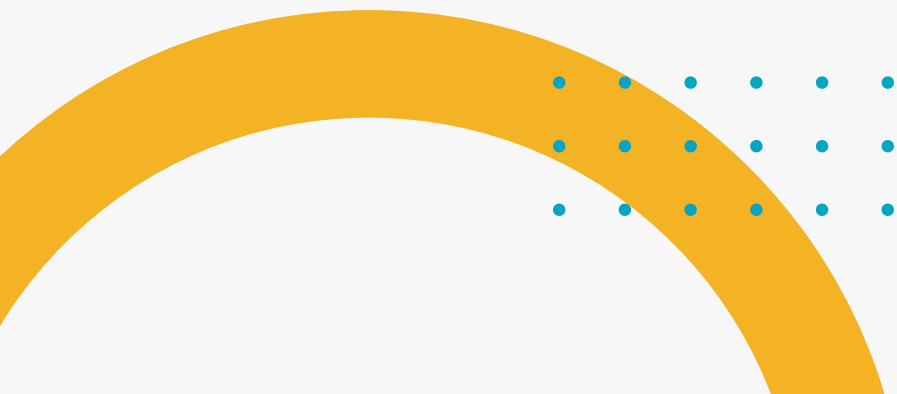




Code to Enhance Learning

2018-2019 ANNUAL REPORT



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ABOUT CODE TO ENHANCE LEARNING

Code to Enhance Learning is a non-profit organization based in Ahmedabad which uses coding as a tool to build 21st-century skills.

India envisions being the largest economy in the world. Children with higher 21st-century skills would play a crucial role in achieving this vision. However, children have poor 21st-century skills.

We offer an engaging, affordable, and confidence-building coding program to children to solve daunting problems using technology. Indirectly, we also create informed and invested parents and communities in the journey of building 21st-century skills in children.

We share an open-source skill-based coding curriculum, place CEL's trained facilitator in

classrooms or train and support in-house teachers and monitor the progress of children. We also give showcase opportunities to children to solve problems aligned to UN Sustainable Development Goals in front of industry experts and distinguished stakeholders.



PROBLEM STATEMENT

Children in age group of 10-15 lack engaging opportunities to build 21st century skills including critical thinking, creativity, collaboration and perseverance.

World Economic Forum Report 2016 identified 21st century skills as significant for children to thrive in the innovative world. Also, it shows a correlation of these skills with higher fundamental literacy and numeracy skills.

The poor ASER report of Gujarat and many other states shows poor literacy and numeracy skills and hence points towards poor 21st century skills. We all will find it hard to make India the largest economy for better livelihood and living conditions if children are not empowered with 21st century skills.

The root causes are lack of engaging resources and awareness about 21st century skills in parents and stakeholders

Lack of engaging opportunities for children in the age group of 10-15 to build 21st century skills



21st century skills
important for children to
thrive in the innovative
world*



Low 21st century
skills in low income
kids of developing
countries*



**Lack of awareness
& skill based
curriculum in India**

*WEF Report 2016

SOLUTION

We leverage coding as a tool to build critical thinking, creativity, collaboration and perseverance in children in grade 4-9 (age 10-15).

As per a research article on Frontier, leading open science platform, platform for coding significantly boosts the executive functions in children which are related to 21st century skills.

We create open-source skill based coding curriculum, place CEL's trained facilitator in classrooms or train and support in house teachers and monitor the progress of children. We organize national level Hackathon to give showcase opportunities to children. Children solve problems aligned to UN Sustainable Development Goals in front of industry experts and distinguished stakeholders.

Our program leverages open source technologies like Scratch, JavaScript and other web development framework to make the program affordable.

Children have higher engagement, increased confidence in solving daunting problems using technology and programs are less costly. Indirectly, we also create informed and invested parents and communities in the journey of building 21st century skills in children.

In short term, children will code games and application on different programming platforms to express and solve contextual problems to build critical thinking, creativity, perseverance and collaboration. In long term, children will grow into a pool of change makers who are aware of contextual/global problems and have innovative skills to solve problems to make world better place.

As per research by Keep Connected Program, children at the age, from age 10-15, are developing reasoning and critiquing abilities at a faster pace. They start developing a liking towards any particular field and develop personalities. Strong support can help them develop the confidence they need to make positive choices as they sort out who they are and how they fit with others.

Leverage coding as a tool to build critical thinking, creativity, collaboration and perseverance



2.5 times more children from low-income countries ask for access to digital devices**

**Children in Digital World, A UNICEF's 2017 report

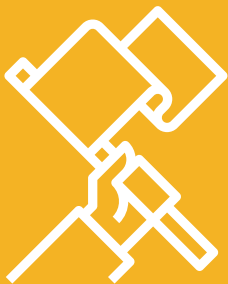


Coding activities accelerates the executive function in children***

***Research article on Frontier, a leading science platform

VISION

Children in India leverage technology to solve contextual problems and thrive in the innovative world.



MISSION

Our mission is to empower schools/organizations to bring coding to children.



JOURNEY



July-August 2018

Designed Course 1 Curriculum for an open source learning platform called Scratch developed by MIT Media Labs.

September 2018

Trained 5 teachers and oversaw the implementation of the curriculum from grade 4 to grade 7 with total of 200 children

October-November 2018

Conducted classes for 70 students in different schools to give them chance to explore computer coding

December 2018 -January 2019

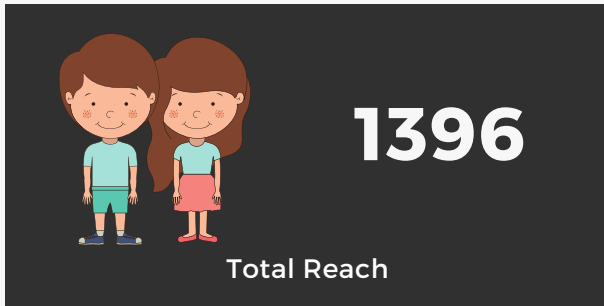
Trained 3 volunteers and placed them in the school to conduct coding workshops for 18 students to prepare them for CEL Kids Hackathon 2019

February-March 2019

Organized National Level coding competition called CEL Kids Hackathon 2019 from 4th February to 10 February 2019 to help kids showcase their coding talent 45 Schools across 8 cities with 1156 children participated in the event



IMPACT



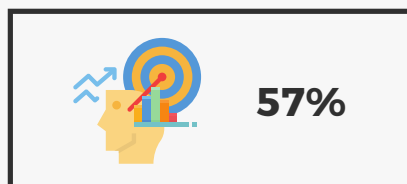
Total Hours of Curriculum



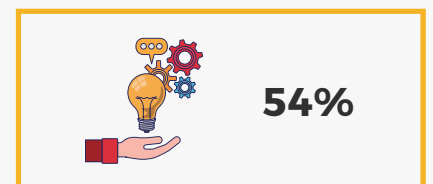
Improvement of students performance on our metrics



Technology Awareness



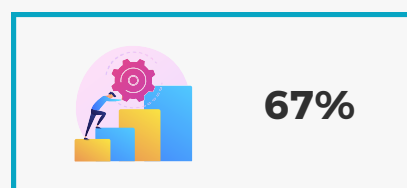
Critical Thinking



Creativity



Collaboration



Perseverance

STUDENT CODING PROGRAM



CEL Student Coding Program is a well-crafted program designed for students. The goal is to empower them to use coding as a medium of self expression and problem solving. The Expert Facilitator of CEL works directly with students to create amazing learning experiences for children.



40

kids built 21st century skills with the help of
CEL's expert facilitators

TEACHER CODING PROGRAM

CEL Teacher Coding Program is a well-crafted program designed for teachers. The goal is to empower them to facilitate coding sessions for children in grade 4-9. They get access to researched curriculum and engaging pedagogies and are trained to deliver them effectively and efficiently. Moreover, they get access to assessment tools which help them to gain more insights about the children, analyse and make changes for higher learning outcomes. It saves time and energy spent on making and conducting assessments.



200

children were empowered to code
with the help of in-house school
teacher





CEL KIDS HACKATHON

CEL Kids Hackathon is an annual collaborative coding event for students in grades 5 to grade 9 to help them begin their coding journey and showcase their coding talent. The students would be required to participate in pairs. Children would be given a problem statement aligned to UN Sustainable Development Goals for which they have to create a project on Scratch if they have access to a computer or Pocket Code if they have access to Smartphone.



1156

kids showcased their coding talent by solving contextual problems aligned to UN Sustainable Development Goals.

ABOUT FOUNDER



Irfan is founder of a non-profit called Code to Enhance Learning (CEL) and currently nurtures it playing different exciting roles.

He has done Mechanical Engineering from Maharaja Sayajirao University of Baroda, Vadodara. After two year working with Tata Technologies Limited in Pune, he joined Teach For India Fellowship in 2014 in Ahmedabad and taught 3 and 4 graders for two years in a low income school. He taught coding to his students to build 21 century skills by connecting it with various subjects besides other subjects for the holistic development of children. This experience inspired him to start CEL later. In April 2017, he published a book called Code (with Scratch) to Enhance Learning, a pocket friendly resource, to help teachers and beginners to start learning to code.





COLLABORATORS & SUPPORTERS

TEACHFORINDIA

shama
SCHOOL

K7 COMPUTING

A black and white photograph of a computer lab with several students sitting at desks, working on computers. The image is slightly blurred and serves as the background for the text overlay.

Code to Enhance Learning

THANK YOU

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