

**GLOBAL  
LEARNING** **XPRIZE**  
**EXECUTIVE SUMMARY**



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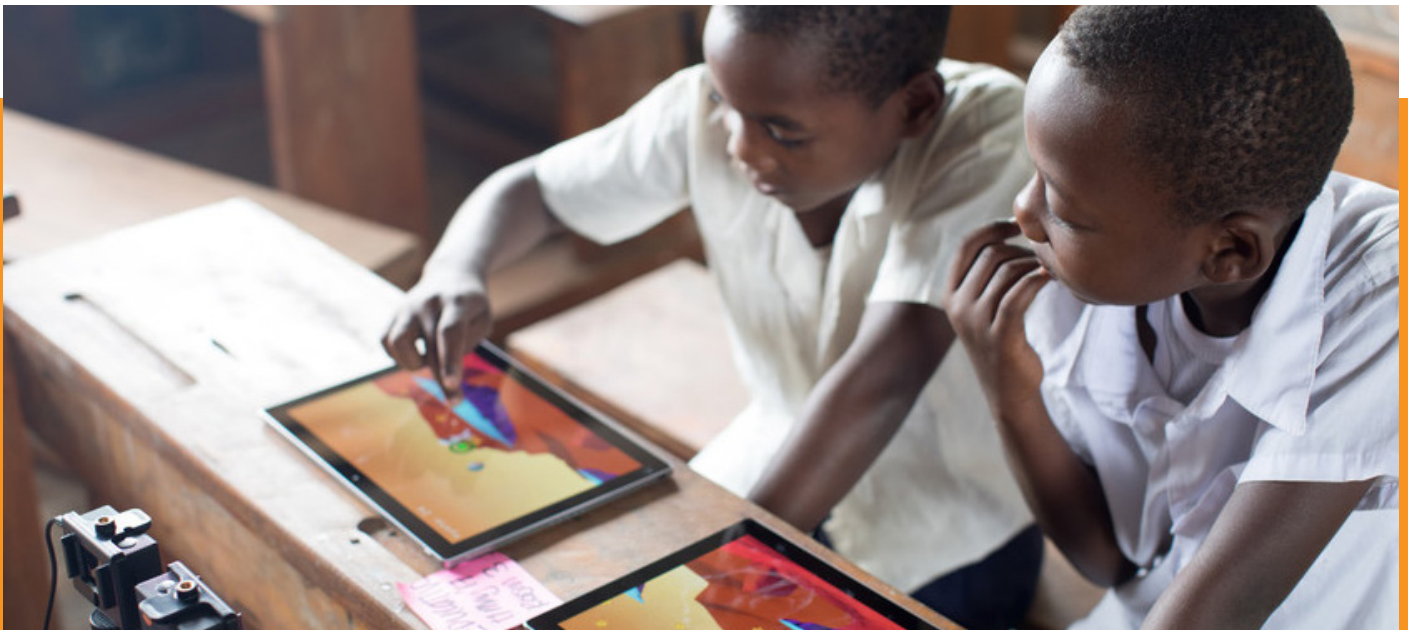
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1.

# ABOUT THE GLOBAL LEARNING XPRIZE

The \$15 million Global Learning XPRIZE was launched in 2014 to address the challenge of the over 250 million children globally who do not have access to learning tools and even more who cannot read, write, or do basic math.

The Global Learning XPRIZE challenged teams from around the world to develop open-source, scalable learning software that empowers children to teach themselves basic reading, writing, and arithmetic within 15 months.





## 2.

# MEET THE TEAMS

This competition was a global effort from the onset. The prize launch in 2014 resulted in over **198 registered teams from 40 countries** set on solving the challenge and winning the prize purse. In 2018, the independent judging panel narrowed the pool of competitors down to five finalist teams who were each awarded **\$1 million** and participated in an intensive **15-month field test** in the Tanga region of Tanzania.



### **CCI** – New York, United States

CCI developed structured and sequential instructional programs, in addition to a platform seeking to enable non-coders to develop engaging learning content in any language or subject area.



### **Chimple** – Bangalore, India,

Chimple created a learning platform aimed at enabling children to learn reading, writing and mathematics on a tablet through more than 60 explorative games and 70 different stories.



### **Kitkit School** – Berkeley, United States & Seoul, South Korea

Kitkit School developed a learning program with a game-based core and flexible learning architecture aimed at helping children independently learn, irrespective of their knowledge, skill, and environment.



### **onebillion** – London, United Kingdom & Nairobi, Kenya

onebillion merged numeracy content with new literacy material to offer directed learning and creative activities alongside continuous monitoring to respond to different children's needs.



### **RoboTutor** – Pittsburgh, United States

Robotutor leveraged Carnegie Mellon's research in reading and math tutors, speech recognition and synthesis, machine learning, educational data mining, cognitive psychology, and human-computer interaction.

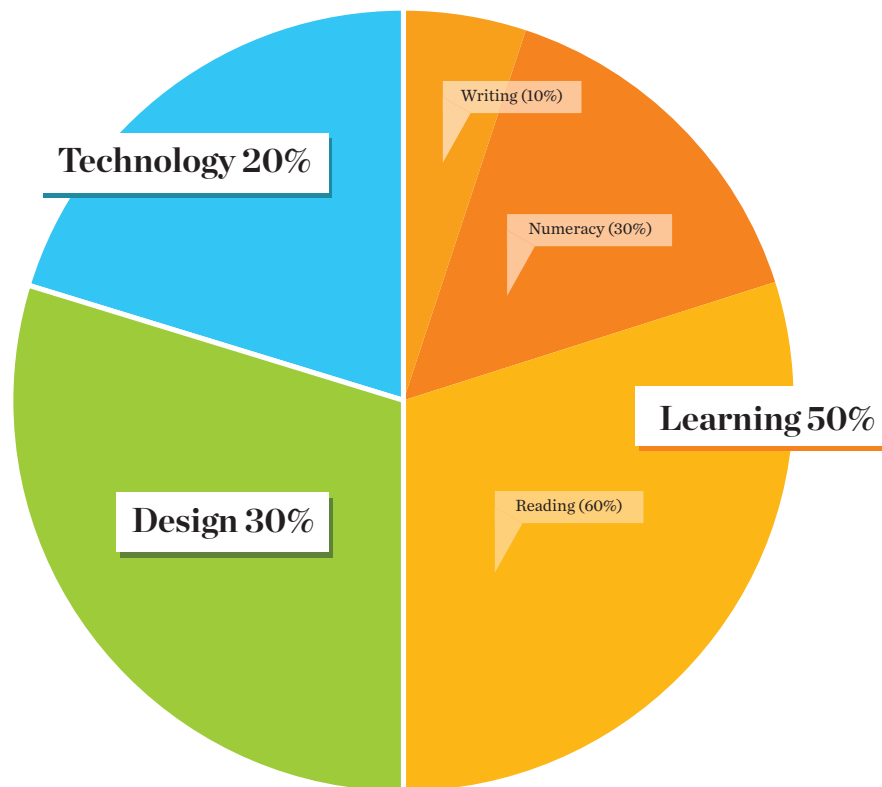


### 3.

## JUDGING CRITERIA

Teams had 18 months to develop software and those that had fully complete software solutions were submitted to an international panel of judges with expertise across industries. These solutions were evaluated on their design, technology and learning potential. The judges selected 11 teams to be semi-finalists who gave a live demonstration and explanation of their work to the judges. **Entries were judged on the following criteria:**

1. Ability to measurably increase the learning in reading, writing and numeracy of children in villages with limited access to schooling
2. Creation and implementation of a design that is easy to use and engaging for children. Software had to be capable of being operated without an adult's help, and be able to track individual progress and engage multiple cognitive styles.
3. Creation of open source software that makes marked improvements to existing technology and demonstrate scalability, replicable for 100 million children or more.



Following the semi-finalist demonstrations, 5 finalist teams were selected for the 15-month field test in Tanzania. Judging for the Grand Prize was based solely on the learning gains generated from the field test.

## 4.

# FIELD TEST

## Why Tanzania?

XPRIZE chose to conduct the field test in Tanzania because we were looking at social-political factors such as political stability, a common language that was widely spoken amongst remote populations, and equal access to education and learning for both girls and boys. After running our risk analysis and meeting with leaders of several potential host countries, Tanzania was the best fit for this project.

**300+**

**People in Tanzania**

**2,700+**

**Children**

**170**

**Villages**

The field test spanned across 170 villages with over 2700+ out of school children aged 7-11 participating and 300+ Tanzanians contributing to its success.

## Operational Partners



The World Food Programme, UNESCO, RTI International, the Government of Tanzania and the hundreds of district officials, ward officials, village mamas, students, field assistants, and the children of the communities all came together and contributed in valuable ways to make this highly complicated and collaborative field test possible.





**5.**

## **BUILDING INFRASTRUCTURE**

The villages that participated in the field test had limited infrastructure with little access to running water, no access to the internet, and were located far distances from schools. To ensure the success of the field test, we, along with our Operational Partners, built the infrastructure to support the needs of the competition, including the installation of solar panels to power the preloaded learning devices.





6.

## RESULTS

- Before the Global Learning XPRIZE field test, 74% of the participating children were reported as having never attended school, 80% reported never having been read to at home, and over 90% of participating children were unable to read a single word in Swahili, the national language of Tanzania.
- After 15 months of learning on Pixel C tablets donated by Google and preloaded with one of the five finalists learning software, that number was cut in half. Additionally, in math skills, all five software were equally effective for girls and boys.
- Children were able to learn the equivalent of a year's worth of full-time school on an average of one hour a day in our field trial.
- Collectively over the course of the competition, the five finalist teams invested approximately \$200 million in research, development, and testing for their software, a total that rises to nearly \$300 million when including all 198 registered teams.



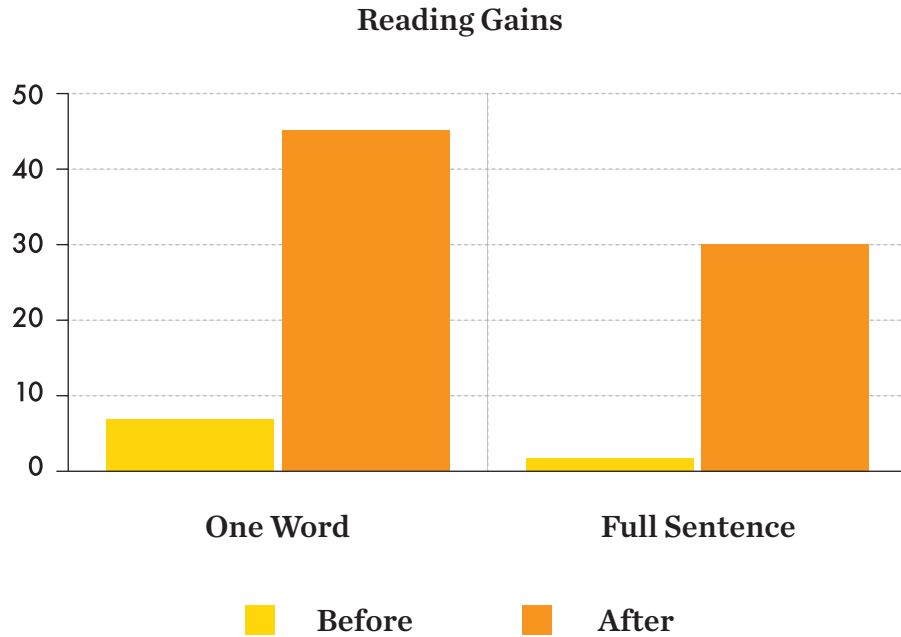
**“Education is a fundamental human right, and we are so proud of all the teams and their dedication and hard work to ensure every single child has the opportunity to take learning into their own hands.”**

**- Anousheh Ansari**  
CEO of XPRIZE

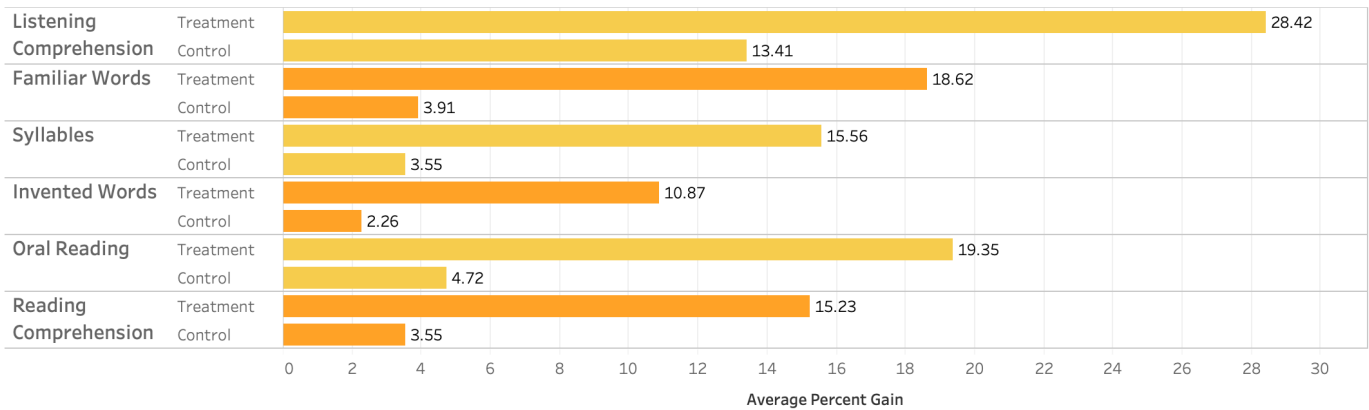


# Reading

At the beginning of the Global Learning XPRIZE field test, less than 10% of the participating children could read a single word in Swahili. After the field test, 45% of these children could read a word, with 30% reading full sentences.



### Average Percent Gain - Treatment vs Control



## Reading, cont.

### Average Percent Gain - Per Team

Listening Comprehension	CCI	28.65			
	Chimble	22.90			
	Kitkit	34.75			
	onebillion	27.85			
	RoboTutor	27.87			
Familiar Words	CCI	16.54			
	Chimble	18.80			
	Kitkit	20.83			
	onebillion	19.91			
	RoboTutor	16.53			
Invented Words	CCI	11.37			
	Chimble	9.99			
	Kitkit	11.50			
	onebillion	11.58			
	RoboTutor	9.87			
Oral Reading	CCI	17.57			
	Chimble	19.49			
	Kitkit	21.07			
	onebillion	21.33			
	RoboTutor	16.86			
Reading Comprehension	CCI	14.13			
	Chimble	16.19			
	Kitkit	16.95			
	onebillion	15.76			
	RoboTutor	12.70			
Syllables	CCI	15.22			
	Chimble	14.60			

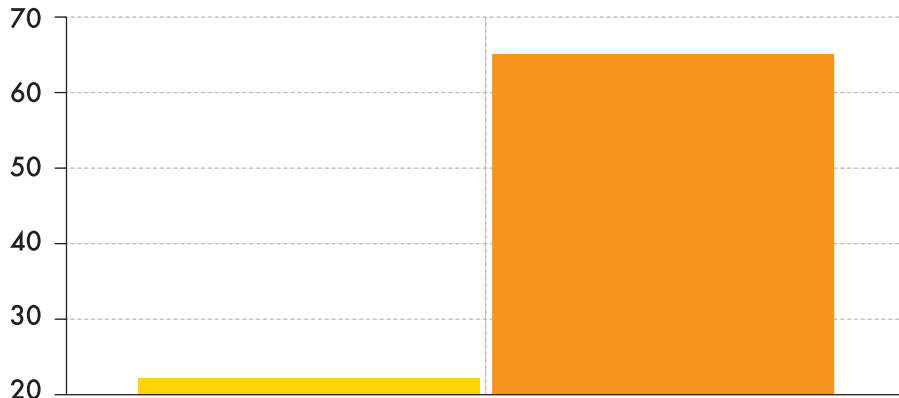




# Numeracy

23% of the children were able to correctly answer at least ONE single-digit addition or subtraction problem. After 15 months with tablets, that number jumped to 66%.

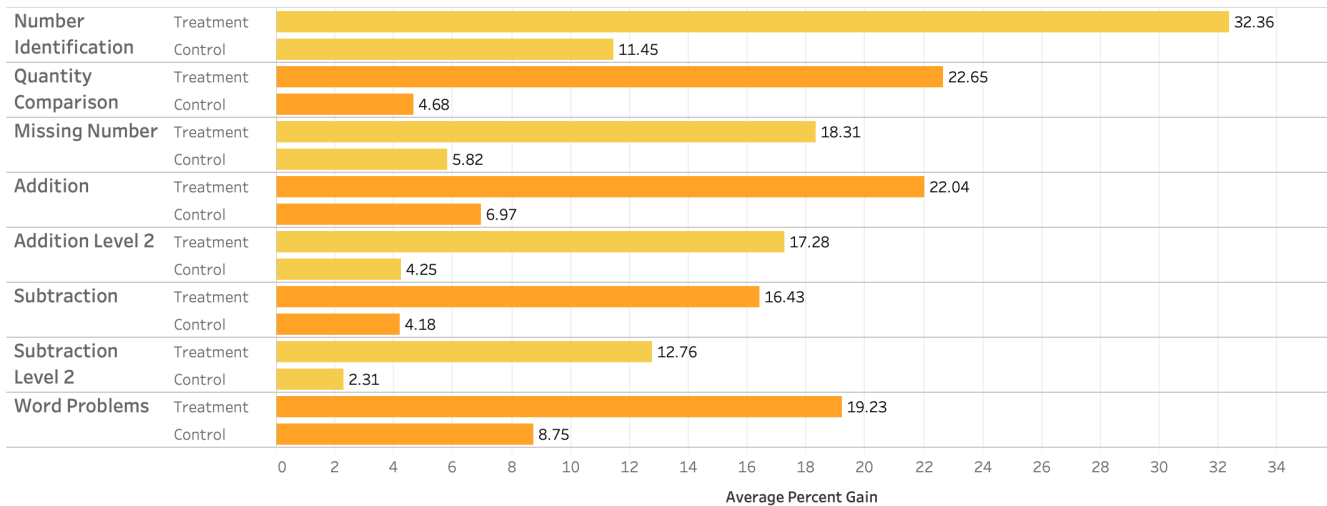
## Numeracy Gains



### Single-Digit Addition or Subtraction Problems

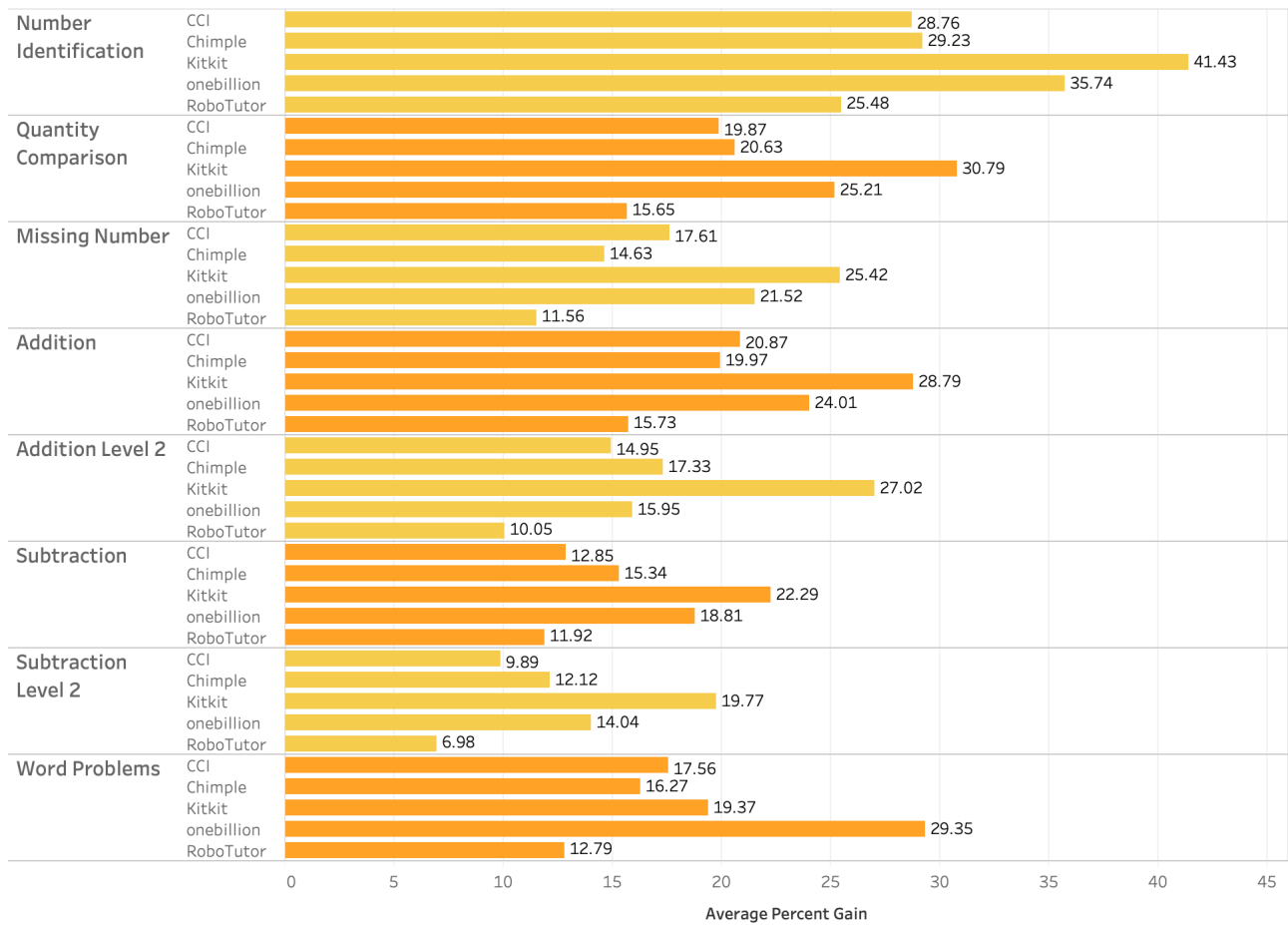
■ Before      ■ After

## Average Percent Gain - Treatment vs Control



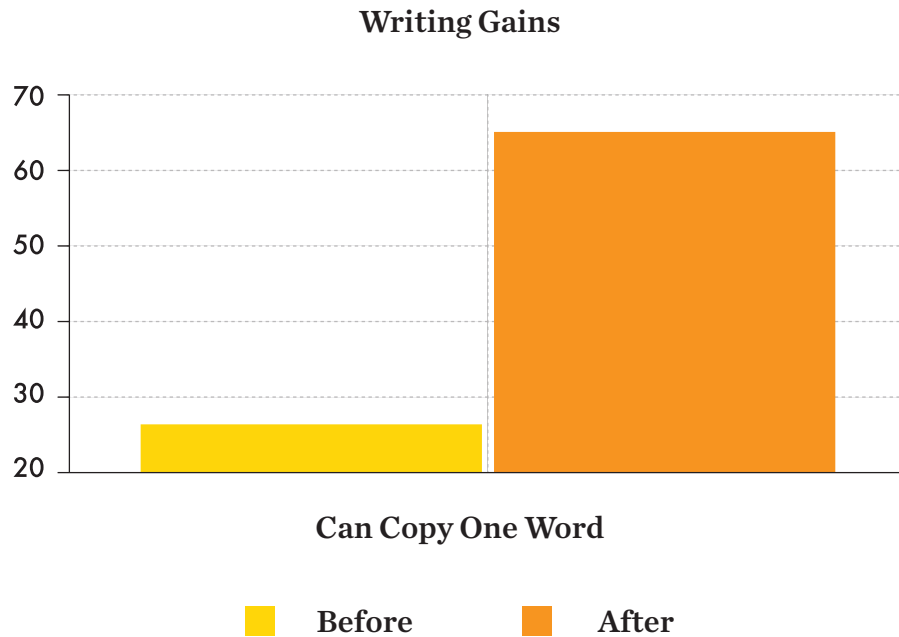
*Numeracy, cont.*

**Average Percent Gain - Per Team**

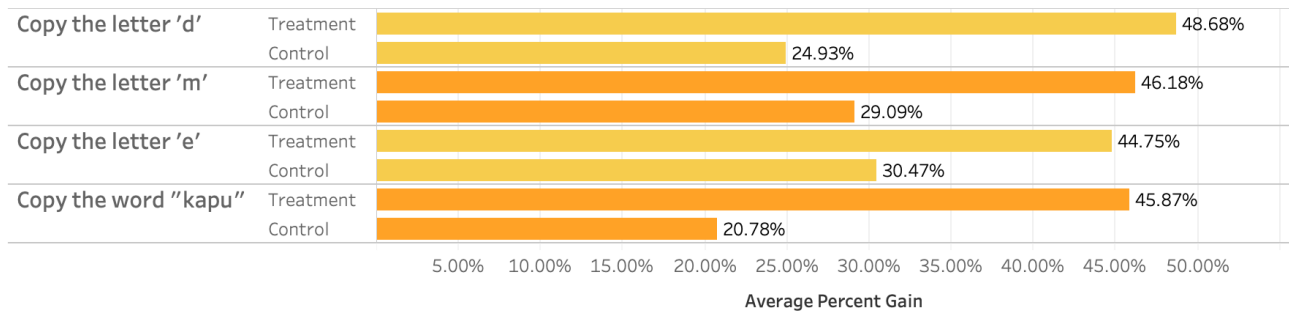


## Writing

26% of children were able to correctly copy a simple word they were shown using a pencil and a piece of paper. After 15 months, 67% of children with tablets were able to do this correctly.



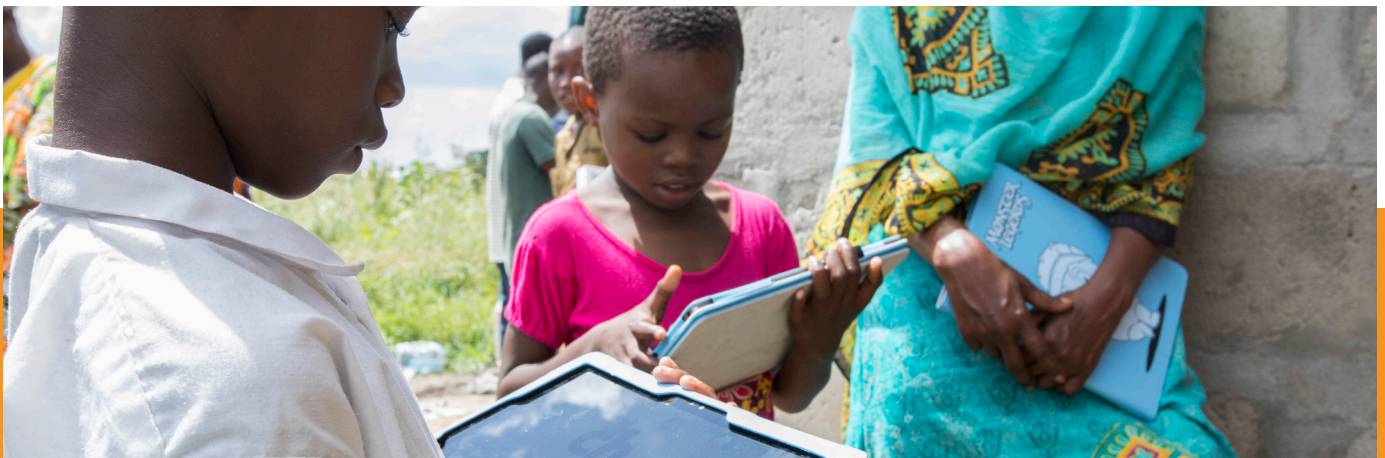
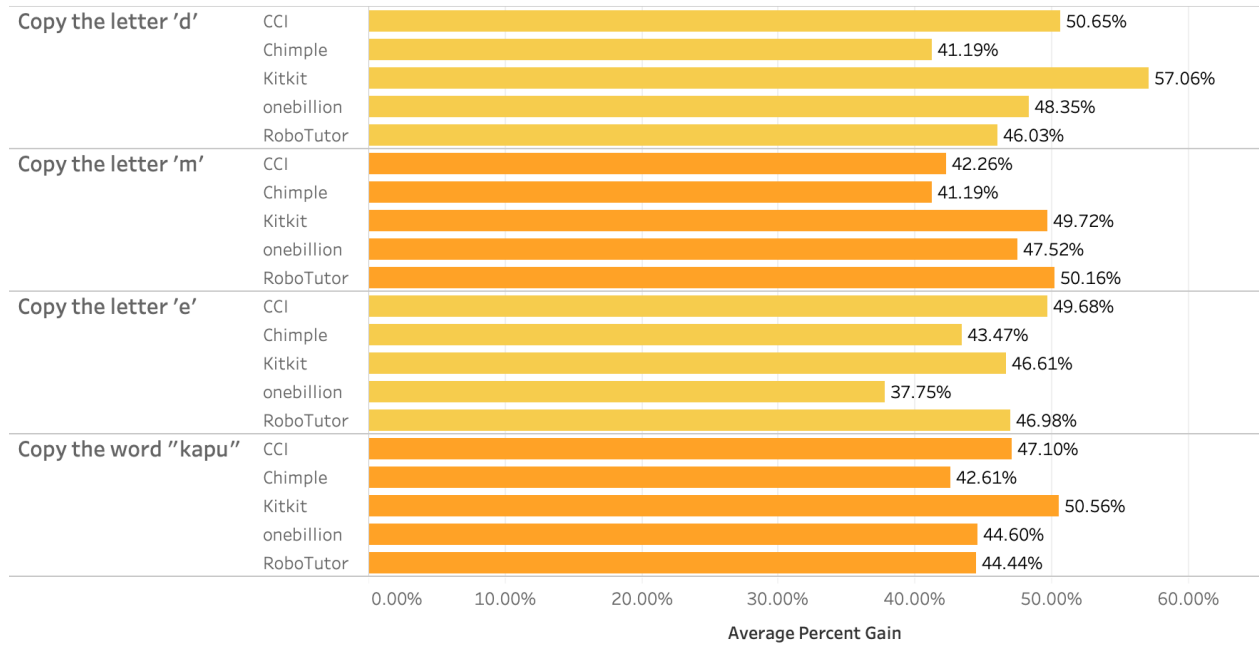
### Average Percent Gain - Treatment vs Control





Writing, cont.

Average Percent Gain - Per Team





## 7.

# GRAND PRIZE

The Grand Prize was announced at the Global Learning Award Ceremony held at the Google Spruce Goose Hangar in Playa Vista, CA on May 15, 2019. In an exciting turn of events, the Judges determined that two teams, Kitkit School and onebillion, would split the Grand Prize purse of \$10 million, and thus, each received \$5 million. These two teams consistently had impactful results in the designated areas, and the difference between them was statistically insignificant. The Judges noted, however, that it was incredible how well each of the five finalist teams performed. XPRIZE recognizes and salutes each of the five finalist teams for their exceptional achievements and contributions to solving for global education.



From left to right, Emily Church, Peter H. Diamandis, Jamie Stuart (onebillion), Andrew Ashe (onebillion), Elon Musk, Sooinn Lee (Kitkit school), Gunho Lee (Kitkit school) and Anoushesh Ansari.

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## IMPACT INITIATIVES

The competition of the Global Learning XPRIZE came to a close upon the announcement of the Grand Prize winners on May 15, 2019. However, the work must continue if we are to achieve universal access to quality education.

In order to accomplish this goal, we need help from as many people as possible. So, we have launched the [Global Learning XPRIZE pledge page](#) where individuals from around the world have joined our community to learn about the many ways to help scale the Global Learning XPRIZE technologies so every child, everywhere is able to access it.

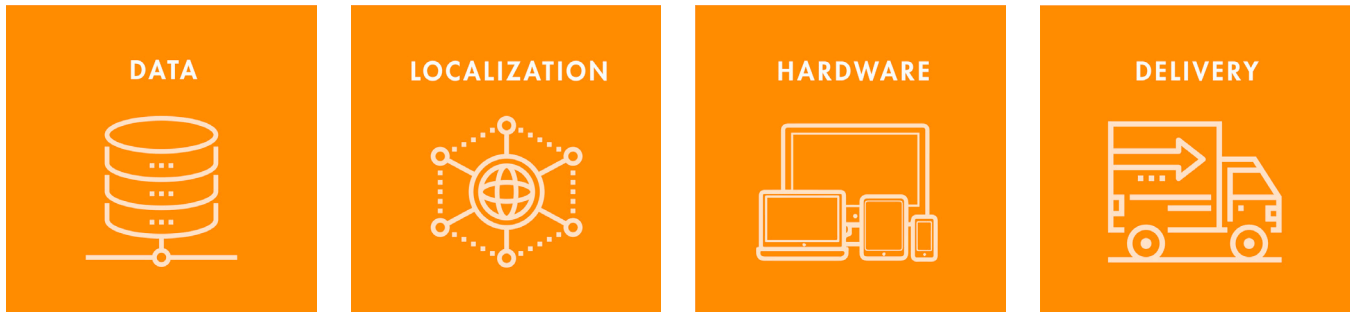
The day after the award ceremony, XPRIZE held a “Celebration-to-Action” workshop to help determine how to support the teams to continue their work. Our five finalist teams reaffirmed their commitment to the mission to continue to push forward.





## What more can be done?

Now, the world has to work to secure and load the software onto tablets; localize the software into different languages; and deliver preloaded hardware and charging stations to remote locations so all finalist teams can scale their learning software across the world.



**Data** – XPRIZE has made our data open and free for the world to use, analyze, and build upon. Please explore the data [here](#).

**Localization** - Localize the software to make sure it is culturally relevant to each child in their environment, with the goal of localizing into 20 languages within one year.

**Hardware** - Hardware needs to be sourced at an affordable price point and loaded with the adapted software..

**Delivery** - Scalable delivery systems need to reach children in even the most remote or challenging areas.

To help achieve each of these goals, we have made the software of each finalist team available for free online, for anyone to download, use, and build upon, in both English and Swahili. Find the code [here](#).



**By making each software open source, the Global Learning XPRIZE and the finalist teams are providing an advanced tool that the world can build upon and adapt to the specific needs of their community. We believe this is a major advancement for the global movement to transform how we can help to bring quality learning to children anywhere. Children -- whether they do not have access to school, have had intermittent access to a classroom, or want to supplement their current education -- have the basic human right to learn.**

**- Emily Musil Church, Ph.D.,  
Executive Director of the Global Learning XPRIZE**



## Pilots Around the World... So Far

The initiative of the Global Learning XPRIZE continues. This map illustrates the fifteen pilot projects, that have begun due to the Global Learning XPRIZE. Our efforts and our community continue to expand, as do the solutions XPRIZE has stimulated. In full affect, we have accelerated solutions to one problem of education faced by millions of children and the world at large. With each child that learns, a community grows more intelligent and has greater access to more information and tools to solve any problems they may face. An empowered child helps empower our entire global community.



If you would like to learn more about recent impacts and how you may participate, please contact [global.learning@xprize.org](mailto:global.learning@xprize.org)

**9.**

# **BENEFACTORS**

The generosity of our benefactors and donors made this work possible. We are deeply grateful for their support, and their unfailing belief that we can do better for the world's children.

## **Benefactors**

Elon Musk

Anthony Robbins Foundation

Dick and Betsy DeVos Family Foundation

Merkin Family Foundation

John Raymonds

Scott Hassan

Suzanne West

## **Additional Donors**

Jack Bader

James and Randie Eberlin

Mark Bidwell

Rod Roddenberry

Rajeev Agarwal

Google

Our many Indiegogo crowdfunding contributors

# ADVISORY BOARD

Our international, diverse highly esteemed Advisory Board helped ideate, debate, and shape this project from its onset. They contributed to the success of the competition and continue to support the teams and the mission.



**ANTONIO M  
BATTRO**



**ADÈLE  
BOTHA**



**CESAR AUGUSTO  
GUADALUPE  
MENDIZABAL**



**RUTH  
KAGIA**



**GEORGE  
MULAMULA**



**ZULMIRA  
RODRIGUES**



**MARCELO M  
SUÁREZ-OROZCO**



**MARYANNE  
WOLF**

# JUDGES

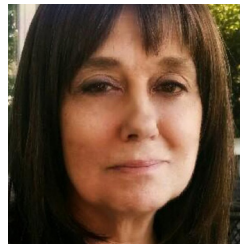
Our independent judging panel was designed to represent the global reach of the competition. The eleven women and men on the judging panel came from countries all around the world. Their cultural differences and diversity of expertise - from education, technology, language and neuroscience - created a holistic and multifaceted judging process.



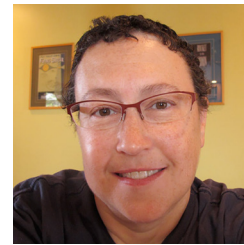
**JOHN  
COMINGS**



**DAVID  
DOCKTERMAN**



**LINDA  
DYCK**



**TRACY  
FULLERTON**



**LOUIS  
GOMEZ**



**TAMI  
KATZIR**



**HANIFA K.F.  
MPONJI**



**MARGUERITE KHAKA  
MIHESO-OCONNOR**



**BARBARA  
TRUETT**



**CLAUDIA  
URREA**



**STEPHANIE  
GOTTWALD**

*\*After years of service to the Global Learning XPRIZE, Stephanie Gottwald recused herself in Spring 2019 in order to focus on scaling learning technologies.*



# OPERATIONAL STAFF

Every department at XPRIZE worked to make this project a success, as well as more than 300 people in Tanzania during our field test. This endeavor truly took a global village to achieve all it did.



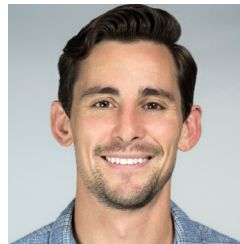
**EMILY MUSIL  
CHURCH Ph.D.**

*Executive Director*



**DEVIN  
KROTMAN**

*Director,  
Field Operations*



**DANIEL  
MILLER**

*Project Manager*



**CHANDA  
GONZALES-MOWRER**

*Vice President,  
Prize Operations*



**JO  
GRIMSTAD**

*Technical Lead*



**TAMMY  
STOCKFISH**

*Director, Account  
Management,  
Business Affairs*



**OSE  
UGOCHUKWU**

*General Counsel,  
Legal and Corporate*

*There have been many people who have worked hard on this project.  
We want to pay special tribute to past members of the Global Learning XPRIZE core team.*

Matt Keller, Ed McNierney, Ben Bain, Nathan Wong, Annie Nguyen.

**13.**

## ABOUT XPRIZE®

XPRIZE is a **501c3 non-profit organization** which designs and operates multi-million-dollar, global competitions to incentivize the development of technological breakthroughs that accelerate humanity toward a better future.

Our mission is to inspire and empower a global community of problem-solvers to positively impact our world. We believe solutions to the world's problems can come from anyone, anywhere.

Learn more at [xprize.org](https://xprize.org)

