



STEAM
Learning Institute

2024-2025

Executive Summary

**Liberatory STEAM Education
Creates Safe Space for
Educators to Thrive**



In Classrooms Across The Nation...

Students and educators from diverse backgrounds are systematically excluded from the opportunities and success that science, technology, engineering, arts, and math (STEAM) education can offer.

The persistence of traditional pedagogy and curriculum, rooted in Eurocentric values, alienates those whose identities are not reflected in the curriculum. The shortage of educators of color, compounded by high turnover rates stemming largely from inadequate support systems, exacerbates this problem, leaving both promising and experienced teachers feeling disempowered and isolated.

This systematic marginalization demands an urgent and comprehensive response.



OUR MISSION

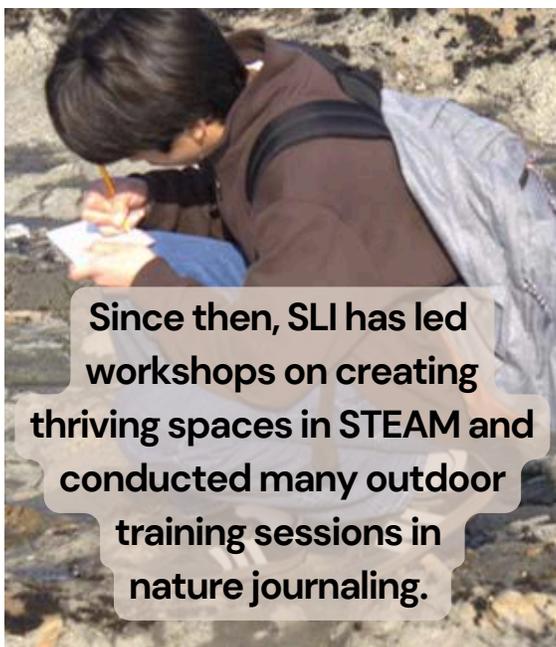


The STEAM Learning Institute's (SLI) mission is to **empower** educators and students through a transformative approach that integrates **culturally-affirming**, nature-based, and anti-racist practices into STEAM education and teacher support. Our innovative programs provide STEAM educators with the community and skills they need to foster **engaging, joyful, rigorous learning environments** grounded in **liberatory, anti-racist curriculum** and pedagogy.

In 2021 and 2022, SLI with USF partnered with Gateway Schools in San Francisco to run summer school STEAM programming

They ran three groups of middle and high school students with USF teacher trainees, grounded in our innovative framework. In 2023, the SLI was funded, and Dr. Imène Ghernati created the Starter Guide on Liberatory STEAM Education based on her experience with Gateway Schools. Due to high interest from educators in our network, in May 2024 and 2025, SLI led a successful pilot program for two cohorts of 12 teachers, titled "Introduction to Liberatory STEAM Education."

Participants engaged in social identity reflections, designed projects for their classrooms, and explored new approaches to attend to their mental health and wellness. Both initiatives received strong feedback from participants and generated requests for SLI to expand our programming to reach more educators and students.



Since then, SLI has led workshops on creating thriving spaces in STEAM and conducted many outdoor training sessions in nature journaling.



Over the next two years, the STEAM Learning Institute aims to:

1. Expand their liberatory STEAM training and teacher training. They plan to partner with more school districts and community centers that work with K-12.
2. Develop community and nature-based initiatives that bring STEAM education directly to students and families in their communities.
3. Conduct participatory research and advocacy to influence broader educational policy and practices by publishing studies on the impact of anti-racist and Liberatory STEAM education
4. Develop a flexible, scalable, liberatory STEAM curriculum for grades 6 - 14.

Transforming STEAM:

Overcoming Marginalization and Eurocentric Pedagogies

The STEAM Learning Institute exists to address four interrelated issues that contribute to the marginalization of diverse educators and their students:



1. Dominance of Traditional Educational Methods:

Conventional education systems often employ 'colonial' pedagogies: traditional educational methods that prioritize Eurocentric knowledge, enforce rigid classroom hierarchies, emphasize standardized testing, and overlook diverse cultural contexts and other ways of knowing, thereby perpetuating systemic inequalities and marginalizing non-European perspectives. These methods commonly fail to engage and inspire both students and educators, particularly those from marginalized backgrounds.



2. Lack of Safe, Anti-Racist Spaces for Marginalized STEAM Educators:

Many STEAM educators, especially those from diverse backgrounds, have not been exposed to liberatory educational experiences themselves or trained to provide them for students. Further, these educators often lack safe spaces to reflect with peers on the complex ways that identity, power, and systemic inequities play out in their lives and classrooms. The dearth of such spaces is one of the prevailing forces driving educators of color out of the profession.

Transforming STEAM: Overcoming Marginalization and Eurocentric Pedagogies

3. Insufficient Attention to the Benefits of Liberatory STEAM Pedagogy

There is insufficient attention by researchers, institutes of higher education, and curriculum publishers to the effectiveness of training and coaching STEAM educators to integrate liberatory pedagogy into their classrooms. This hinders the wider adoption of such innovative practices, as most education systems tend to favor traditional methods that are often harmful to students and educators from marginalized identities.



4. Marginalization in STEAM Fields:

Historically, students from diverse communities have been disproportionately excluded from culturally-affirming STEAM education and related careers. Where wealthier families enroll their children in specialized programs, most low-income and families of color are forced to contend with underfunded and often alienating school programs. The consequences of such disempowering educational experiences become a barrier to obtaining college and other advanced degrees and limits economic mobility.



The training with the STEAM Learning Institute was one of the best experiences that I have had as an educator in a long time. It was well organized, I learned a great deal, and left with enthusiasm as well as something practical that I can do with students. I am greatly looking forward to the next workshop!"



Our Successful Programs & Demand for Growth

Since its inception, the STEAM Learning Institute has provided customized programming for students and educators and received overwhelmingly positive feedback. Participating educators and schools have **expressed strong enthusiasm to continue these partnerships.**

Successful Training on Creating Thriving Spaces in STEAM and Nature Journaling:

In 2024 and 2025, SLI conducted cohorts (online and in-person) of 12 teachers, each titled "Introduction to Liberatory STEAM Education" and "Creating Thriving Spaces in STEAM."

The program featured interactive sessions designed to foster rigorous and culturally affirming STEAM pedagogy and curriculum in 6th- to 12th-grade classrooms. Participants engaged in social identity reflections, explored STEAM identities, and designed practical applications for liberatory pedagogy in their teaching.

In 2025, SLI conducted numerous outdoor training sessions in nature journaling for educators who lack access to quality outdoor education.

The goal is to build a stronger relationship with the environment, one that connects science with history, culture, and community.

Our nature journaling training reimagines what it means to study the environment while staying rooted in science, community and connection to place.



Liberatory STEAM Summer Programs and Teacher Training:

SLI collaborated with Gateway High School in San Francisco to provide summer programming for 65 students in grades 6-9 and student teachers.

The program involved hands-on projects, makerspaces, and fieldtrips that integrated art, science, and math through culturally relevant activities, resulting in high student engagement and improved learning outcomes.

Vibrant Partnerships with Community Organizations:

SLI has established partnerships with educators in California, Pennsylvania, Minnesota, Hawaii, and Florida.

Collaborations with institutions like the San Francisco State University and SF-based Boys and Girls Clubs enabled SLI to offer comprehensive STEAM programs that include mentorship, field trips, and extracurricular activities.



The STEAM Learning Institute aims to significantly grow its programming

The STEAM Learning Institute aims to significantly expand its programming and deepen its impact by providing customized, co-designed teacher professional development, training, and coaching within a liberatory, anti-racist framework.

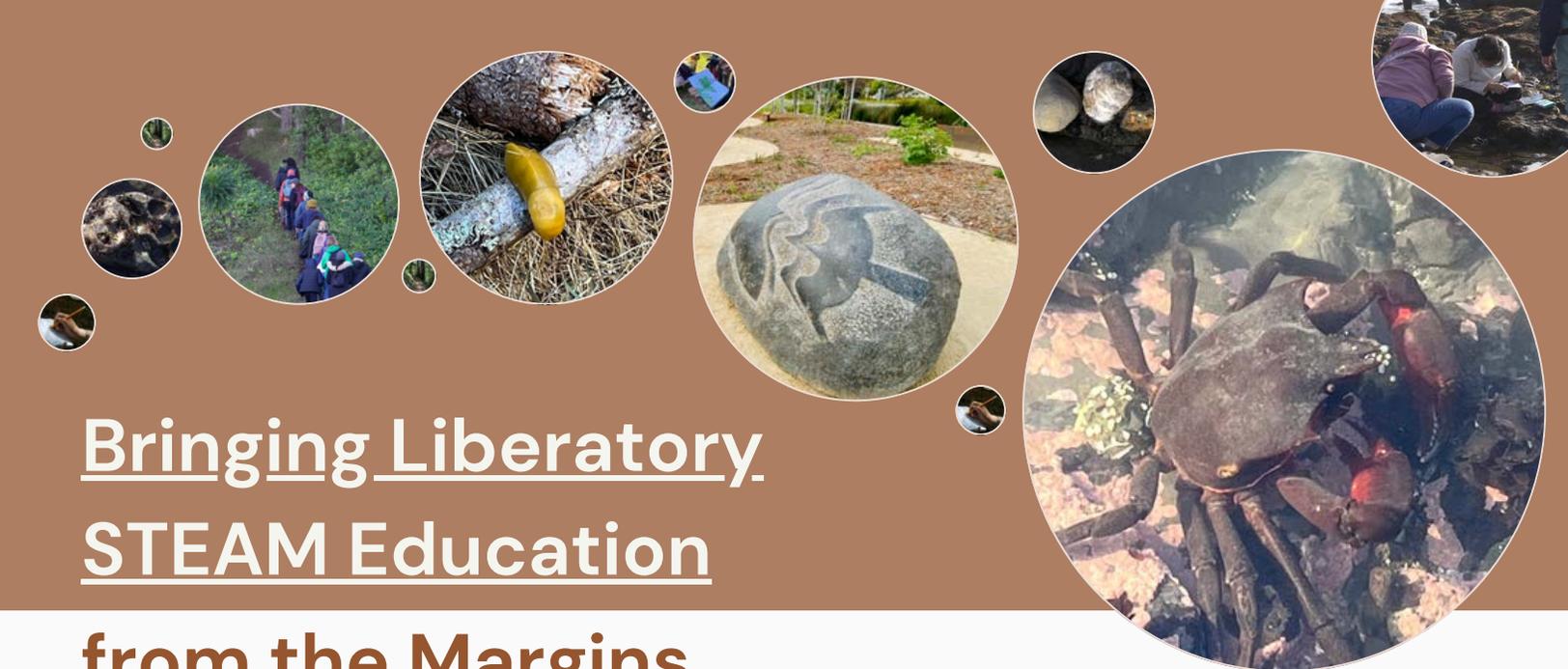
This framework includes mindfulness practices and nature-based contemplative explorations, culturally responsive practices that celebrate the learner's identities, experiential learning experiences that foster a sense of belonging, storytelling, the arts, and more.



...I enjoyed seeing both the models and the applications, and hearing from other more experienced teachers about how they mindfully incorporate Liberatory STEAM education. I'd like to continue researching this and see how I can adapt my curricula accordingly."

The nature journaling workshop was engaging, fun and hands-on. I walked away ready to take my students outside, where they would observe and capture their observations visually and with notes. It made me feel free"





Bringing Liberatory STEAM Education

from the Margins to the Mainstreams

1. Liberatory STEAM Educator Community of Practice

SLI will launch a virtual community of practice for its 50 past participants to support the retention of STEAM educators of color and their effectiveness with students. We will partner with [The Teaching Well](#) to provide educators with culturally relevant social-emotional practices to support their resiliency and wellness.

2. Community and Place-Based STEAM Initiatives

SLI will launch community-based initiatives that bring STEAM education to neighborhoods serving predominantly underfunded communities. These initiatives will include after-school programs, summer camps, and family engagement events, ensuring that STEAM learning is accessible to all students, regardless of their socio-economic background. Community-based programs will also help to build stronger connections between schools, families, and local organizations, fostering a more supportive and engaged educational ecosystem.

3. Research and Advocacy

To influence broader educational policy and practice, SLI will engage in participatory research and advocacy efforts with program graduates and our partners in Hawaii. This will include publishing studies on the impact of liberatory STEAM education and advocating for policies that support inclusive and equitable STEAM

4. Liberatory STEAM Curriculum

SLI will develop a comprehensive, culturally responsive STEAM curriculum that incorporates liberatory and decolonial education practices. The curriculum will be adaptable and scalable, meeting the diverse needs of various communities and grade levels. It will emphasize critical thinking, creativity, and real-world problem-solving, integrating arts to make learning more engaging and relevant to educators and students' lives.

5. Introduction to Liberatory STEAM Education Cohorts

SLI will host three 12–15-person educator cohorts in winter and spring 2026. These programs will empower teachers with the knowledge, skills, and tools needed to implement liberatory pedagogical practices and curriculum in their classrooms.



STEAM Learning Institute Leadership



Imène Ghernati is the funder and the Executive Director of the STEAM Learning Institute. Trained as a veterinarian and a researcher, Imène's career spans academia, the pharmaceutical industry, the Ed Tech industry and serving as an educational stewards in the classroom with new and aspiring STEAM teachers.

Her journey from a successful researcher with multiple patents to an advocate for liberatory education is driven by her passion for teaching and her commitment to equity and inclusion.

Imene has built strong partnerships with schools across the Bay Area and beyond, and maintains close ties with a broad network of STEAM educators nationwide.

Dr. Imène Ghernati, Executive Director

Imène Ghernati

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Education is seriously underfunded, and Science Education is heavily impacted.

The STEAM Learning Institute is dedicated to offering accessible training and scholarships to STEAM Educators.

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Get your school or district partner with us

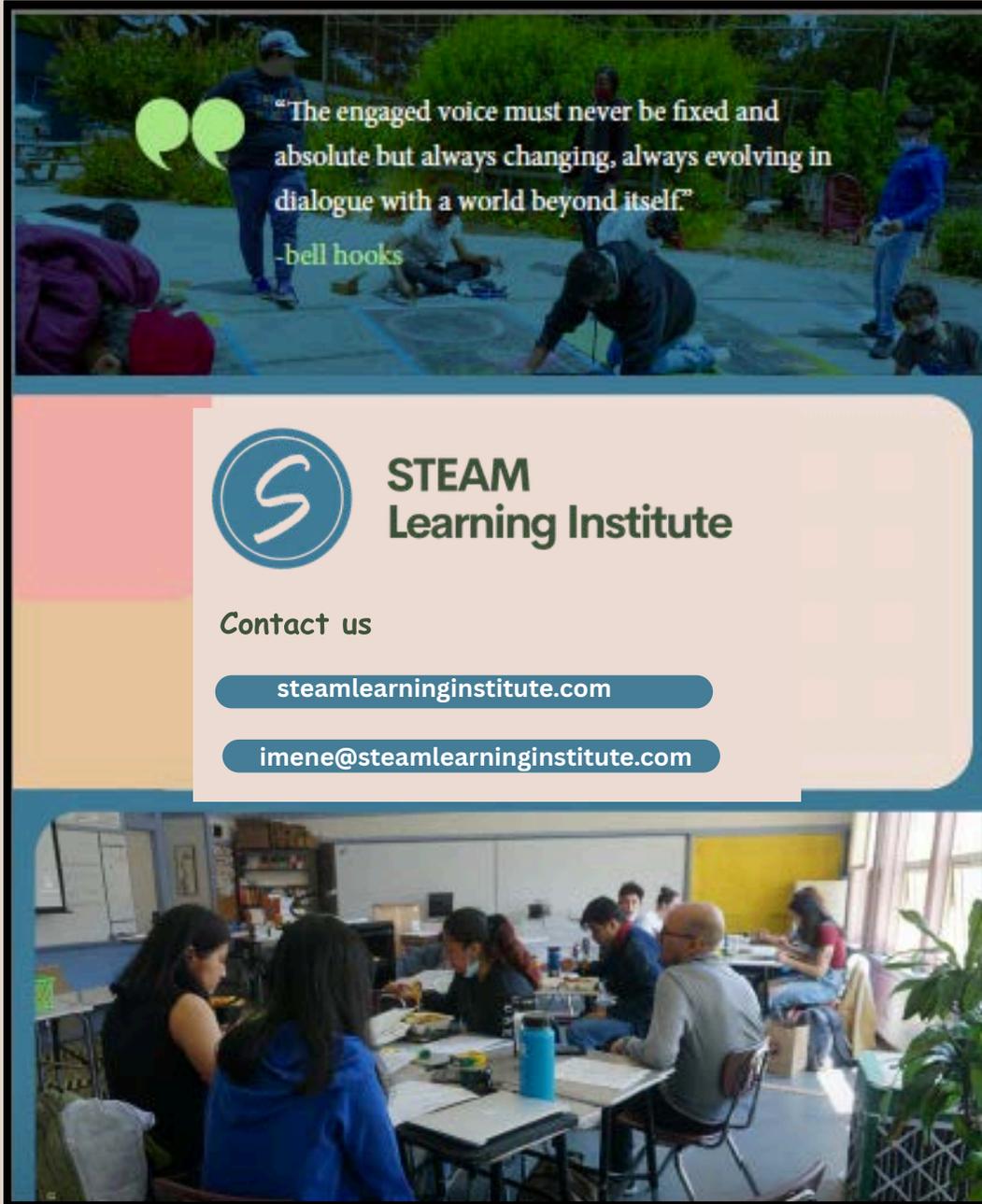


Gift us your space for an educator retreat or convening

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We thank you for your ongoing support



“The engaged voice must never be fixed and absolute but always changing, always evolving in dialogue with a world beyond itself.”
-bell hooks

 **STEAM Learning Institute**

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