

2024 Symposium

PRESENTATIONS

**STEMtastic
Adventures!**

**14th Annual
mEducation Alliance
Symposium**

October 1-4, 2024

www.meducationalliance.org

ARLINGTON VIRGINIA, &
WASHINGTON D.C



**mEducation
Alliance**

<https://meducationalliance.org/>

Editor's Note

Dear Reader,

We are delighted to share with you this compilation of STEMtastic presentation highlights from the mEducation Alliance's 14th Annual Symposium which took place October 1-3, 2024 in Arlington, Virginia, USA.

Not surprisingly, this year's theme, *STEMtastic Adventures!*, attracted enthusiastic attendees from over 40 countries presenting and participating in 19 tracks covering topics such as: *STEM Empowered Educators; Coding and Robotics; Climate Education; Delivering STEM Instruction in Challenging Educational Environments; Mathical Thinking*, and *Science Labs and Museums*.

We were also thrilled to have significant participation from senior government representatives from several African countries including Ghana, Kenya, Liberia, Malawi, and Zambia. Their insights into *National STEM Education* programs provided great value to the overall event.

In addition to panel presentations, attendees benefited from meeting 30+ exhibitors as part of our *STEM Education Village* and being in the audience for the *Dolphin Tank* "pitch" sessions with US government-funded edtech organizations in dialogue with "mock" investors.

In the pages which immediately follow, you'll see reference to two regional STEMtastic Adventures-themed Symposia we are organizing in 2025. If you already don't, please subscribe to our eNews to receive notice when the call for presentation proposals for these and our 15th annual Symposium (October 7-9, 2025) will be posted.

We hope to see you one of these future events!

Anthony Bloome
Executive Director

Effie Akinyi,
Director of Engagement

mEducation Alliance

ITEM

PAGE

Editor's Note	2
Join the Alliance	4
Subscribe to our eNews	5
The 2025 Math power! Prize	6
2025 STEMtastic Adventures! Africa	7
2025 STEMtastic Adventures! with Young Pacific Leaders	8
Amazon & Amazon Web Services	11
Chimple	12
Robots Mali	13
Technovation	14
University of Illinois	15
Change for Children	17
Education Development Center	18
Take Action Global	19
UNICEF	21
Digital Promise	23
EdTech East Africa	24
GIZ	25
Profuturo Foundation	26
Afrika Tikkun Bambanani	28
Benetech	29
Dost Education	30
Educational Initiatives Limited	31
EIDU	32
Haryana School Shiksha Pariyojna Parishad	33
Ideas42	34
Imagine Worldwide	35, 36, 57
Ministry of Education and Training - Liberia & Learning Equality	37
PhET Interactive Simulations - University of Colorado Boulder	38
Robotical	39
SIL International	40, 63
Spix Foundation	41
Team4Tech	42
Ubongo	43
War Child Alliance	44, 45
British Council	47
Foldscope Instruments	48
Global Science of Learning Network	49
Smithsonian Science Education Center	50
Quest Alliance	52
Edutab Africa	54
EdTech Hub	55
eKitabu	56
Onebillion	58
Ori Consultancy	59
Projekt Inspire	60
Punto CREA	61
Save the Children	62
Vex Robotics	64
The Wilderness Technology Alliance	65
Dfusion	67
Early Family Math	68
mEducation Alliance	69
Teach for All - Poland	70
Learning Equality	72
Practical Education Network	73
George Mason University	75
Peace Corps Kenya	76
Hilo Intermediate School	78
Arizona State University	80
Beekee	81
Darsel	82
Purdue University	83
World Learning	84
Brazilian Creative Network	86
World Education	87
National Institute of Education Singapore	89



Join the Alliance!

Our mission is to increase the impact of EdTech stakeholders globally by strengthening formal and non-formal educational systems, especially in low-resource and developing country contexts, with relevant and inclusive events, products and initiatives that are collaborative, not competitive in nature, developed in partnership with our member network and strategic partners.

mEducation Alliance Member Benefits

- Exclusive network access to mEducation Alliance organizational members
- Institutional EdTech highlights are featured in variety of channels (eCafés, [EdTech Connected](#), [eNews](#), [Pulse Media Channel](#));
- Opportunity to have a branded [Pulse Media Playlist](#)
- Matchmaking/networking among Alliance members for potential funding opportunities;
- Co-creation and engagement in Alliance working groups;
- Ground-level engagement in signature activities ([Math Power!](#), [Youth Digital Champions](#), [Global Digital Literacy](#), [Literacy League](#), and [#InspirationSTEM](#));
- Participation in invite-only, VIP annual Alliance member events such as workshops, co-creation sessions, trainings and other professional development opportunities;
- Free admission to all Alliance member events.

Membership in the mEducation Alliance also gives you access to discounted services that the Alliance provides such as:

- Sophisticated technical advice in planning your next physical and/or virtual event;
- Access to our engagement and communications campaign design and production team that can advise on your next webinar, workshop, targeted event, or marketing campaign.



Alliance Members at the World Bank HQ during the 2023 mEducation Alliance Symposium

Interested in becoming a member of the Alliance?

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mEducation Alliance

ABOUT

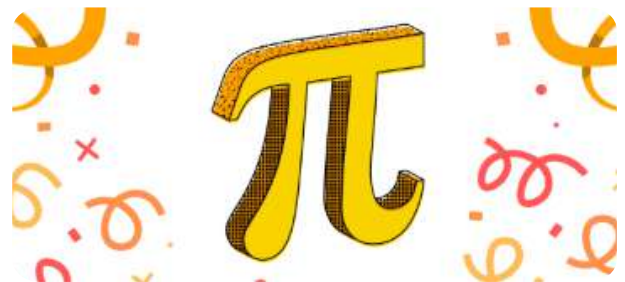
The mEducation Alliance eNews is released on a biweekly basis. Within which, we feature timely and noteworthy tech and non-tech education-focused interventions around various thematic areas, including updates from Alliance Members, upcoming events, and funding opportunities.

Some of our Favorite issues include:

CELEBRATING INTERNATIONAL LITERACY DAY



PI DAY - EVERYTHING MATH EVERYWHERE AND ALL AT ONCE!



SIZZLING SCIENCE! EDUCATION TRACK, SMITHSONIAN, AND MORE!



CELEBRATING WOMEN AND GIRLS IN SCIENCE



CLIMATE EDUCATION RESOURCES FOR A GREEN FUTURE!

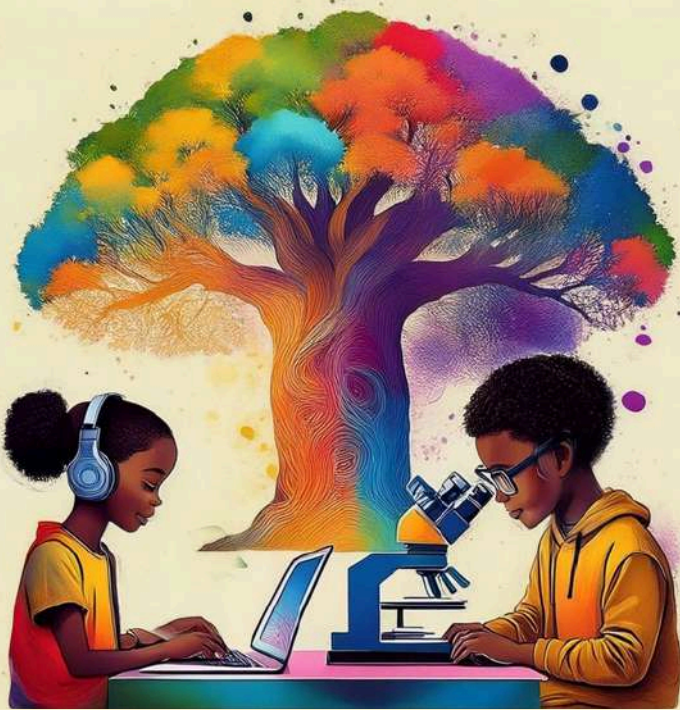


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STEMtastic Adventures! Africa



22 - 25 July 2025
CEMASTE Campus
Nairobi, Kenya

Join us in a gathering of STEMtastic education champions from across Africa!

Event Features:

You'll be joined at this event by 250 - 300 invite-only representatives from:

- Ministries of Education and other policymakers
- Public and private sector organizations
- Practitioners and researchers
- Alliance member institutions, including donors and other funders

Event Timeline:

Call for Presentation Proposals Opens - 1st December 2024
Deadline for Presentation Proposals - 28th March 2025
General Symposium - 22nd - 23rd July 2025
STEMtastic Workshops - 24th July 2025
Networking on a Safari Adventure! - 25th July 2025

Be An Event Sponsor!

- Sponsor Recognition
- Co-host track(s)
- Organize a workshop
- Attend Alliance Member receptions and sessions
- Exhibit booth

Event Formats include:

Thought-provoking and engaging presentations and workshops

Facilitated dialogues with government and donor representatives

STEM Education Village with lots of hands — on booths — and food!

STEMtastic Event Tracks:

- AI and Emerging Technologies
- Accessibility with Limited Resources
- Climate Education
- Foundational Learning
- Inclusive Education
- Mathical Thinking
- Policy and Funding
- Teacher Empowerment
- Youth Employability/Entrepreneurship
- More!

For more information, including how to become an event co-sponsor, email us at medalliance@educationalliance.org

www.educationalliance.org



STEMtastic Adventures! with Young Pacific Leaders

9 - 11 September 2025
Nadi, Fiji

Join us in a gathering of STEMtastic education and youth champions from across the Pacific Islands!

Event Features:

You'll be joined at this event by approximately 150 invite-only representatives, including Young Pacific Leaders, from:

- Youth serving institutions
- Ministries of Education and other policymakers
- Public and private sector organizations
- Practitioners and researchers
- Alliance member institutions, including donors and other funders

Event Timeline:

Call for Presentation Proposals Opens	2 December 2024
Deadline for Presentation Proposals	28 March 2025
General Symposium	9-10 September
STEMtastic Workshops	11 September
Pacific Islands Adventure Networking	12 September 2025

Be An Event Sponsor!

- Sponsor Recognition
- Support Participant Travel
- Co-host track(s)
- Organize a workshop
- Attend Alliance Member receptions and sessions
- Exhibit booth

Event Formats include:

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STEM Education Talanoa with hands – on booths – and food!

STEMtastic Event Tracks:

- AI and Emerging Technologies
- Accessibility with Limited Resources
- Climate Security
- Foundational Learning
- Inclusive Education
- Mathical Thinking
- Policy and Funding
- Teacher Empowerment
- Youth Employability/Entrepreneurship
- More!

For more information, including how to become an event co-sponsor, email us at medalliance@meducationalliance.org

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2024 Symposium Presentations

AI and Other Emerging Technologies

AMAZON WEB SERVICES



AWS EDUCATION EQUITY INITIATIVE PILOT

Institution Primary Location: Seattle, Washington

Region of Impact: Global

Sub-theme(s): AI and Other Emerging Technologies

Abstract: They lead global products initiatives that help enable, democratize and accelerate access to cloud computing and AI especially for organizations building digital learning solutions for underserved communities.



PROJECT DESCRIPTION

AWS EEI Pilot democratizes access to cloud computing including AI for education equity builders by giving free technology and technical advising so they can increase downstream learner access. This means, non-profits, start-ups, social enterprises, government institutions and corporate social responsibility functions of larger for-profits are able to apply for AWS social impact cloud credits to do what they need to do: build or scale digital learning solutions, focusing on a future skill, for underserved and underrepresented learners.



MORE INFORMATION:

[Click here for the Symposium Presentation](#)

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PRESENTERS



Aanya Niaz
Global Education Equity Leader
Email



Tom Berry
Global Leader, Technology Education
Email

CHIMPLE

TRANSFORMING LESSONS INTO ENGAGING GAMES USING GENERATIVE AI

Institution Primary Location: Bengaluru, India
Sub-theme(s): AI and STEM Education and other emerging technologies

Region of Impact: South Asia

Abstract: Chimple.ai transforms traditional learning into interactive, game-based adventures. The tool will engage children in STEM subjects through gamified content, making learning exciting and immersive.

PROJECT DESCRIPTION

Chimple.ai transforms primary education by turning traditional learning materials into engaging, gamified content using AI and Large Language Models (LLMs). Building on the success of the Chimple app, it addresses the lack of localized educational content in low- and middle-income countries by allowing educators to upload materials, which are then adapted into interactive games and quizzes. The platform offers content customization based on students' abilities and cultural contexts, providing personalized learning experiences. With real-time assessment tools and accessibility for diverse learners, Chimple.ai makes education more interactive and enjoyable. As an open-source platform, it empowers educators worldwide to improve learning outcomes.

MORE INFORMATION

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PRESENTER



Srikanth Talapadi
CEO
Email

ROBOTSMALI

USE OF AI TO PRODUCE TRANSFORMATIVE CHILDREN'S LITERATURE ROOTED IN LOCAL CULTURE IN LOW-RESOURCE AFRICAN LANGUAGES

Institution Primary Location: Bamako, Mali

Sub-theme(s): AI and STEM Education

Region of Impact: Sub-Saharan Africa

Abstract: Educational robotics is a mainstay of STEM programs. Robotics kits, curriculum and competitions attract thousands of students to STEM. This panel explores the power of robotics in STEM and its future.

PROJECT DESCRIPTION

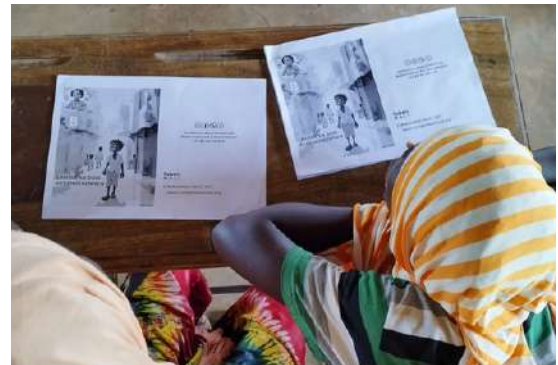
STEM education has emerged globally, focusing on technology and essential skills for today's world. It builds on traditional subjects like math, physics, and chemistry while encouraging students to apply their knowledge to real-world problems. This approach also emphasizes social responsibility, urging students to use their skills for the betterment of humanity. Robotics, which combines computer science, electronics, and teamwork, has become a popular method for teaching STEM concepts. Despite its reach across Africa, the movement faces challenges due to limited resources such as training facilities and qualified instructors. The Robotics Club aims to centralize these resources by creating a training center that offers extracurricular programs in partnership with schools, ultimately integrating STEM into national curricula.

MORE INFORMATION

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Robots MALI



PRESENTER



Michael Leventhal
President of the Board

TECHNOVATION



AI + ENTREPRENEURSHIP + PBL + COMMUNITY = ENDURING STEM TASTIC ADVENTURES FOR GIRLS

Institution Primary Location: Remote, USA
Sub-theme(s): AI and STEM Education (and other emerging technologies)
Region of Impact: Global
Abstract: Girls from 65 countries, supported by a caring network, build AI + app solutions to problems. They often continue to study STEM in university and engage in incredible long-term STEMtastic adventures.



PROJECT DESCRIPTION

Technovation empowers girls to become leaders and innovators by providing tech education and fostering an entrepreneurial mindset. As the world's largest tech entrepreneurship competition for girls, it helps teams create mobile or web apps that address real-world problems aligned with the UN SDGs. With a curriculum of over 40 hours, Technovation boosts participants' interest in STEM and entrepreneurial skills. Over the past 18 years, it has reached over 400,000 girls in more than 120 countries, significantly increasing their pursuit of STEM careers. In 2023, Technovation partnered with UNICEF and Google to launch the AI Forward Alliance, aiming to empower 25 million girls globally. Success stories from alumnae, like Atwiine from Uganda and Dorcas from Kenya, illustrate the program's impact, with many reporting increased interest in STEM and technology careers after participating. Through community support, Technovation seeks to close the gender gap in STEM.



MORE INFORMATION

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Rebecca Anderson
Senior Director of Program

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



STRENGTHENING LEARNING EQUITY FOR STEM THROUGH TECHNOLOGY: A COMPARATIVE ANALYSIS FROM LATIN AMERICA

Institution Primary Location: Urbana, Illinois, USA

Sub-theme(s): AI and STEM Education (and other emerging technologies), Digital Literacy

Region of Impact: South America, Central America, The Caribbean

Abstract: This session presents an analysis of ICT policies that enhance STEM education, promote digital literacy, and address learning equity in Latin America and the Caribbean.

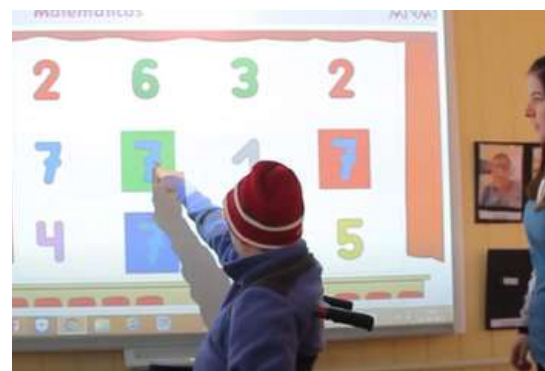
PROJECT DESCRIPTION

This research examines national education policies in twelve Latin American and Caribbean countries, focusing on how they address learning equity in technology implementation for education. While policies clearly outline areas like infrastructure and pedagogy, they often neglect equity considerations for marginalized learners and effective monitoring of their progress. Findings are categorized into four domains: infrastructure readiness, digital literacy in STEM, public-private partnerships, and learning equity. This study provides a framework for evaluating and improving ICT policies to foster inclusive STEM learning environments, aligning with the global commitment to SDG4.

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PRESENTER



Santiago Ospina Tabares
Ph.D. student -
Research Assistant

Climate Education

CHANGE FOR CHILDREN



CLIMATE CHANGE EDUCATION MOOC IN CENTRAL AMERICAN INDIGENOUS COMMUNITIES

Institution Primary Location: Edmonton, Canada

Sub-theme(s): Climate Education

Region of Impact: Central America

Abstract: Our presentation will focus on our Climate Change Education MOOC for teachers using indigenous knowledge and delivered in indigenous languages in some of Central America's most remote schools.



PROJECT DESCRIPTION

This project equips teachers in Guatemala and Nicaragua to integrate Climate Change Education (CCE) into their classrooms using a new MOOC on the RACHEL digital library. In partnership with Mundo Posible, Change for Children (CFC) will pilot the course in 30 schools, training 90 teachers on innovative methods that combine Indigenous knowledge and Western science. After the pilot, the course will be rolled out to 100 schools, with all content made open-source. Building on CFC's decade-long work using RACHELs in marginalized communities, the project will enhance climate change instruction and leadership development, particularly for girls, using over 600 RACHEL learning labs across Central America.



MORE INFORMATION

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PRESENTERS



Tony Llorente
Coordinator for Results, Monitoring
and Communication - Nicaragua
Email



Juan Reanda
Training and Development
Coordinator

EDUCATION DEVELOPMENT CENTER



GLOBAL LEARNING AND OBSERVATIONS TO BENEFIT THE ENVIRONMENT

Institution Primary Location: Waltham, USA

Sub-theme(s): Climate Education

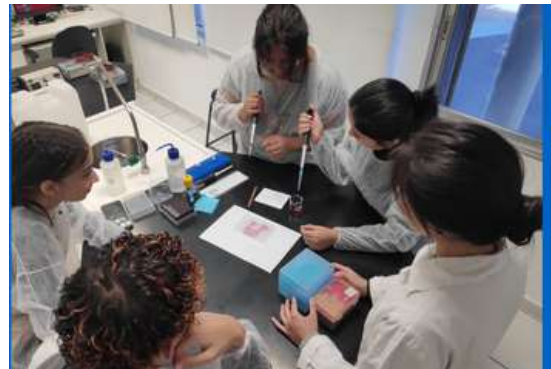
Region of Impact: Global

Abstract: GLOBE is an international science and education program that focuses on promoting scientific literacy and building connections between people passionate about the environment.



PROJECT DESCRIPTION

The GLOBE (Global Learning and Observations to Benefit the Environment) Program is an international science and education program that focuses on promoting scientific literacy and building connections between people passionate about the environment. GLOBE has three primary goals: increasing environmental awareness, contributing to increased scientific understanding of the Earth and supporting improved student achievement in science and mathematics. By participating in GLOBE, students, teachers, researchers and lifelong learners can connect with the program's global community.



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PRESENTER



Rebecca Lewis
Managing Project Director

TAKE ACTION GLOBAL



CODING FOR CLIMATE: CONNECTING CLASSROOMS TO TAKE ACTION FOR THE PLANET

Institution Primary Location: Clearwater, FL, USA

Sub-theme(s): Climate Education

Region of Impact: Global

Abstract: Ideas presented in this session prioritize cultivating a community of climate education and STEM partners and experts whose diverse perspectives inform and enhance the learning experiences of all.



PROJECT DESCRIPTION

The Coding for Climate project united over 3,000 K-12 classrooms from 115 countries to explore climate action through coding. Participants engaged in environmental topics across various subjects, selecting solutions like Minecraft, Scratch, and web design. The initiative included collaboration among classrooms and culminated in an online Earth Day celebration showcasing student projects. Developed by Take Action Global (TAG), a non-profit dedicated to climate action and equitable education, this project has reached over 4.8 million students and educators worldwide. TAG collaborates with organizations like LEGO, NASA, and the Jane Goodall Institute, and in 2023, the World Economic Forum recognized the Climate Action Project as an Education 4.0 Lighthouse, highlighting innovative approaches to childhood learning.



MORE INFORMATION

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PRESENTERS



Jennifer Williams
Executive Director

Coding and Robotics

UNICEF



TINKERING WITH TECH: INNOVATING & DEVELOPING 21ST CENTURY SKILLS FOR TEACHERS AND STUDENTS

Institution Primary Location: New York, U.S.A.

Sub-theme(s): Coding and Robotics Showcase,
Making STEM Accessible (equity, diversity, learners
with disabilities, non-formal education)

Region of Impact: Global

Abstract: The project supports teachers to guide
their students to use a playful and experimental
approach to solving challenges using micro:bits,
developing 21st century skills & instilling a love for
STEM.



PROJECT DESCRIPTION

The "Tinkering with Tech" project aims to equip students with essential 21st-century skills through hands-on, interdisciplinary learning that integrates coding and robotics with core subjects like math and science. Research indicates that such engagement enhances cognitive development, fosters problem-solving, and boosts interest in STEM, especially among girls. By empowering teachers and school leaders, the initiative promotes the development and transfer of these skills. Launched by the UNICEF Global Learning Innovation Hub in collaboration with the Micro:bit Foundation, the project will initially be implemented in Montenegro, the Maldives, Honduras, and Vietnam, creating a model for transformative education.



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PRESENTER



Juan Pablo Giraldo
Education Specialist

Digital Literacy

DIGITAL PROMISE



CHALLENGE-BASED LEARNING FOR GLOBAL STEM SKILLS

Institution Primary Location: Washington, DC
Sub-theme(s): Digital Literacy, STEM Empowered Educators, Climate Education, or Making STEM Accessible

Region of Impact: Global

Abstract: Challenge-based learning takes students on an adventurous journey of discovery and creative problem-solving that equips them with the global competencies and STEM skills they need to thrive.



PROJECT DESCRIPTION

Digital Promise is a global leader in Challenge-Based Learning (CBL), which empowers students to tackle real-world issues aligned with the UN Sustainable Development Goals (SDGs). Through the Ciena Solutions Challenge, students worldwide design solutions to these challenges, with winners receiving \$2,500 sustainability awards. CBL promotes creativity, critical thinking, collaboration, and STEM skills, while aligning with the DigComp framework for digital competencies. Digital Promise provides free professional development, mentoring, and resources to support educators and students in project-based learning. These resources include project samples on SDG topics, STEM education tools, and multilingual facilitation materials to guide CBL stages: engage, investigate, and act.



MORE INFORMATION

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PRESENTERS



April Williamson
Project Director
Email



Karissa Bowen
Senior Project Manager, Ciena
Solutions Challenge



Shayla Cornick
Director of R&D, Edtech and
Emerging Technologies

EDTECH EAST AFRICA

The logo for EdTech East Africa, featuring the text "EDTECH" in a large, bold, white font above the text "EASTAFRICA" in a smaller, white font, all set against a solid orange background.

STEMTASTIC ADVENTURES: A COLLECTIVE ACTION APPROACH

Institution Primary Location: Nairobi, Kenya

Sub-theme(s): Digital Literacy

Region of Impact: Sub-Saharan Africa

Abstract: STEMtastic Adventures falls into the realm of adaptive problems that cannot be solved by an individual entity. There is collective effort required to address the ecosystem for solutions to work.



PROJECT DESCRIPTION

Most LMICs face challenges with infrastructure, policies, and resources for promoting STEM education, despite its inclusion in core curricula. STEMtastic Adventures addresses this by offering games and activities that teach STEM concepts, problem-solving, and sequencing, fostering early interest and proficiency. EdTech East Africa, a community of over 3,800 actors, unites educators, innovators, policymakers, and stakeholders to leverage technology for improved, inclusive education across the region. The group fosters collaboration, innovation, and collective action to build an evidence-driven approach to technology-enabled learning. Key STEM collaborators include the Centre for Innovative Teaching and Learning, STEM Impact Centre Kenya, and Girl's Learning Through Technology.



MORE INFORMATION

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[Click here for Video Teaser](#)

PRESENTER



Joan Mwachi
Collective Action Lead

DIGITAL INCLUSION OF STUDENTS WITH INTELLECTUAL DISABILITIES

Institution Primary Location: Bonn, Germany

Sub-theme(s): Digital Literacy, Digital Inclusion

Region of Impact: The Middle East

Abstract: GIZ showcases innovative ways, technology can be leveraged to make STEM learning more accessible and engaging for students with intellectual disabilities.

PROJECT DESCRIPTION

The underrepresentation of marginalized groups, such as persons with disabilities, in STEM deepens biases in AI and creates non-inclusive digital environments. However, digital technology can bridge these barriers and support inclusive STEM education by providing equitable access to resources and tools. The GIZ-Sector Programme Education, in collaboration with GIZ's Global Programme on Inclusion and the PROMISE project in Jordan, is mapping digital innovations for children with intellectual disabilities in public schools. EdTech tools like braille accessories, hearing aid-compatible headsets, and sign language translators already exist, but there is a need for more tools focused on intellectual disabilities. The mapping results will be shared at the mEducation Alliance Symposium and the Global Disability Summit 2025 to promote inclusive EdTech approaches and integrate them into educational projects.

MORE INFORMATION

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PRESENTERS



Susann Gühr
Junior Policy Advisor

PROFUTURO FOUNDATION

BRINGING STEM ADVENTURES TO REFUGEE LEARNERS WITH PROFUTURO MATHEMATICS

Institution Primary Location: Madrid, Spain

Sub-theme(s): Digital literacy, Foundational literacy and STEM, Global science of STEM learning, Making STEM accessible, Making math education magical

Region of Impact: Sub-Saharan Africa

Abstract: UNHCR and ProFuturo introduce ProFuturo Mathematics, a platform supporting math skills for primary learners, implemented in refugee hosting primary schools in Zimbabwe.

PROJECT DESCRIPTION

Founded in 2016, ProFuturo is a digital education program backed by Telefonica Foundation and La Caixa Foundation that aims to bridge the global education gap through technology. It provides a comprehensive solution with online resources, teacher training, offline servers, educational materials, and tablets for primary schools. Since partnering with UNHCR in 2021, ProFuturo has expanded its reach to refugee learners in Rwanda, Nigeria, and Zimbabwe, benefiting over 25,654 children and 985 teachers across 24 schools while funding essential activities like school meals and classroom construction. ProFuturo Mathematics supports primary and lower secondary learners, enabling teachers to monitor student progress via individual accounts. Digital literacy is essential for teachers to utilize these resources effectively, a focus of the program for educators in refugee-hosting communities.

MORE INFORMATION

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PRESENTERS



Mila Goncalves
Hea of Product and Innovation



Conchi Gallego
Global Partnerships

**STEM is Foundational Literacy and
Numeracy**

AFRIKA TIKKUN BAMBANANI



PLAY BASED LEARNING THROUGH TECHNOLOGY

Institution Primary Location: Johannesburg, South Africa

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Sub-Saharan Africa

Abstract: BAMBA LEARN isn't just an app – it's a captivating universe of learning, exploration, and joy. With each swipe, the child inches closer to becoming a confident and curious individual.



PROJECT DESCRIPTION

The Bamba Learn App, designed for children aged 2 to 6, combines play and learning through an internationally and locally accredited curriculum. Interactive games develop essential skills like memory, categorization, phonics, numeracy, problem-solving, and fine motor abilities, while storybooks in multiple South African languages promote reading and language development. The app includes an art board to foster creativity, and tracks each child's progress, ensuring personalized learning. Aligned with Afrika Tikkun Bambanani's mission of inclusive education, Bamba Learn supports both advanced learners and those needing extra practice. Guided by engaging characters, the app enhances learning through weekly themes, empowering children to thrive and preparing them for future success.



MORE INFORMATION:

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PRESENTER



Theresa Michael
CEO
Email

BENETECH

USING BOOKSHARE AND PAGEAI, STUDENTS WITH DISABILITIES CAN LEARN STEM SUBJECTS

Institution Primary Location: South Africa

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Sub-Saharan Africa

Abstract: BAMBA LEARN isn't just an app – it's a captivating universe of learning, exploration, and joy. With each swipe, the child inches closer to becoming a confident and curious individual.

PROJECT DESCRIPTION

The Inclusive EdTech Working group has three subgroups focused on Data and Best Practices, Implementation and Coaching, and Tech Innovations. Each subgroup is comprised of members working on many different initiatives, including EdTech solutions to support accessible STEM content. While we don't have a specific focus on STEM, it is a topic that is discussed throughout the sub working groups.

MORE INFORMATION:

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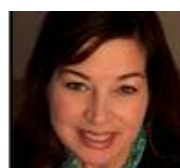
PRESENTERS



Ayan Kishore
CEO



Vanessa Lombardo
Benetech/Bookshare
Email



Lisa Wadors
VP, Programs

DOST EDUCATION

ACHIEVING LANGUAGE READINESS IN EARLY CHILDHOOD - ROLE OF TECH IN PARTNERSHIP WITH COMMUNITY

Institution Primary Location: Delhi, India
Sub-theme(s): Foundational Literacy and STEM
Region of Impact: South Asia

Abstract: A case study from India: Ubiquitous platforms like WhatsApp when combined effectively with community led models enrich early language stimulation at home and close the readiness gap for children

PROJECT DESCRIPTION

Dost Education is a non-profit aimed at ensuring every child is school-ready. It offers parenting programs for low-income Indian families, providing actionable resources to create nurturing environments for young children. Since 2017, Dost has reached over 300,000 caregivers through accessible technology like phone calls and partnerships at various levels, helping them stimulate their children's development effectively. Over 50% of caregivers report positive impacts from applying Dost's recommendations. In 2024, Dost will launch a language readiness program for children aged 3-6, utilizing WhatsApp for resources and offline support at Anganwadi preschools, in collaboration with TalkTogether and Oxford University to integrate evidence-based measurement.

MORE INFORMATION

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PRESENTER



Anar Amin
Chief of Staff
Email

EDUCATIONAL INITIATIVES PRIVATE LIMITED



EI MINDSPARK - IMPROVING FOUNDATIONAL LITERACY AND MATH FOR LOW- INCOME COMMUNITIES IN INDIA

Institution Primary Location: Bengaluru, India

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: South Asia

Abstract: Ei Mindspark's revolutionary approach has doubled learning outcomes for 500K+ underserved children across India, making strides in closing the education gap in foundational literacy and math.



PROJECT DESCRIPTION

India has the world's largest school-going population, but learning outcomes remain poor, threatening opportunities to escape poverty. Ei Mindspark, a Personalized Adaptive Learning (PAL) solution, addresses this by creating individualized learning paths that reinforce foundational literacy and math skills. Verified by a J-PAL study, Mindspark has doubled learning improvements and currently serves over 500,000 students in 9 languages. By 2030, Ei aims to reach 10 million students annually, working to transform education and shift away from rote learning to deeper understanding.



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PRESENTERS



Ritesh Agarwal
Vice President
Email



Paul Flowerman
Advisory Board Member

EIDU

EIDU: THE PATHWAY TO STEM TASTIC ADVENTURES FOR MILLIONS OF CHILDREN

Institution Primary Location: Berlin, Germany
Sub-theme(s): Foundational Literacy and STEM
Region of Impact: Sub-Saharan Africa
Abstract: With EIDU we lay the foundational stones of literacy and numeracy for children in low-resource settings, catapulting them into the world of STEM adventures.

PROJECT DESCRIPTION

EIDU addresses the Global Learning Crisis by transforming educational outcomes for children worldwide through its digital learning platform. This comprehensive solution digitizes national education systems, engaging all stakeholders with tools for students, lesson plans for teachers, state training, and real-time data insights for governments. EIDU's scalable and affordable program builds local capacities for sustainability and currently focuses on preschool to grade 6 in math and reading, laying the foundation for future expansion into broader STEM fields.

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PRESENTERS



Nina Bolte
Head of Learning
Email



Tomas Kessel
GmbH

HARYANA SCHOOL SHIKSHA PARIYOJNA PARISHAD



IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TEACHERS' AND STUDENTS' ENGAGEMENT IN PUBLIC SCHOOLS

Institution Primary Location: Panchkula, India

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: South Asia

Abstract: The presentation focuses on effective technology use in 25,000 Indian elementary classrooms, enhancing student and teacher engagement under the STEMtastic theme

PROJECT DESCRIPTION

In collaboration with educational organizations, the Haryana state government is prioritizing 8,750 government schools to improve foundational literacy and numeracy for nearly one million students in grades 1-5. Aligned with the National Education Policy, the initiative leverages technology, such as interactive learning platforms and real-time monitoring, to enhance learning outcomes and support teachers with effective pedagogy. The project also emphasizes parental involvement and community engagement through regular progress updates and active participation. Divided into seven workstreams, it focuses on academic materials, teacher development, mentoring, monitoring, system evaluation, management, and community outreach.

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PRESENTERS



Parmod Kumar
Program Officer

IDEAS42

IMPROVING TEACHERS' SUPPORT TO LEVELED SMALLER GROUPS IN AN AFTER-SCHOOL REMEDIATION PROGRAM IN SENEGAL USING APPLIED BEHAVIORAL SCIENCE

Institution Primary Location: NYC, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Sub-Saharan Africa

Abstract: Our project aims to identify barriers for teachers to adopt new teaching methods to improve FLN. Insights from this work can be applied to identify barriers preventing teachers from engaging in STEM.

PROJECT DESCRIPTION

Finding Thabo is a play-based game designed to stimulate young children's brains and facilitate caregiver-child engagement. It is distributed in ECD centers across South Africa and a pilot showed promising impact. Nonetheless, behavioral barriers remain that prevent caregivers from regularly engaging with the game, even when they are motivated to do so. Using a collaborative behavioral design approach, we are unpacking the barriers caregivers face, and designing and evaluating interventions to promote play. Behavioral design employs qualitative research and co-creation to develop targeted interventions that can be rigorously evaluated. We will share the results from the RCT showing that the light-touch, low-cost behaviorally designed interventions led to a significant increase in caregiver engagement in play with their children for caregivers in the treatment group.

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PRESENTERS



Carolina Better
Associate Managing Director



Katherine Flaschen
Principal Behavioral Designer

IMAGINE WORLDWIDE



EARLY LEARNINGS FROM SCALING EDTECH IN SUB-SAHARAN AFRICA

Institution Primary Location: San Francisco, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Sub-Saharan Africa

Abstract: Our presentation will share early learnings from scaling Imagine's BEFIT program to all primary schools in Malawi as well as how these learning might address barriers to scale in similar contexts.



PROJECT DESCRIPTION

Imagine Worldwide and its partners provide children in Sub-Saharan Africa with access to foundational literacy and numeracy skills, essential for improving life outcomes across generations. While there is strong commitment to foundational learning in the region, scaling efforts often lack coordination and effective tools. Imagine Worldwide fills this gap as an "ecosystem coordinator," helping governments scale impactful edtech solutions. In 2023, we expanded our work across seven countries, serving nearly 50 times more students. In Malawi, Year 1 of BEFIT reached 300,000 students in 500 schools, with solar-powered systems, 76,000 tablets, and training for 4,000 educators. This presentation will share our lessons on overcoming barriers to scale in similar contexts.



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PRESENTERS



Jennifer Welsh
Head of Business Development



Celeste Lopez
Research Associate

IMAGINE WORLDWIDE



PERSONALIZED EDTECH AND GENDER EQUITY

Institution Primary Location: USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Sub-Saharan Africa

Abstract: We summarize evidence on gender outcomes from five RCTs and the first year of a national rollout in Malawi of a personalized EdTech program and discuss factors contributing to the equitable results.



PROJECT DESCRIPTION

Millions of children, especially girls, lack access to quality education. Educated girls benefit from improved health, delayed marriage, and higher incomes (The World Bank). Five RCTs of a personalized EdTech program in Sub-Saharan Africa showed positive literacy and numeracy impacts for both genders, with girls often seeing greater gains, especially in math. As the program expands in Malawi (500 schools in 2023-24), larger sample sizes may reveal further insights. This presentation reviews gender outcomes from the RCTs and Malawi's rollout, highlighting factors that drive girls' success.



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PRESENTERS



Karen Levesque
Head of Research

MINISTRY OF EDUCATION AND TRAINING

DEPLOYING STEM EDTECH IN LIBERIA'S HIGH SCHOOLS: A MINISTRY OF EDUCATION AND LEARNING UPGRADE PARTNERSHIP

Institution Primary Location: Lesotho

Sub-theme(s): Foundational Literacy and STEM,
#InspirationSTEM is Girl Powered!, Making STEM
Accessible, STEM in Challenging Education Environments
Region of Impact: N/A

Abstract: It enhances participation in STEM subjects from the primary education level to the tertiary education considering marginalized groups. It links all levels of education and training.

PROJECT DESCRIPTION

The STEM3+15 project originated from a collaboration between a woman and two Basotho gentlemen who met at Makerere University during the Universities' Pod launch in January 2023. Their goal is to enhance collaborations in Lesotho, promoting STEM education that benefits both higher education institutions and local schools. The project aligns with the SADC Education for Sustainable Development Regional Strategic Framework (2022-2030) and addresses several Sustainable Development Goals (SDGs), including Quality Education, Clean Water and Sanitation, Affordable Clean Energy, and Climate Action, among others. It emphasizes cooperation in higher education and aims to increase the involvement of girls and marginalized groups in STEM activities. The project's objectives include fostering partnerships among educational institutions, improving STEM participation at all levels, and bridging the digital divide in education.

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MINISTRY OF EDUCATION
AND TRAINING LESOTHO



PRESENTER



Sangay M. Freeman
Director of STEM Education

PHET INTERACTIVE SIMULATIONS, UNIVERSITY OF COLORADO



MULTILINGUAL EARLY MATH WITH PHET: SUPPORTING TEACHERS IN PLAY-BASED EDUCATION WITH INTERACTIVE SIMULATIONS

Institution Primary Location: Boulder, CO, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Global

Abstract: Come learn about open education resources (PhET Interactive Simulations) that engage multilingual learners ages 5-7 and support their deep thinking about number sense in 120+ languages.



PROJECT DESCRIPTION

PhET Interactive Simulations offers free, interactive science and math simulations that are research-based and extensively tested for educational effectiveness. Available online and for download on various devices, these simulations are open source for all students and teachers. To support young learners (ages 5-7) and second language learners, PhET has developed early numeracy simulations and a professional development program for teachers. This program, grounded in discipline-based education research, aims to bridge the gap between practitioners, researchers, and policymakers. Participants will explore early math simulations, promote professional development opportunities for teachers, and collaborate to enhance and scale these resources.



PRESENTERS



Rebecca Vieyra
Director of Global Initiatives

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ROBOTICAL



FROM YOUNG LEARNERS TO AI MACHINE LEARNING - USING PHYSICAL COMPUTING TO TEACH STEM

Institution Primary Location: Edinburgh, Scotland, UK
Sub-theme(s): Foundational Literacy and STEM, AI and STEM Education

Region of Impact: North America, Western Europe, Eastern Europe, Southeast Asia

Abstract: Physical computing enables students to connect the world of sight, sound, and movement into the world of data and algorithms. This session will explore programmable STEM tools for all ages.



PROJECT DESCRIPTION

The focus is on teaching computational thinking and coding using physical computing learning tools in addition to programming on a screen. Starting with five year old children with simple lights, sounds, and movements and progressing to modern-day AI Machine Learning where older learners can create their own classification models for images, sounds and gestures.



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PRESENTERS



Hal Speed
Head of North America



98% OF THE WORLD'S LANGUAGES LACKS A LITERACY GAMES APP. NOW WHAT?

Institution Primary Location: Dallas, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: Global

Abstract: 98% of the World's Languages Lack a Literacy Games App. Now What?

PROJECT DESCRIPTION

98% of the world's 7000 languages have no literacy games app available in the Android Play Store. To respond to this need, SIL created the Alpha Tiles app. Alpha Tiles is a literacy games app that can be created in a one week workshop or via collaboration with SIL staff in a Google Drive project folder. The code is open source. We have created 86 localizations of the app and another 180 localizations are in process. More information is available at <https://alphatilesapps.org/>. We have registered 10,000 hours of play time among 86 languages with a median speaker population of 34,000 speakers. (Note that a large - but unknowable - amount of play time is never registered, as the app is often localized for language communities where internet access is sporadic or inaccessible.) Various primary schools in Indonesia and Mexico are now using the app as part of their school curriculum. We have completed one year long pilot with 185 students in a primary school of Tlacoapa, Guerrero, Mexico, and the students showed substantial improvement across all categories measured.

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PRESENTER



Aaron Hemphill
Mobiles for Literacy Advisor

SPIX FOUNDATION



RESPECT: MAKING DIGITAL COURSEWARE BETTER FOR MOE'S, DONORS, AND DEVELOPERS

Institution Primary Location: Silicon Valley, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: North America

Abstract: When today's Kindergarteners graduate from K12 in 2038, AIs' mental labor and robots' physical labor will be so cheap that humans won't be able to compete. So: what should the Class of 2038 study?



PROJECT DESCRIPTION

Wright's Law predicts that by 2038, AI and robots will make most jobs obsolete, while energy, food, and transport become incredibly cheap. The Class of 2038 Project, funded by the Spix Foundation, seeks to redefine K12 education to prepare today's Kindergarteners not for jobs but for success in a radically different world. Join us in shaping the future of education!



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PRESENTERS



Jim Plamondon
CEO

TEAM4TECH



BUILDING A PARTNERSHIP TO ACHIEVE IMPACT FOR LEARNERS AT SCALE

Institution Primary Location: Menlo Park, USA

Sub-theme(s): Foundational Literacy and STEM

Region of Impact: South Asia

Abstract: Through partnership and co-design, Dost Education scaled their work leveraging mobile technology to serve Indian parents of any literacy level from a small 2017 pilot to reaching over 300k families.

PROJECT DESCRIPTION

In India, over 160 million women are illiterate, including 11 million aged 15 to 24. Many of these women, motivated to provide better educational opportunities for their children, benefit from Dost Education, which empowers parents of all literacy levels with mobile technology and research-backed curriculum to support early childhood education. Since partnering with Team4Tech in 2019, Dost has expanded from serving 10,000 families in Delhi to 300,000 families directly across 120 districts in 9 states, reaching an additional 500,000 families through government partnerships. After achieving their goals, Dost graduated to become a mentor within Team4Tech's NGO alumni network, now serving as a beacon of learning in India's education ecosystem.

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PRESENTER



Julie Clugage
Co-Founder and Executive
Director

UBONGO



CREATING NEW NORMS: EMPOWERING A GENERATION OF NEURODIVERSE LEARNERS WITH INCLUSIVE EDUTAINMENT

Institution Primary Location: Dar es Salaam, Tanzania

Sub-theme(s): Foundational Literacy and STEM, Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education)

Region of Impact: Sub-Saharan Africa

Abstract: Nuzo and Namia, an inclusive edutainment show by Ubongo, builds foundational literacy and problem-solving skills for 6-9 year olds across Africa. The show airs on TV and radio in 10+ African countries

PROJECT DESCRIPTION

Approximately 15-20% of the population is neurodivergent, yet educational resources often overlook these learners. A 2023 survey in Tanzania, Kenya, and Nigeria highlights varying awareness levels and prevalent stigma around neurodiversity. Ubongo aims to address this gap by providing engaging, localized edutainment to over 40 million children in Africa. Since 2022, Ubongo has focused on creating inclusive edutainment through user testing with diverse groups, including refugees and children with disabilities. Their new show for 6-9-year-olds features neurodivergent twins, Nuzo and Namia, who embark on problem-solving adventures while showcasing the strengths of neurodiversity. The show, broadcast in over 10 countries, teaches literacy skills and aims to shift attitudes about disabilities. Initial surveys suggest strong viewer demand for inclusive content. Ubongo plans to share findings from an impact evaluation of the show in Kenya, examining its effects on reading comprehension and attitudes towards gender, along with insights from co-creation with neurodivergent children.

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PRESENTERS



Clodhna Ryan
Director of Education and Research



Anette Ngongi
User Research Manager

WAR CHILD ALLIANCE

HARNESSING THE POWER OF DIGITAL PERSONALIZED LEARNING SOLUTIONS (DPLS) IN FRAGILE SETTINGS

Institution Primary Location: Amsterdam, Netherlands

Sub-theme(s): Foundational Literacy and STEM, STEM in challenging education environments

Region of Impact: Sub-Saharan Africa, The Middle East, Eastern Europe, Global

Abstract: Join us for an insightful session, where we spotlight Can't Wait to Learn, and discover key findings and policy recommendations derived from recent GPE KIX-supported global research programmes.

PROJECT DESCRIPTION

Education quality in conflict-affected regions is severely compromised, with nearly half of school-aged refugee children out of school (UNHCR, 2020). The COVID-19 pandemic worsened this crisis, particularly impacting marginalized groups. Funding for education in emergencies remains critically low, at under 4% of humanitarian aid (INEE, 2020). War Child Alliance's Can't Wait to Learn (CWTL) platform addresses these challenges by providing digital and distance learning in difficult contexts like Ukraine and South Sudan, showing significant improvements in literacy and numeracy. War Child's research team will present findings and recommendations to enhance education policy and practice in conflict-affected settings.

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PRESENTER



Selin Turan
Knowledge Mobilization and
Engagement Coordinator

WAR CHILD ALLIANCE

WAR CHILD'S CAN'T WAIT TO LEARN MATH CONTEXT FRAMEWORK AND CLASSROOM PROGRAM

Institution Primary Location: Amsterdam, Netherlands
Sub-theme(s): Foundational Literacy and STEM, STEM in challenging education environments, Making STEM accessible (equity, diversity, learners with disabilities, non-formal education)
Region of Impact: Sub-Saharan Africa, The Middle East, Eastern Europe, Global
Abstract: CWTL translated its digital Math content into a classroom Math program. Join us to learn by applying this freely available resource for Education programme design or Teacher Professional Development.

PROJECT DESCRIPTION

Can't Wait To Learn (CWTL) provides quality education to children in conflict settings, where access to learning is often severely limited. This evidence-based EdTech program offers curriculum-aligned e-learning in Math and Reading for Year 1-3 children through a tablet-based system tailored for resource-constrained areas. Collaborating with Ministries of Education, CWTL maps curricula and adapts its content to promote active learning. Over the past decade, it has expanded from a pilot in one country to reach over 165,000 children across seven countries, including Uganda and Ukraine. CWTL now offers a flexible Math program designed as a global public resource to help education actors address the learning needs of children affected by crisis. We propose two sessions at the mEducation symposium: a panel for policymakers on the Math Content Framework and an interactive workshop for educators on utilizing the framework's resources effectively.

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PRESENTER



Luke Stannard
Programme Director CTWL

Global Science of STEM Education

BRITISH COUNCIL

INTERNATIONAL PARTNERSHIPS AND EXAMPLES - CODING, COMPUTING AND STEM

Institution Primary Location: London, UK
Sub-theme(s): Global Science of STEM Education; STEM in Challenging Educational Environments; Making STEM Accessible
Region of Impact: South America, North Africa, Sub-Saharan Africa, Western Europe, Global
Abstract: Sharing examples and evaluation research including international coding and STEM programmes from the British Council's work, featuring our partnership with the Micro:bit Educational Foundation.

PROJECT DESCRIPTION

This session highlights international examples and research outcomes from coding and STEM programs by the British Council and Micro:bit Educational Foundation, reaching thousands globally. It covers models, impacts, and challenges from initiatives like South Africa's Learning to Code and 21st Century Schools in the Western Balkans, with projects in India, Algeria, and beyond. The British Council empowers educators, governments, and organizations to provide quality education focused on coding, computing, and digital inclusion, aiming to develop creators, not just consumers, of technology. Programs span South America, Europe, Asia, the Middle East, and Africa. This session will share insights from projects, including a £10 million initiative in the Western Balkans and a £9 million computing hub program in Colombia. The British Council and Micro:bit Educational Foundation work to inspire young people to shape their digital futures.

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PRESENTER



Adrian Fenton
Senior Consultant

FOLDSCOPE INSTRUMENTS INC



CREATING BILLIONS OF PORTALS INTO THE MICROCOSMOS

Institution Primary Location: Palo Alto, CA, U.S.A.

Sub-theme(s): Global Science of STEM Education

Region of Impact: Global

Abstract: We magnify curiosity worldwide through our low-cost science tools, app, and community website. We distributed over 2 million paper microscopes to over 165 countries, and we hope to reach billions.

PROJECT DESCRIPTION

Foldscope is a groundbreaking \$1 paper microscope developed by Manu Prakash and James Cybulski at Stanford University, offering 140x magnification and 2-micron resolution. With over 2 million units distributed across 165+ countries, Foldscope democratizes access to microscopy for education, research, and healthcare. Its diverse applications include identifying agricultural pests, mapping pollen diversity, and detecting bacteria in water. Foldscope has fostered a global community of users who collaborate through the Microcosmos platform, sharing discoveries and promoting equal access to scientific tools, with the mission to "magnify curiosity" worldwide.

MORE INFORMATION

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PRESENTER



James Cybulski
CEO

GLOBAL SCIENCE OF LEARNING NETWORK



Global Science of Learning
Education Network

LET'S TALK ABOUT CLASSROOMS WHERE THE SCIENCE OF LEARNING MEETS THE JOY OF MAKING

Institution Primary Location: San Diego, CA, U.S.A.
Sub-theme(s): Global Science of STEM Education, AI and STEM Education

Region of Impact: North America, North Africa, Western Europe, Eastern Europe, South Asia

Abstract: Engaging in conversation on how to leverage the science of learning and the joy of active learning can help cultivate socioculturally relevant future-facing classrooms of high impact for our children.

PROJECT DESCRIPTION

The underrepresentation of marginalized groups, such as persons with disabilities, in STEM deepens biases in AI and creates non-inclusive digital environments. However, digital technology can bridge these barriers and support inclusive STEM education by providing equitable access to resources and tools. The GIZ-Sector Programme Education, in collaboration with GIZ's Global Programme on Inclusion and the PROMISE project in Jordan, is mapping digital innovations for children with intellectual disabilities in public schools. EdTech tools like braille accessories, hearing aid-compatible headsets, and sign language translators already exist, but there is a need for more tools focused on intellectual disabilities. The mapping results will be shared at the mEducation Alliance Symposium and the Global Disability Summit 2025 to promote inclusive EdTech approaches and integrate them into educational projects.

MORE INFORMATION

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PRESENTERS



Akshay Nagarajan
Cognitive Science Researcher
Email

SMITHSONIAN SCIENCE EDUCATION CENTER



Smithsonian
Science Education Center

SMITHSONIAN SCIENCE FOR GLOBAL GOALS

Institution Primary Location: Washington, DC
Sub-theme(s): Global Science of STEM Learning
Region of Impact: Global

Abstract: Smithsonian Science for Global Goals Project gives youth around the world the knowledge & skills to understand the world's most pressing issues & to become agents for change in their own communities.

PROJECT DESCRIPTION

The Smithsonian Science for Global Goals Project empowers youth worldwide to tackle pressing global issues by exploring the science behind the UN Sustainable Development Goals. Through free community research guides, young people investigate their local communities and apply scientific principles to make informed decisions. The project fosters critical thinking, reflection, and collaboration, helping youth develop skills in empowerment, equity, and global-local connections. With 12 guides published and more in development, the program equips young people to actively shape the future of their communities and the world.

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PRESENTERS



Carol O'Donnell
The Douglas M. Lapp and Anne B.
Keiser Director



Alexia Antunez
Program Specialist

#InspirationSTEM is Girl Powered!

QUEST ALLIANCE



STEM MINDSET AND ITS MYRIAD CHALLENGES

Institution Primary Location:Bangalore, India

Sub-theme(s): #InspirationSTEM is Girl Powered!

Region of Impact: South Asia

Abstract: Empowering girls to embark on 'STEMtastic Adventures!' Quest Alliance's presentation showcases the journey, impact, and stories from the IBM STEM for Girls program in India.

PROJECT DESCRIPTION

Quest Alliance, supported by IBM, launched the "STEM for Girls" campaign to encourage girls to pursue STEM courses post-10th grade, reaching nearly 200,000 girls and boys in public schools over four years. The program focused on digital fluency and life skills, aiming to break gender stereotypes and promote skills like tinkering and critical thinking. Our presentation will address challenges in encouraging girls in STEM, highlight the role of facilitators, and showcase innovative methods such as mobile apps and hackathons for schools without digital infrastructure. We will share curriculum insights, key takeaways, and resources for educators to adapt in their contexts.



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PRESENTERS



Rishi Mazumdar
Education Technology Architect



Aparna Balakrishnan
Senior Program Manager

**Making STEM Accessible (equity,
diversity, learners with
disabilities, nonformal education)**

EDUTAB AFRICA



UNVEILING STEAM HORIZONS: SCIENCE, EXPLORATION, EDUCATION, AND FOLDSCOPE STORYTELLING IN RURAL KENYA

Institution Primary Location: Nairobi, Kenya

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education)

Region of Impact: Sub-Saharan Africa

Abstract: Embark on STEAM adventures! Kids explore biodiversity using digital science tools such as Foldscopes and Inaturalist App fostering curiosity & environmental stewardship.



PROJECT DESCRIPTION

Funded by the National Geographic COVID-19 Remote Learning Emergency Fund, our initiative has significantly improved STEM accessibility for marginalized groups in Kenya. EduTab Africa introduced Foldscopes to over 2,500 students in counties like Embu, West Pokot, and Kakamega, leading to innovative learning materials and heightened student engagement in science. We've expanded Foldscope applications through teacher training sessions across Kenya and Tanzania, gaining global recognition at the 2022 Falling Walls Science Summit in Berlin. Collaborating with organizations like the Home River Collective, we host citizen science events such as the River BioBlitz, fostering community engagement and environmental awareness while leveraging digital tools for local ecosystem observations.



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PRESENTER



Michael Mumbo
Co-founder & Director

EDTECH HUB



UNDERSTANDING THE POTENTIAL FOR EDTECH IN SEND: REFLECTIONS FROM FORMATIVE RESEARCH IN MALAWI

Institution Primary Location: Washington DC, US
Sub-theme(s): Making STEM Accessible, Inclusive Education

Region of Impact: Sub-Saharan Africa

Abstract: EdTech Hub's will share insights from its recent engagement in Malawi on the potential for EdTech to support learners with special educational needs and disabilities.



PROJECT DESCRIPTION

EdTech Hub has long supported education stakeholders in making evidence-based decisions to enhance education systems. Recently, the Hub focused on EdTech for special educational needs and disabilities (SEND) to explore how technology can foster inclusive education. In March, we conducted a workshop in Malawi with research partners from the University of Nottingham and FCDO to understand the country's SEND needs and develop a research agenda in collaboration with key Ministry of Education stakeholders. We'll share early insights from this workshop and a follow-up digital survey on the role of EdTech in SEND, promising areas for exploration, and our plans to advance research in this field.



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PRESENTERS



Syed Mustafa Hassan
EdTech Analyst



Molly J. Eberhardt
Director of Engagement



Daniel Plaut
Innovation Learning Lead

EKITABU

IMPROVING FOUNDATIONAL LEARNING THROUGH MORE ACCESSIBLE FORMATS

Institution Primary Location: Nairobi, Kenya
Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education), Foundational Literacy and STEM,
Region of Impact: South America, North Africa, Sub-Saharan Africa, The Middle East, South Asia
Abstract: eKitabu and Sesame Workshops work towards ensuring that all content is made more accessible for children across the world and in different formats that benefit different learning styles.

PROJECT DESCRIPTION

eKitabu and Sesame Workshops are collaborating to enhance accessibility in foundational literacy and STEM education for deaf and hard-of-hearing children by prioritizing early access to sign language. Their presentation, "Empowering the Deaf Community in STEMtastic Adventures," aligns with the 2024 Symposium theme and emphasizes the integration of literacy and STEM concepts through innovative, accessible educational approaches. Sesame Workshop will showcase content from their library, including the "Watch, Play, Learn" series, which features engaging videos that introduce math and science concepts while promoting emotional well-being. By localizing this content with sign language and audio descriptions, the collaboration aims to empower all learners, fostering curiosity and confidence in navigating STEM fields.

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PRESENTERS



Nadia Nibagwire
Project Manager



Omar KAYIGI
Rwandan Sign Language Coordinator

SUSTAINABLY SCALING EDTECH IN REFUGEE SETTINGS

Institution Primary Location: Lilongwe, Malawi
Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, challenging educational environments), Foundational Literacy and Numeracy
Region of Impact: Sub-Saharan Africa
Abstract: How to scale sustainably in refugee settings: Tablet learning in low-resource hard-to-reach refugee settings unlocks a digital world of STEMtastic Adventures for thousands of refugee children.

PROJECT DESCRIPTION

Only 50% of the world's 43.3 million refugee children have access to formal education, facing overcrowded and under-resourced classrooms that hinder basic literacy and numeracy. To address this, we've developed a community-driven approach using child-directed, tech-enabled learning through an offline tablet-based edtech solution. This model has proven effective in improving literacy and numeracy, with strategic partnerships with local refugee-led organizations (RLOs) ensuring cultural relevance and local ownership. Our co-financing model allows us to cover initial tech infrastructure costs, while RLOs handle ongoing support, all for under \$7 per child per year.

MORE INFORMATION

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PRESENTERS



Nadia Asmal
Director of Refugee Programs

ONEBILLION

CENTERING NEURODIVERGENT VOICES IN STEM EDUCATION: LESSONS IN CONTENT AND IMPLEMENTATION DESIGN FROM DELIVERING IMPACTFUL EDTECH TO MARGINALISED LEARNERS

Institution Primary Location: London, United Kingdom

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, nonformal education)

Region of Impact: Global

Abstract: onebillion will share insights on centring the needs of neurodivergent children and children with Special Educational Needs in the design of Education Technology for marginalised populations.

PROJECT DESCRIPTION

Onebillion, a non-profit EdTech developer, delivers comprehensive software solutions for marginalized children to learn reading and math, primarily in Sub-Saharan Africa. Its *onecourse* software, used on the dedicated *onetab* device, is scaling across Malawi's primary schools through the BEFIT program. Since partnering with The LEGO Foundation in 2022, onebillion has focused on enhancing accessibility for neurodivergent children, believing that meeting their needs benefits all learners. In this presentation, we will share insights on content development and the importance of feedback loops, user testing, and overcoming barriers in designing STEM education for neurodivergent children.

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PRESENTERS



Andrew Ashe
CEO



Nat Dinham
Partnerships Lead



Sam Weekes
Content Author

ORI CONSULTANCY



BUILDING A COMMUNITY OF STEM LEARNERS THROUGH THE INTRODUCTION OF EVERYDAY STEM

Institution Primary Location: Richmond, VA, United States

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education), STEM in Challenging Education Environments, STEM Empowered Educators – and Volunteers

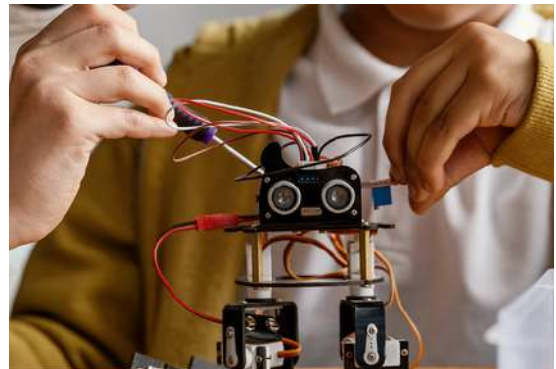
Region of Impact: Sub-Saharan Africa

Abstract: In this presentation we share how we are building a local community of STEM learners, problem solvers and advocates who harness local materials and tools for change.



PROJECT DESCRIPTION

To ensure society thrives, we must build a robust STEM learning ecosystem, especially in Africa where less than 25% of higher education students pursue STEM fields, and under 8% are women. Limited infrastructure like electricity and internet hinders STEM learning, creating a cycle of underdevelopment. Disrupting this cycle requires culturally inclusive STEM education tailored to local contexts. Through workshops for education leaders and teachers, supported by the Ori STEM Kit, and classroom-based programs, students will be empowered to lead STEM projects that address community needs. Our pilot in Dakar, Senegal, in partnership with Junior Achievement Africa, is the first step towards this vision, with a follow-up planned in 2025.



PRESENTERS



Bummi Esho
Founder & Principal

MORE INFORMATION

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PROJEKT INSPIRE



DISRUPTING STEM EDUCATION IN TANZANIA

Institution Primary Location: Dar es salaam, Tanzania

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education)

Region of Impact: East Africa - Tanzania

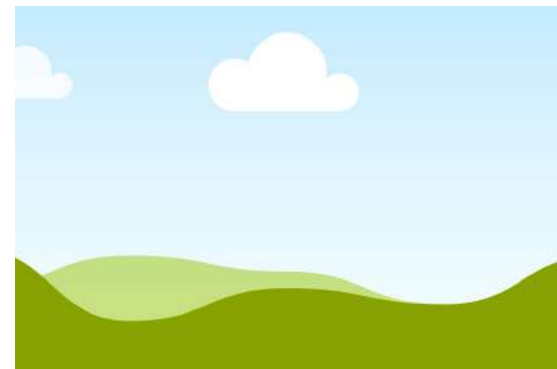
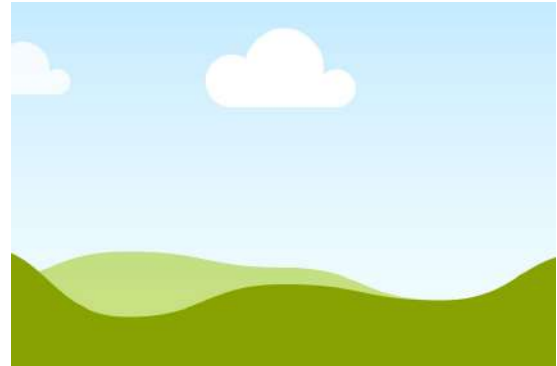
Abstract: Our initiative is the first of its kind in East Africa, where science centers are virtually nonexistent. It fits in the STEMtastic Adventures as the most innovative idea in the region.

PROJECT DESCRIPTION

ProjeKt Inspire is transforming STEM education in Tanzania with the goal of establishing over 100 STEM Hubs and Parks by 2034, empowering youth to drive economic growth and global competitiveness. Key initiatives include a STEM Career Ladder that provides a continuous education pathway from early childhood to young adulthood, Tanzania's first STEM Parks and mobile labs bringing hands-on learning to underserved areas, and teacher training programs to enhance STEM instruction. Through partnerships with schools, local governments, NGOs, and private sector entities, ProjeKt Inspire fosters community engagement and aligns with Tanzania's Vision 2025, promoting innovation and technological integration to ensure sustainable development.

MORE INFORMATION

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PRESENTERS



Dr. Lwidiko Mhamilawa
Director

PUNTO CREA

STEAMIZING COMMUNITIES WITH DIGNITY THROUGH THE LEADERSHIP OF VOLUNTEER TUTORS, SPECIALISTS IN FACILITATING STEAM CHALLENGES

Institution Primary Location: La Antigua Guatemala Guatemala

Sub-theme(s): Making STEM accessible (equity, diversity, students with disabilities, non-formal education)

Region of Impact: Central America

Abstract: Where communities of young creators are accompanied by a STEAM tutor (volunteer who becomes a specialist in facilitating challenges) who meet once a week, developing a STEAM challenge session

PROJECT DESCRIPTION

Punto Crea is a non-formal STEAM learning initiative for youth aged 15 to 24, designed to complement both formal education and out-of-school learning. Rooted in the DIY movement, makerspaces, and challenge-based learning, it emphasizes hands-on experimentation and collaboration to connect theoretical knowledge with practical application. Crea Points are physical, open spaces where young people address STEAM challenges related to community and personal needs, guided by volunteer tutors. Managed by Vitruvian Consulting in Guatemala, the project is centered on youth empowerment and community involvement, ensuring interventions respect local social fabric and engage participants as active contributors to their learning.

MORE INFORMATION

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PRESENTER



Ismael Pecher
General Coordinator

SAVE THE CHILDREN



**Save the
Children®**

STEM UP: BREAKING GENDER BARRIERS, BUILDING BETTER FUTURES FOR ALL YOUTH THROUGH INCLUSIVE DIGITAL SKILLING

Institution Primary Location: Washington, DC, U.S.A.

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education)

Region of Impact: South Asia

Abstract: Discover how Accenture and Save the Children foster digital and STEM skills development among youth for success in the digital era. Explore future-ready skills and how to ensure accessibility for all.

PROJECT DESCRIPTION

Accenture's New Skills Now framework addresses the challenges of the digital age by equipping vulnerable children and youth with essential digital and sustainability skills, focusing on areas like AI, data analytics, and cybersecurity. Through partnerships with educational institutions, nonprofits, and governments, the initiative aims to close the digital divide and foster a more inclusive future. In Bangladesh, Accenture's Skills to Succeed (S2S) program, in collaboration with Save the Children, introduces a mobile training center (MTC) to bring digital and STEM skills training to young women in remote communities. The program offers training in data entry, digital marketing, graphic design, and soft skills, alongside promoting gender equality through family and community engagement. As a result, young women gain employability, contribute to their households, and experience greater empowerment and control over their lives.

MORE INFORMATION

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PRESENTER



Monica Caminiti
Senior Director



GROWING MINDS: HOW BLOOM NURTURES STEM LEARNING

Institution Primary Location: Dallas, TX, U.S.A.

Sub-theme(s): Making STEM Accessible, Climate Education, Digital Literacy, Foundational Literacy and STEM

Region of Impact: Global

Abstract: This presentation will explore how the Bloom platform enables STEM content to be adapted to varying audiences, including, especially, linguistic minorities, the visually impaired, and the Deaf.



PROJECT DESCRIPTION

Bloom has more than a decade of use in developing reading materials for linguistically marginalized communities, with more than 780 languages represented in the library. More recently, it has added the capability to produce accessible books for the visually impaired (500+ books) and sign language books for the Deaf (also 500+). The Bloom Library already hosts more than 400 books on STEM-related topics and can be a means of creating new STEM content and adapting existing content for new audiences and needs. Bloom's output ranges from PDFs for printing simple books to more sophisticated digital books that incorporate narrated audio, sign language, and interactive activities, and its output formats include ePUB, Bloom's native BloomPUB format, and video for sharing on social media. Bloom thus makes content available in multiple forms for diverse audiences, making it an ideal tool for developing and disseminating STEM content within the framework of Universal Design for Learning.



PRESENTERS



Paul Frank
Associate Director of the Language
Solutions Portfolio



Catherine Burnett Fierbaugh
Bloom Program Director

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VEX ROBOTICS



CREATING AN INCLUSIVE COMPUTER SCIENCE ENVIRONMENT FOR K-12 STUDENTS

Institution Primary Location: Pittsburgh, PA, USA

Sub-theme(s): Making STEM Accessible (equity, diversity, learners with disabilities, non-formal education)

Region of Impact: Global

Abstract: Join us for a session on creating an inclusive K-12 programming environment with touch coding, screen reader support, and Braille Coder Cards with our accessibility pathway and UDL-focused STEM labs.



PROJECT DESCRIPTION

Join us for a session on creating inclusive programming environments for K-12 students of all abilities. We'll explore accessibility features like touch coding, screen reader support, and Braille Coder Cards in VEXcode. Learn about the new Accessibility Pathway, designed with Universal Design for Learning (UDL) principles, and VEX's latest hardware updates for touch coding with braille. Professional development for educators on UDL concepts will also be highlighted, along with insights from teachers and special education students who helped refine the design.



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PRESENTER



Jimmy Lin
Director of Computer Science
Education

THE WILDERNESS TECHNOLOGY ALLIANCE

THE CYCLE OF TRANSFORMATION

Institution Primary Location: Washington D.C., U.S.A.

Sub-theme(s): Making STEM Accessible; STEM in Challenging Education Environments

Region of Impact: Sub-Saharan Africa

Abstract: A holistic program creating new career pathways for rural youth in technology by improving education and providing work-based learning through tech access, 21st century curriculum and teacher training.

PROJECT DESCRIPTION

WildTech addresses the challenge of rural students returning to subsistence farming after receiving technology training through its 5-step "Cycle of Transformation" (CoT) model, implemented in Tanzania since 2015. The program starts with understanding local lifestyles by engaging with the community, followed by building computer labs in rural secondary schools equipped with 20 refurbished laptops and essential resources. We train 15 teachers per school to deliver technology-enabled courses, fostering digital literacy among students. To further enhance employment opportunities, we host a Cisco Networking Academy for teachers, providing free training and certifications, alongside refurbished laptops. This creates pathways for students to gain advanced tech skills and eventually work in community tech centers, thus addressing the need for local technology services and entrepreneurship.

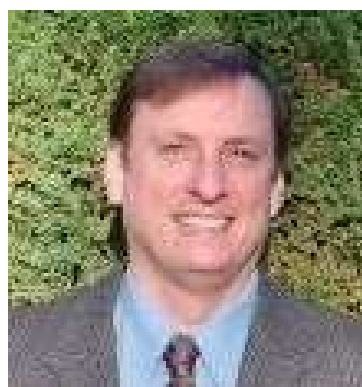
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PRESENTER



Lou August
Executive Director

Mathical Thinking/Non-Digital Games

DFUSION, INC.



SCORE! GETTING BOYS AND GIRLS EXCITED ABOUT (AND PROFICIENT WITH) DATA ANALYTICS

Institution Primary Location: California, USA
Sub-theme(s): Mathical Thinking: Making Math Education Magical

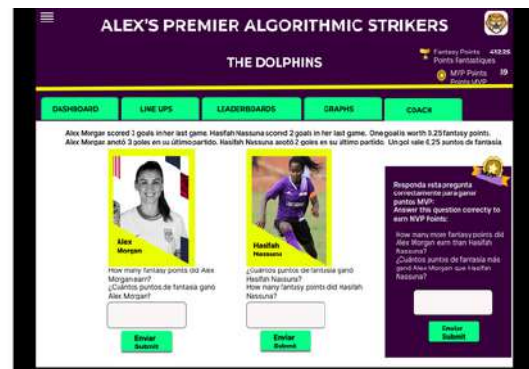
Region of Impact: North America

Abstract: Fantasy Sports Math League connects sports to math to increase student access and motivation. The game engages users with sports statistics, equations, and graphs in school or community programs.



PROJECT DESCRIPTION

Connecting sports to STEM learning can enhance student motivation and demonstrate the relevance of math concepts. We developed the Fantasy Sports Math League (FSML), a technology-based game that integrates professional sports statistics with math computations, problem-solving, and data analytics. Students manage their fantasy teams using real-time player stats, solve algebraic equations, and create graphs to analyze performance. The game encourages collaboration and customization while reinforcing curriculum concepts. Pilot testing in five 6th grade classes in California showed significant improvements in equation knowledge, math confidence, and reduced anxiety for both boys and girls. Feedback from students was overwhelmingly positive, with requests for more sports and features to enhance their learning experience.



MORE INFORMATION

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PRESENTER



BA Laris
Senior Program Manager/PI

EARLY FAMILY MATH

PLAYFUL EARLY MATH IN THE HOME AND CLASSROOM USING THE EFM MOBILE APP AND MATERIALS

Institution Primary Location: San Diego, California

Sub-theme(s): Mathical Thinking: Making Math Education Magical

Region of Impact: Global

Abstract: Experience the fun and effectiveness of using the free EFM mobile app and materials. Find out how to create playful, deeper early math education for children in social ways that require no resources. EFM seeks to build an app for early math teachers. Join a brainstorming discussion about providing free and quick-to-learn resources to new and untrained early math teachers in low-resource settings.

PROJECT DESCRIPTION

Early Family Math promotes playful math learning in low-resource communities, focusing on the critical first five years of a child's life. Our website offers free resources like educational games and puzzles for families and 200 classroom puzzles for educators. Our mobile app, available in English, Spanish, and French, includes family resources and Playdates for group activities. A recent study in Kenya showed our app boosted caregivers' confidence in teaching math. We plan to expand research on Playdates and create a free app to support early math teachers in underserved areas.

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PRESENTERS



Dr. Chris White
Co-founder & CEO
Email

MOBILES FOR EDUCATION ALLIANCE



MATH POWER EXPLORER: MATH GAMES VIA INTERACTIVE VOICE RESPONSE IN LOW- RESOURCE SETTINGS

Institution Primary Location: Arlington, VA

Math Power Explorer: Math Games Via Interactive Voice Response in Low-Resource Settings

Anthony Bloome, Executive Director

Sub-theme(s): Mathical Thinking: Making Math Education Magical

Region of Impact: Africa

Abstract: We have been experimenting over the last three years with using Interactive Voice Response (IVR) in Rwanda to reach primary aged learners in households with entertaining audio and phone keyboard driven math games. Come and hear about the newest game, Sunny Days Ahead, we've just launched in that country.



PROJECT DESCRIPTION

Worldwide, more than 600 million children and adolescents lack the ability to achieve minimum proficiency in reading and mathematics, posing a significant barrier to educational and economic progress (UNICEF, 2023). In sub-Saharan Africa, this issue is compounded by limited smartphone penetration, which restricts access to digital learning resources that could otherwise support foundational literacy and numeracy skills. The scarcity of devices, along with limited connectivity, prevents many students and teachers from leveraging technology-based solutions that have the potential to bridge educational gaps. Addressing these challenges requires innovative, accessible educational tools designed to reach communities with limited resources and connectivity, ensuring that children in underserved regions can receive the instruction they need to succeed.

MORE INFORMATION

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PRESENTERS



Anthony Bloome
Executive Director



Effie Akinyi
Director of Engagement

TEACH FOR ALL



TEACHING STEAM TO CULTIVATE STUDENT LEADERSHIP

Institution Primary Location: Warsaw/Poland

Sub-theme(s): Mathical Thinking: Making Math Education Magical

Region of Impact: Eastern Europe

Abstract: Explore collective leadership in education through STEAM projects: Gingerbread School and Mathematical City Map. Learn how these initiatives shape the future of education for local communities.



PROJECT DESCRIPTION

My STEAM initiative integrates science, technology, engineering, arts, and mathematics to foster creativity, critical thinking, collaboration, and leadership in students. The Mathematical City Map project encourages students to explore their town, identifying real-world mathematical concepts, while enhancing spatial reasoning and community engagement. Meanwhile, the Gingerbread School Project teaches structural engineering and architectural design through the creation of a to-scale gingerbread model of a school, blending math, teamwork, and 3D printing to make learning hands-on and fun. Both projects connect theoretical knowledge with practical application and emphasize community involvement, enriching the overall learning experience.



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PRESENTER



Patrycja Janekankit
Math Teacher / Partnership
Manager

National STEM Education Programs

LEARNING EQUALITY

REMixING DIGITAL CONTENT IN THE CLASSROOM AND EDUCATOR CERTIFICATION TO ENABLE AND ENCOURAGE WIDESPREAD ADOPTION OF BLENDED LEARNING

Institution Primary Location: Cambridge, MA, USA
Empowering Teachers and Students Through Flexibility

Ilyana Sawka, Outreach & Communications Manager
Sub-theme(s): STEM Education, Math Education
Region of Impact: Global

Abstract: LabXchange: Experience science as it should be - a journey of bold thinking, deep imagination, and supportive community.

PROJECT DESCRIPTION

Learning Equality (LE) is developing a self-paced educator certification to boost edtech adoption, focusing on blended learning in low-resource settings. Built through collaboration with teachers, partners, and governments, the program aims to enhance teacher confidence, with initial efforts in Honduras, Kenya, Uganda, and Bangladesh. This presentation will share key insights, draft modules, and an action plan, highlighting how certification can promote inclusive, equitable education through offline-first technology.

MORE INFORMATION

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PRESENTERS



Navya Akkinipally
Head of Training and Impact
(forthcoming co-Executive Director)



Jaime Alexandre
Executive Director

PRACTICAL EDUCATION NETWORK



GETTING HANDS-ON FOR STEM EDUCATION WITH LOCAL MATERIALS IN AFRICA

Institution Primary Location: Accra, Ghana

Sub-theme: STEM Education

Region of Impact: Sub-Saharan Africa

Abstract: Come see how Practical Education Network (PEN) is leveraging low-cost, locally-available materials to make hands-on learning available for students in STEM classrooms across Ghana, Liberia and Rwanda.

PROJECT DESCRIPTION

Practical Education Network (PEN), an NGO in Ghana and Liberia, was founded at MIT in 2014 to improve STEM education through hands-on teacher training. PEN equips teachers with MIT-style activities using low-cost, local materials, aligned with national curricula. Having trained over 8,000 teachers and impacted nearly two million students in Ghana, Rwanda, and Liberia, PEN's approach has boosted students' science exam scores by 97% and increased interest in STEM by 141%. PEN has also been involved in integrating its content into Ghana's primary school curriculum through NaCCA.



MORE INFORMATION

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PRESENTERS



Heather Beem
CEO & Founder

Peace Tech

GEORGE MASON UNIVERSITY



DISCUSSION ON THE PHILOSOPHY OF TECHNOLOGY AND TEACHING IN PEACE

Institution Primary Location: Arlington, VA

Sub-theme(s): Center For Peace Tech

Region of Impact: North America

Abstract: “Peace technology” is an umbrella-term for applications of artificial intelligence and machine learning of peace building. Does new technology contribute or detract from peace building goals?



PROJECT DESCRIPTION

The recent advances in artificial intelligence have driven investment in applications in the fields of peacebuilding, humanitarian aid, and international development. Practitioners have begun to use the term “peace technology” as an umbrella to describe applications for technology in early warning systems, peacebuilding programming, and managing relationships between international actors and people in conflict. The talk questions what technology actually contributes to peace and impacts the social systems of peacebuilders based on experience conducting research with narrative-based technology at the Carter School Peace Engineering Lab. By being realistic about how technology affects our work, we can better judge how to incorporate it into practice without sacrificing relationship building and face-to-face interaction that is the core of peace work.



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PRESENTERS



Megan Jeans
Director of Law and Tech



Dr. Kenneth S. Ball
Dean of the College of Engineering
and Computing

PEACE CORPS - KENYA



PROMOTING STEM EDUCATION AMONG DEAF STUDENTS

Institution Primary Location: Kisumu, Kenya

Sub-theme(s): Peace Tech

Region of Impact: Sub-Saharan Africa

Abstract: Highlighting the need for inclusion of Kenyan Deaf students in STEM promotion efforts through technical sign language development, exposure, teacher training and curriculum adaptation.



PROJECT DESCRIPTION

Teachers in secondary schools for the Deaf in Kenya have challenges in delivering the STEM curriculum to Deaf learners due to limited technical signs vocabulary. The idea is to develop audio-visual resources that will ensure available signs are harmonized across schools, and development of non-existing signs. Deaf students need to be taught and assessed using accurate math and science signs, since Kenyan Sign Language is used for instruction in schools for the Deaf. They need to be exposed to STEM resources, ideas and events that are adapted to their learning to spark their interest and innovation in this area and improve their performance in academics.



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PRESENTERS



Renalda Mwanyuma Program Manager - Education

Science Labs (Physical and Digital)

HILO INTERMEDIATE SCHOOL



ENGAGING STUDENTS IN CITIZEN SCIENCE EXPERIMENTS WITH THE YELLOW SUBMARINE

Institution Primary Location: Hilo, Hawaii, USA

Sub-theme(s): Science Labs (Physical & Digital)

Region of Impact: North America, Pacific Islands

Abstract: Engaging students in classrooms to do science is tied directly to encouraging citizen science experiences. Learn how the "Yellow Submarine" lessons engaged students to DO science in their community.

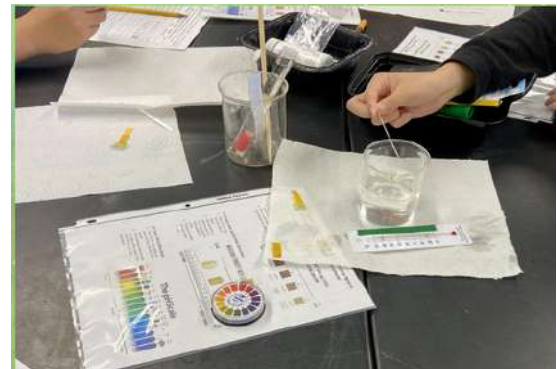


PROJECT DESCRIPTION

Hawaii Island's rural communities struggle with STEM education, with many public schools reporting only 20-40% of students meeting educational goals.

Disadvantaged populations, including Native Hawaiian and South Pacific Islanders, face significant barriers, as only 30% in Hilo and 20% in Ka'u hold college degrees.

To address this, the "Envelopes of Science Awesomeness" project, a partnership between Hilo Intermediate School, the Hawaii Science and Technology Museum, and the Thirty Meter Telescope, supports grades 3-10 teachers in implementing Next Generation Science Standards (NGSS) through hands-on lessons. Over 54 teachers participate, reporting increased confidence and improved teaching skills through this professional development initiative.



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PRESENTERS



Dr. Pascale Creek Pinner
Science Educator

STEM in Challenging Education Environments

ARIZONA STATE UNIVERSITY



ASU SUNSPOT: OFFLINE-FIRST SOLUTION LEARNERS EVERYWHERE

Institution Primary Location: Tempe, Arizona, USA

Region of Impact: North America, Sub-Saharan Africa, The Middle East

Sub-theme(s): STEM in Challenging Education Environments

Abstract: Discover how SunSPOT, an offline-first model using ASU's capacity-building and Beekee's tech, bridges the digital divide in STEM education.



PROJECT DESCRIPTION

Explore the transformative SunSPOT, an offline-first educational technology and capacity-building model designed by Arizona State University (ASU) and powered by Beekee. SunSPOT equips ASU partners and ASU units with the open-source tools and expertise needed to complement existing online programs with interactive offline teaching and learning environments - no electricity or internet required. This session highlights how SunSPOT has the potential to bridge the digital divide through innovative, open-source technology and capacity-building strategies, enabling seamless online and offline education in resource-limited settings. Discover its successful applications, from enhancing higher education access in Malawi to adapting for refugee education, showcasing potential expansions into other educational sectors. Additionally, we will reflect on SunSPOT's use for STEM educational content and reference other ASU STEM-related programs.



PRESENTER



Nicholas Sabato
Senior Director

MORE INFORMATION:

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BEEKEE

ADVANCING EDUCATION AT THE EDGE WITH PORTABLE DIGITAL CLASSROOMS THAT GO BEYOND LIBRARIES, ACCESSIBLE AND EFFECTIVE IN LOW OR NO CONNECTIVITY ENVIRONMENTS

Institution Primary Location: Geneva, Switzerland
Region of Impact: North Africa, Sub-Saharan Africa, The Middle East, Southeast Asia, Pacific Islands, Global
Sub-theme(s): STEM in Challenging Education Environments

Abstract: Empowering experiential education in low-resource areas through portable internet-free digital classrooms. Enabling collaboration and learning experiences that extend the content-delivery approach.

PROJECT DESCRIPTION

This presentation showcases how portable, internet-free digital classrooms, powered by Beekee Box and Hub, transform education in low-resource environments. These tools bypass infrastructure challenges, enabling interactive, collaborative learning with offline Moodle access, fleet management, and easy content updates. Learners can study at their own pace, even offline, boosting motivation and reducing dropout rates. Highlighting projects with ASU, ICRC, Doctors Without Borders, and GIZ (Atingi), we demonstrate how Beekee delivers cost-effective, high-quality education to remote communities.

MORE INFORMATION:

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PRESENTER



Sergio Estupiñán
Co-founder & Co-CEO

DARSEL



SCALING DARSEL'S PERSONALIZED MATH LEARNING CHATBOT

Institution Primary Location: Amman, Jordan
Sub-theme(s): STEM in Challenging Education Environments

Region of Impact: Sub-Saharan Africa, The Middle East, South Asia

Abstract: Darsel is a global nonprofit focused on improving math outcomes in low- and middle-income countries through personalized learning chatbots.

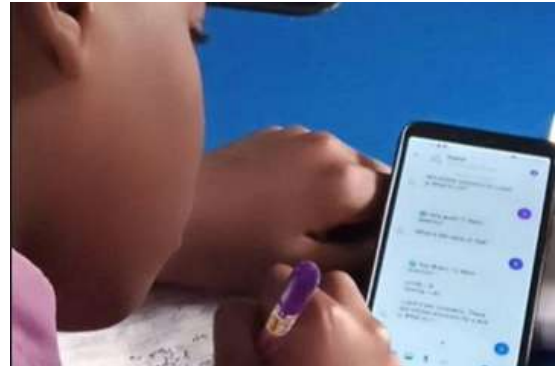
PROJECT DESCRIPTION

Darsel is a global nonprofit organization dedicated to enhancing mathematics education and improving learning outcomes in low- and middle-income countries. The organization focuses on developing innovative solutions, with a particular emphasis on personalized learning. By leveraging AI-powered chatbots, Darsel delivers tailored educational support to students, helping them grasp mathematical concepts at their own pace. These chatbots provide interactive lessons, exercises, and real-time feedback, addressing individual learning gaps and promoting mastery. Through partnerships with schools, governments, and community organizations, Darsel aims to bridge educational inequalities and empower students with the mathematical skills necessary for academic success and lifelong opportunities.

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PRESENTER



Abdulhamid Haidar
Founder & CEO

Purdue

INTEGRATION AND CONTEXTUALIZATION OF AN ADAPTABLE ENGINEERING TEACHING AND LEARNING TECHNOLOGY FOR DISPLACEMENT CONTEXTS

Institution Primary Location: West Lafayette, USA

Sub-theme(s): STEM in Challenging educational environments

Region of Impact: North America, Sub-Saharan Africa

Abstract: Our presentation highlights an innovation that enables learners in displacement contexts to solve the technical needs around them and engages them collaboratively in an engineering journey.

PROJECT DESCRIPTION

Since 2015, the Localized Engineering in Displacement (LED) program has empowered learners in fragile contexts—such as refugee camps and low-income areas—to identify local challenges and develop solutions using STEM principles. Recognizing that these learners best understand local needs but often lack access to necessary tools, LED developed an open-source microelectronics kit that accelerates the design-to-solution process. The kit integrates six years of field data and provides hands-on learning in circuits, programming, and IoT, enabling participants to build real-world prototypes in areas like water, energy, and health. Using a design-based research approach, the program aligns local strengths with technological affordances, emphasizing context-specific interventions and sustainable solutions while advocating for improved learning content in future iterations.

MORE INFORMATION

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PRESENTERS



Dr. Dhinesh Radhakrishnan
Research Scientist



Dr. Jennifer DeBoer
Director of Practice for Education and Youth

WORLD LEARNING



World Learning

THE FUSION OF AI, STEAM, AND ENTREPRENEURSHIP FOR A GREEN ECONOMY

Institution Primary Location: Algiers, Algeria
Sub-theme(s): AI and STEM Education (and other emerging technologies)

Region of Impact: North Africa

Abstract: Insights on fostering climate change solutions and green economic growth through training Algerian youth in blending AI and entrepreneurship skills

PROJECT DESCRIPTION

Since 2016, World Learning has led STEAM education initiatives in Algeria, aiming to inspire youth in STEM fields to address real-world challenges. Central to this effort is the AI Saturdays workshop series, which encourages students' creativity and curiosity. Notable success stories, like Nassim's award-winning smart trash bin, exemplify the innovative spirit fostered in these workshops. In response to the growing demand for AI training, the STEAM Makerspace developed a comprehensive curriculum covering Python programming, machine learning, and entrepreneurship. This holistic approach empowers students to transform their ideas into viable projects, driving impactful changes in their communities, from AI in agriculture to energy efficiency innovations.

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PRESENTER



Yacine Hakmi
STEAM Education Specialist

STEM Empowered Educators

BRAZILIAN CREATIVE LEARNING



FOSTERING CREATIVE AND MEANINGFUL STEM LEARNING THROUGH FESTIVALS OF INVENTION AND CREATIVITY

Institution Primary Location: São Paulo, Brazil

Sub-theme: "STEM Empowered Educators – and Volunteers"

Region of Impact: South America, Central America, North America

Abstract: Festivals of Invention and Creativity are regional celebrations that empower students and educators from low-resource communities by promoting STEM through hands-on, creative, and engaging learning

PROJECT DESCRIPTION

Brazil's educational system has faced challenges in STEM, worsened by COVID-related setbacks. The Brazilian Creative Learning Network (BCLN), a movement of 15,000 volunteer educators, promotes creative, hands-on learning through Festivals of Invention and Creativity (FICs) that unite teachers, students, and communities to recognize innovative educators. Since 2017, 91 FICs have reached 96,000 participants in Brazil and beyond. Now, BCLN is launching a global FIC Toolkit to help educators worldwide host their own FICs and share resources via a dedicated portal.

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PRESENTER



Leo Burd
Founder and President of the Board

WORLD EDUCATION



DIGITAL TOOLS AS CONTINUOUS PROFESSIONAL DEVELOPMENT: WHAT SUPPORTS PRIMARY TEACHERS AND STUDENTS IN MOZAMBIQUE

Institution Primary Location: Boston, MA, USA

Sub-theme(s): STEM Empowered Educators

Region of Impact: Global

Abstract: Learn how service learning professional development to generate OER combined with innovative tools for sharing OER supports design, delivery, and sharing of high quality, adaptable math content.



PROJECT DESCRIPTION

The USAID SABER program's app enhances educational practices by providing instructional videos in three local languages (Elomwe, Emakhuwa, Echuwabo) and Portuguese to support essential teaching routines like decoding, reading aloud, and vocabulary acquisition. Another key feature is audio modeling for accurate pronunciation of letter sounds in the local languages, aiding language acquisition. Since 2023, the app has been integrated into training activities, and future content will focus on strengthening Mathematics instruction and supporting the transition from local languages (L1) to Portuguese. Designed for accessibility, the app works offline, with all features pre-installed and compatible with Android 4.0 or higher devices.



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PRESENTERS



Jeff Goumas
Senior Technical Advisor



Adam Turney
Vice President, Africa Portfolio



Stephanie Paloscio
Program Officer

STEM Game & Play (tech and non-tech interventions)

NATIONAL INSTITUTE OF EDUCATION



NURTURING LEARNER AGENCY THROUGH DISCIPLINARY DECONSTRUCTION

Institution Primary Location: Singapore

Sub-theme(s): STEM Game and Play

Region of Impact: Southeast Asia

Abstract: The presentation describes case studies of students themselves embarking on STEM adventures, one in AI and Math, and the other as they seek to better understand the microclimate of their school.

PROJECT DESCRIPTION

This presentation explores how nurturing learner agency allows students to become producers of knowledge across disciplines. Two student-led projects illustrate this approach: the first integrates ChatGPT-3.5 and 4 APIs with OCR and NLP, enabling learners to engage with mathematical problems through a conversational interface, fostering deeper epistemic understanding. The second project involves studying a school's microclimate in Singapore using the IEMSim environmental modeler. Students created a 3D model in SketchUp to simulate airflow and temperature, identifying issues like heat and poor ventilation. They proposed adding mist fans to improve airflow and reduce temperatures, demonstrating how students can apply disciplinary knowledge to real-world challenges.

MORE INFORMATION

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