Supporting
School-Wide

Teacher Change
with Creative
Schools Program

SEPTEMBER 2025









### Introduction

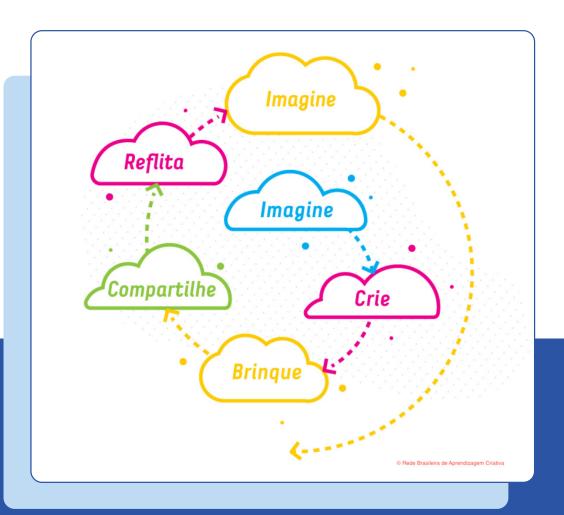
The Creative Schools Program (CSP) of the Instituto Escolas Criativas in Brazil is part of the LEGO Foundation's Tech & Play initiative. The initiative aims to transform primary school learning through play-based pedagogy and technology that promote student-centered, active learning. In 2020, the Brazilian Creative Learning Network (Rede Brasileira do Aprendizagem Criativa [RBAC]) proposed a collaboration with public administrators, school leaders, and teachers to promote policies that encourage such playful learning approaches. With funding from the LEGO Foundation and the Lehman Foundation, CSP was established to help state and municipal education departments build the policy frameworks and teacher support systems needed to make schools more engaging and learner-centered.



# Background Creative Learning Theory

The creative learning approach is based primarily on the work of Seymour Papert and Mitch Resnick, but is also influenced by the ideas of Piaget, Freire, Montessori, and other educational thinkers. Starting with Papert's theory of constructionism, [1] Creative Learning highlights how the experiences of creating something using the Scratch programming language "helps children learn to think creatively, reason systematically, and work collaboratively." [2] As a learning model, CL uses the "4 Ps" of projects, passion, peers, and play. The theory maintains that children learn best when they are building something meaningful to them, whether it's a house, a poem, or a computer program.

Creative Learning views learning as a spiral process rather than a linear one. Learners imagine what they want to create, then build and experiment with materials and ideas, share their creations, and reflect on what they have learned, looping back to reimagine new projects and solutions. Importantly, these steps need not always happen in the same sequence.



# >> Creative Schools Program Model

Launched in 2020 by the Brazilian Creative Learning Network (RBAC), the Creative Schools Program (CSP) supports state and municipal secretariats of education (SOEs) in transitioning to creative learning pedagogies. The CSP program model differs from the Tech & Play projects in Kenya and Rwanda, both of which provided training directly to teachers. CSP leveraged the existing RBAC network to create a two-pronged strategy combining bottom-up and top-down approaches to support implementation.

**Bottom-Up Approach.** CSP encourages all teachers in participating SOEs to engage with RBAC, an online community of more than 40,000 educators across Brazil who share ideas and resources to promote fun, engaging, and meaningful creative learning experiences for children and youth. The RBAC network is an open, inviting online community that aims to offer easy ways for teachers to try innovative, Creative Learning activities and to connect with other teachers across Brazil who are also motivated to try something new.

**Top-Down Approach.** CSP partners with SOEs to design structured professional development programs that train teachers in Creative Learning at the school and municipal levels. Each SOE works with a handful of Focal Schools which get direct support with trainings, on-site coaching, and organized school-wide Creative Learning campaigns.

## >> Creative Schools Program Model

CSP currently works with 16 SOEs to integrate creative learning into Brazil's *Ensino Fundamental I* (primary schools up to age 10). The program's goal is to help SOEs become self-sustaining CL communities, embedding playful and exploratory learning into curricula and school culture. While CSP provides direct support, each SOE maintains autonomy to adapt CL according to its own vision and mission.

CSP organizes its work into three strands of action.

1

**Advocacy and Communication.** Encourages SOEs to review and adapt policies to institutionalize CL, raise awareness, and ensure sustainability, while fostering ownership and commitment.

2

**Professional Development.** Strengthens SOE capacity through three-day trainings for professional development (PD) staff, ongoing online mentoring, and the development of PD programs tailored to CL. CSP also provides manuals and idea books, promotes national campaigns such as *Back to School* and *Hands-on Learning Day*, and supports the creation of School Ambassadors (pedagogical coaches) to mentor teachers.



3

Curricular Integration and Community Engagement. In partnership with RBAC, CSP connects teachers nationwide, promotes citywide *Creativity and Innovation Festivals* (*Feiras de Criatividade e Inovação* [FIC]), and holds contests for Best Lesson Plans to encourage classroom integration of CL and to celebrate student work.

When an SOE joins the Creative Schools Program, it designates a group of between three to 45 Focal Schools to receive intensive support. Teachers at other so-called "Organic Schools" may still participate through campaigns and online resources.

By 2024, 1,255 schools and 26,617 teachers had taken part in CSP activities—including trainings, campaigns, and festivals—reaching an estimated 445,000 students.

## CL Implementation Study

Over the 2023-24 school year, LEPES conducted mixed-methods research drawing from a range of data sources to explore changes related to participation in CSP. At the SOE level, LEPES explored changes in policies and practices related to teacher professional development and Creative Learning. At the teacher level, LEPES explored teachers' attitudes and practices related to the integration of CL in their classrooms.





- **1.** How are SOEs supporting teacher professional development in creative learning?
- **2.** What factors facilitate or inhibit teachers' implementation of creative learning with their students?
- **3.** How do teachers implement and adapt learner-centered pedagogical approaches, and how does implementation vary across teachers and schools?



# Supports for Teacher Professional Development in Creative Learning

SOEs are adapting policies, curricula, and professional development programs to support creative learning, with approaches and intensity varying across systems. Schools that provide on-site pedagogical support, such as School Ambassadors, see higher teacher engagement. However, limitations in SOEs' prior professional development infrastructure, including limited funding, a dependence on short training sessions, and logistical constraints, continue to constrain the program's full impact. Although SOEs can begin to change policies to support an innovative learning model, it is much more challenging for them to redirect financial and human resources to expand their professional development programs.

- SOEs supported the integration of CL as a pedagogical approach across their school systems through adapted policies and dedicated resources. [3-5] Individual SOE approaches and the degree of their policy shifts varied from formally integrating CL into their curricular frameworks, to modifying their official curricula to ensure that the core principles of CL are an approved pedagogical approach, to promoting the inclusion of CL into each school's "Projeto Político-Pedagógico" (School Mission Statement), which guides how curricula are adapted to classroom realities. [6] In addition to policy shifts, some SOEs provided PD to support creative learning and computer science, including providing new PD courses and integrating CL into existing ones.
- SOEs that provided ongoing, school-based pedagogical support helped more teachers become involved with CL. Every school in Brazil has a pedagogical coordinator (Coordenador Pedagógico) and Brazilian legislation also permits schools to have a Support Teacher for Special Projects (Professor de Apoio a Projetos Pedagógicos [PAPP]). SOEs that were able to use these positions to establish School Ambassadors for CL in the Focal Schools saw greater teacher involvement with CL. Schools with an on-site person supporting CL had more teachers engaged in creative learning in the classroom and in the campaigns than did those without school-based support. [4,7]



# Supports for Teacher Professional Development in Creative Learning

- The institutional limitations of many SOEs' prior professional development systems limited CSP's ability to support teachers transitioning to CL. Secondary research on teacher continuing education in Brazil highlights widespread issues such as underfunding, short or poorly structured PD experiences, and weak alignment with curricula goals. [8-10] Because CSP leverages the SOEs' existing teacher professional development systems—providing training and materials to support CL—the program's success is mediated by that prior infrastructure. Interviews with SOE staff, school leadership, and CSP personnel indicated that SOEs often lacked the financial and logistical resources to create the more intensive PD experiences that CSP promotes, such as multi-session PD courses.[11, 12]
- SOEs cannot always commit the necessary financial and human resources to fully redesign their PD systems. Although they joined CSP with the best intentions, many SOEs were initially unaware of the level of financial and staff resources required to fully transform their teacher professional development systems to offer sustained PD courses and provide more coaches and in-school support.









# Factors Facilitating or Inhibiting Teachers' Implementation of CL with Their Students

The CSP model aims to build the capacity of SOE PD training teams to integrate CL into teaching and learning. Findings suggest that SOE trainers recognized and valued CL as distinct from traditional teaching because it emphasizes collaboration and reframes mistakes as learning opportunities. However, many trainers and teachers still struggled to differentiate the instructional design elements that focus CL projects on students' conceptual understanding from general hands-on or creative arts instructional practices.

### SOE trainers value two key distinctions between CL and the traditional transmission model of teaching: [11]

- CL supports collaborative learning using group work instead of isolated, individual learning activities. Trainers valued the shift in classroom dynamics when children worked in groups, and felt that group work helps cultivate student agency and stronger social relationships.
- CL embraces the idea of "productive failure" and learning from mistakes. SOE trainers felt the reframing of "mistakes" (erros in Portuguese) as moments of reflection and learning was an essential element of CL.

SOE trainers reported challenges in helping teachers understand the distinctions between Creative Learning activities and artistic or recreational activities. In interviews, SOE training staff reflected that teachers initially connected CL to the recreational or arts activities they were already doing, and this superficial understanding shaped the initial activities teachers implemented. This initial misunderstanding was often hard to correct.

SOE training staff did not have a clear or consistent understanding of how hands-on activity can create a meaningful learning opportunity within different content areas. [1], 12] A meaningful CL project involves activities

that connect theory—concepts and content—with practice through experimentation, prototyping, and implementation/construction of something. [13, 14] In interviews, most trainers struggled to explain the differences between a CL project and a typical hands-on project where children make something. For example, one trainer recognized that "not every hands-on activity is a CL activity, not every activity gets there .... It's not a simple approach" ("nem toda mão na massa, nem toda atividade prática é a criatividade criativa .... Não é uma abordagem simples") but they struggled to provide a clear explanation of the difference.

The sample unit plans, lesson ideas, and eBooks from CSP helped teachers understand the core principles of the CL approach. [11, 15] Trainers reported that these (and other) instructional resources helped teachers understand the potential and complexity of CL and supported the development of meaningful projects. These resources emphasized the importance of intentional planning and pedagogical mediation by the teacher. Trainers asked for more resources for more arade levels and content areas.



# How Teachers Implement and Adapt Learner-Centered Pedagogical Approaches

and How Implementation Varies Across Teachers and Schools.

- A growing number of teachers are excited to participate in the Creative Learning Community. [5, 7, 14, 16] According to internal CSP data, hundreds of teachers from participating SOEs are joining the RBAC network, participating in online resources, and sharing ideas through the website. Schools receiving direct support have more teachers participating in campaigns and other CL activities than do local schools without such support.
- Teachers value the student collaboration and learning with peers that is central to the CL model. [16] In interviews and observations, teachers reported that CL activities increased engagement, even among quiet students and struggling learners.
- While many activities are hands-on activities, not all are "minds-on" and do not support students in exploring curricular content. [12, 16, 17] Many teachers' projects do not yet meet CL's criteria of a "meaningful project," which requires hands-on and minds-on exploration of curricular content. Instead, activities often focused more on aesthetics and the appearance of final products rather than the process of problem-solving and content exploration. In addition, projects usually are not well integrated with the other curricular topics covered during the school day.
- Adapting CL to the constraints and expectations of formal education is challenging for many teachers. [11, 14, 15] Formal education places heavy demands on teachers regarding what content to cover and when, along with strong pressure to stay on schedule and improve test scores. Since teachers often struggle to create CL projects that integrate curricular content, teachers may view CL as an additional set of activities. Even in highly engaged SOEs, teachers reported fear of reprisals for going off topic or falling behind.

### Discussion



The Creative Schools Program works directly with state and municipal secretariats of education (SOEs) in Brazil to create a sustainable and scalable program to transform all schools into creative learning schools. At the heart of this transformation are empowered teachers creating meaningful learning experiences in core content areas. CSP must strike the right balance between providing sufficient guidance and structure for teachers to fully understand the model and allowing them the autonomy to design experiences that meet their learners' needs. Based on our study, we recommend the following measures.

Build system-level capacity so SOEs can provide the professional development experiences and ongoing support teachers require to integrate CL into their teaching. The CSP model calls for a more robust PD system than many SOEs currently have. SOEs also need a clearer understanding of the effort required to ensure sufficient support.

Ensure that learning experiences and lessons align with the core precepts of CL by providing more explicit instruction for trainers, pedagogical coordinators, professional development staff, and school ambassadors on how to design activities that foster such experiences. Beyond a conceptual understanding of CL, trainers need more direct guidance on designing hands-on and minds-on learning experiences where students encounter productive failure as they try different solutions on the way to a correct one.

Provide more high-quality Creative Learning model unit plans and activity ideas for specific disciplines and grade levels so teachers and trainers can see how Creative Learning strategies support conceptual development and connect to required curricula. Strong examples allow teachers to experiment in their classrooms, study new practices in detail in a realistic context, observe the ways in which new instructional practices engage and support student learning, and envision how they could adapt or modify these strategies to other concepts and content areas.





## Conclusion



Many of the lessons from this study align with broader findings from the Tech & Play initiative across Kenya, Rwanda, and Brazil. But the model of the Creative Schools Program is very different from the other Tech & Play projects in one key aspect. Instead of training teachers directly, the CSP model seeks to strengthen the knowledge and capacity of the state and municipal secretariats of education (SOEs) in Brazil and empower them to train teachers. The CSP has been successful at energizing thousands of teachers to try Creative Learning, but the CSP model faces one significant limitation — current PD structures are insufficient for supporting capacity-building needs and SOEs need external financial support to expand and strengthen their PD structures.



Implementing organizations may wish to consult the complementary brief and reflective tool, Lessons
Learned from the Tech & Play
Initiative: Insights to Inform Program
Design and Implementation, which synthesizes cross-country insights on supporting teacher learning, designing effective instructional materials, aligning technology use with classroom realities, and fostering continuous program improvement.

These resources can guide efforts to design and implement education technology programs that lead to deeper learning outcomes for students.

## **End Notes**

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#### Citation:

Light, D., Silander, M., Breslow, N., Cardarelli, A., & Wedajo, H. (2025). Supporting School-Wide Teacher Change with the Creative Schools Program. New York, NY: Education Development Center.

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