (1/school)	Local implementation and school-foundation alignment
School Leadership Teams	~140 stage leaders in regular network meetings	Distributed leadership, coordinated decision-making
Pedagogical Leadership Network	36 leaders shaping innovation strategy	Whole-school innovation and strategic development
Management Network	27 managers/admins in governance meetings	Organizational sustainability, administrative alignment
Annual collaborative activity	~40 events/year (meetings, workshops, visits, seminars)	Institutionalizes ongoing collaboration and learning
Pedagogical Visits	130 teachers in 24 - 25; 88 in 25 - 26	Peer observation, classroom innovation
Innovation Seminars & Good Practices	96 teachers/5 case studies/2 experts (24 - 25); 97 teachers/7 schools (25 - 26)	Disseminates innovative practices network-wide
Total structured inter-school projects*	67 coordinating teachers, ~3195 students/year (excl. CiberEthics)	Explicit evidence of connections between classrooms that are part of the network
International Partnerships	MISTI: 10 MIT students, 8 schools/year	Links schools to international expertise
European Projects	Erasmus+ (7 countries); Co.De. pilot: 30 teachers, 60 students	International collaboration, co-design skills
Innovation Ecosystem	Innovation Day: 20 companies (24 - 25), 26 (25 - 26)	Links schools to edtech and innovation partners
Organizational Learning	AI Commission, Good Practice Repository, annual planning	Organizational adaptability, continuous improvement

Note: This represents a combined set of initiatives across the network where schools are interacting.

Although the Fundació Tr@ms model has developed within the Catalan educational context, many of its underlying principles—including collaboration, openness to external partnerships, evidence-informed practice, and responsiveness to schools' evolving needs—likely offer valuable insights for educational systems in other regions. Rather than proposing a model to be replicated unchanged, this case illustrates the importance of adapting collaborative structures to local realities while maintaining a clear long-term vision of educational improvement.

We recommend that future research explore the long-term impact of collabo-

rative educational networks on school improvement, teacher professional development, student outcomes, and organizational capacity. Comparative studies involving similar educational networks in different national contexts could also contribute to a deeper understanding of the conditions that enable sustainable educational transformation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Supplemental Materials

Table S1. Inter-school projects. These projects illustrate how Fundació Tr@ms enhances schools' innovation capacity not by prescribing educational practices, but by designing collaborative structures through which teachers and students co-create meaningful learning experiences across institutional boundaries.

Project	Educational stage	Participation	Innovation mechanism	Competences developed
I-mendevines	Early Childhood	19 teachers, 370 EC students	Exchange of riddles	Early literacy, oral language
Contes.net	Early Primary	25 teachers, 575 students	Collaborative story creation	Literacy, creativity, digital competence
Correu CM-XS	Upper Primary	9 schools, ~450 students	Digital communication between schools	Communication, digital citizenship
English Collaborative Projects	Early Childhood and Primary	23 teachers, ~1800 EC/Primary students	International and inter-school communication	English language, collaboration, intercultural competence
CiberEthics	Secondary	NA	Collaborative ethical inquiry	Critical thinking, ethics, citizenship

I-mendevines involves early childhood education students in collaborative literacy activities through the exchange of riddles between schools. Children actively create, interpret, and share riddles with peers from other member schools, promoting early reading skills, oral language development, and curiosity through playful interaction. *Contes.net* engages primary school students (Years 1 - 2) in the collaborative creation of digital stories. Working with partner schools, pupils develop reading and writing skills while creating illustrations and collectively producing original stories. The project combines literacy development with creativity and digital competence through authentic collaborative learning. *Correu CM-XS* introduces upper primary students to meaningful digital communication by pairing classrooms from different member schools. Students exchange messages, share experiences, and learn to use digital communication tools responsibly within an authentic educational context. *English collaborative projects* connect students from different schools through shared learning experiences, including recipe creation, storytelling performances, virtual meetings, videoconferences, and other communicative activities. These projects provide authentic opportunities for language use while promoting intercultural awareness, collaboration, and digital communication. *CiberEthics* is an inter-school project designed for secondary education that encourages students to discuss contemporary social and ethical issues related to digital citizenship. Through collaborative activities, students exchange perspectives with peers from other schools while developing critical thinking, ethical reasoning, and responsible participation in digital environments.

Table S2. Organizational sustainability strategies implemented by Fundació Tr@ms.

Strategic Area	Main Actions	Expected Outcomes
Network Growth	Incorporation of new member schools while preserving collaborative culture and service quality	Sustainable expansion of the network
Financial Sustainability	Personalized consultancy, training, and innovation support services	Diversified income sources
Quality Assurance	National and international expansion of the SMART School Seal	Continuous school improvement
Strategic Partnerships	Collaboration with educational organizations, universities, technology providers, and philanthropic partners	Access to expertise, innovation, and resources
Needs-Based Innovation	Continuous diagnosis of schools' needs and development of tailored projects and services	Increased relevance and responsiveness
External Funding	Participation in national grants and European projects	Long-term financial resilience
Talent Development	Accredited recruitment platform and customized professional learning programs	Strengthened human capital across member schools