



## Annual Report 2019

### Background

Imagine exists to demonstrate that children with child-directed, technology-enabled learning solutions in their hands can become literate and numerate, driving their own instruction. Over 600M children in developing countries fail to attain minimum proficiency in literacy or numeracy. We believe that we can work with schools and communities to address this seemingly intractable problem.

We are partnering with organizations across the globe to achieve this goal. We will build an evidence base for what works, why, and under what conditions. We will use data to drive continuous improvement of content, approach, and implementation. Then we will provide tools, expertise, capital, and a network to bring this opportunity to children across the globe. We envision a world where all children have access to opportunity. Demonstrating the effectiveness of child-directed, tech-enabled learning, beginning in places with few alternatives, can pave the way for limitless possibilities for all children.

We are proud of the progress that we have made in our short history and are inspired by the many opportunities that lie ahead. We are well on our way to building a portfolio of evidence that is critical to the success of this work. We have launched work in government schools in Malawi, as well as in a refugee settlement – the latter including both an informal school and a center that serves out-of-school children. We have also launched work in an emergency refugee setting in Cox's Bazar, Bangladesh, in partnership with the International Rescue Committee (IRC) with whom we plan to launch additional pilots in multiple countries and languages. Finally, we are working with the Ministry of Education in Ghana to plan a pilot in government schools there. We have built strong partnerships, completed our first year of successful research, and forged relationships with new implementation and software partners that will help this work to reach exponentially more children.



Lilongwe, Malawi

## 2019 Program Review

We made tremendous strides over the last 12 months. After launching our first pilot in Malawi in 2018, we now have three pilots operating in several contexts in Malawi (in-school, informal school, and out-of-school) and one pilot in Cox's Bazar, Bangladesh (out-of-school). We have built deep partnerships with software developers (onebillion and Enuma), implementation partners (Voluntary Service Overseas [VSO] and IRC), and research partners (University of Malawi and IRC). We are building new relationships with important organizations that can eventually scale this work (for example, the Ministry of Education in Ghana).

Our strategy continues to focus on two core elements:

1. Proof: Building the evidence base for child-directed, technology-enabled learning in various contexts with a range of partners;
2. Scale: Supporting scale so that we can bring evidence-based solutions to as many children as possible.

We continue to focus on four key goals aligned to those elements:

1. Build a portfolio of evidence in different contexts for child-directed, technology-enabled learning
2. Expand our network and understanding of the field
3. Set the stage for scale
4. Operate and grow a sustainable organization

In this report, we describe our progress during 2019 as well as our exciting plans for 2020-2021 as they relate to each goal.



Lilongwe, Malawi

*2019 Goals and Objectives*

As an organization, we established the following ambitious, yet achievable, goals and objectives for 2019:

Goals	Objectives
1) Build an evidence base for child-directed, technology-enabled learning	<ul style="list-style-type: none"> <li>• Monitor progress of a multi-year, in-school pilot in Malawi</li> <li>• Launch pilots in Dzaleka refugee camp in Malawi</li> <li>• Design and Launch additional pilots in a second country</li> <li>• Continue to develop and refine plans for our portfolio of pilots as we learn from our experience</li> </ul>
2) Expand our network and our understanding of the field	<ul style="list-style-type: none"> <li>• Explore potential new partnerships to support the work</li> <li>• Develop a deeper understanding of the technology landscape</li> </ul>
3) Set the stage for scale	<ul style="list-style-type: none"> <li>• Continue research on the conditions for large-scale implementation</li> <li>• Codify learning from early pilot studies for later replication efforts</li> </ul>
4) Operate and grow a sustainable organization	<ul style="list-style-type: none"> <li>• Expand the Imagine team to strengthen our ability to execute the work</li> <li>• Continue to deliver on a sustainable budget and ensure healthy cash flow in accordance with our budget</li> </ul>



Lilongwe, Malawi

## 2019 Progress Reporting

In the following section, we will report on the progress of each goal and set of objectives:

### *Goal 1: Build an evidence base for child-directed, technology-enabled learning*

#### *Objective: Monitor progress of a multi-year, in-school pilot in Malawi*

We are thrilled to report that we successfully concluded and have analyzed the results from our first efficacy randomized controlled trial (RCT) in two government primary schools in Malawi. The findings demonstrate strong positive results, especially in literacy. Some highlights from the Year 1 results include:

- 87% of learners persisted in the study.
- Learners in the literacy intervention group gained the equivalent of about 13.3 months of overall literacy learning during the 8-month intervention, an added value of about 66% over the control group.
- Learners in the literacy intervention group gained about 2x what the control group gained in listening comprehension and reading comprehension during the 8 months.
- The tablet program produced positive impacts (effect sizes) in all targeted literacy skills and in key early math skills (number sense).
- Better implementation and better attendance at the peri-urban school were associated with an even stronger impact in overall literacy learning (effect size = .40).
- The more days that children attended the tablet program, the more they learned on average: children who attended at least 50% of the time gained 77% more in overall literacy and about 40% more in number sense skills than the control group.
- Both girls and boys benefited from the program: intervention effects for boys and girls were not statistically different in either literacy or numeracy .
- Parents, teachers, and school and community leaders were overwhelmingly positive about the impact of the program on learners. More than 75% of the adults interviewed reported strong improvements in each of the following areas: children's excitement about school, attendance, achievement in literacy and numeracy, work effort, and confidence as learners.

In October 2019, we launched a new study with a second cohort of children at the two schools. We expect to see even greater learning gains in this second year due to expanded software content and improved implementation based on lessons learned in our pilot year.

*Objective: Launch pilots in Dzaleka refugee camp in Malawi*

In Spring 2019, we launched and completed two short-term (7-week) implementation studies in the Dzaleka Refugee Camp. The first was conducted with approximately 120 students ages 4-7 at Integrity Church School, an informal school in the camp. We used onebillion's procedural math software in English with the purpose of understanding whether the software was appropriate for children whose first language is not English and for what ages the software was most appropriate. The initial study suggested that children aged at least 5 years could make good progress using the math software.

The second implementation study was conducted with approximately 30 learners at takenoLab, a community center in the Dzaleka Refugee camp that provides technology-focused programs for out-of-school youth. We used onebillion's adaptive literacy and math software in English to understand what implementation model works well in a community setting. We learned that recruiting out-of-school children and youth should start early and that recruiters need to be conscious of ethnic diversity in their recruitment efforts. In addition, community sensitizations were important for encouraging attendance.

Building on the above implementation studies, we launched in Fall 2019 a longer (4-month) proof of concept RCT at the Integrity Church School with children in Preschool 3 and Grades 1, 2, and 3 (ages 5-8) using onebillion's procedural math software in English. This RCT will help us to understand how much additional learning children at different ages gain over standard instruction.

We also launched a second study at TakenoLab with a new group of 30 children ages 6-12, using onebillion's adaptive literacy and math software in English. This study (which does not have a control group) will help us to understand how much learning the participating out-of-school children gain over 4 months and whether their sense of well-being improves.

*Objective: Design and launch additional pilots in another country*

In November 2019, we launched our first learning program in partnership with the International Rescue Committee (IRC) in Cox's Bazar, Bangladesh, where only 27% of the 530,000 Rohingya refugee children are enrolled in learning opportunities. We started with an implementation study involving 600 children with the goal of testing and refining replicable delivery models for child-directed, tech-enabled learning that can be deployed within eight weeks of crisis.

This study will answer feasibility and implementation questions related to two delivery models -- a home-based delivery model and a center-based delivery model. The children, ages 6-14, will use the tablets for approximately four hours per week in addition to participating in some social-emotional learning activities. The software, in English with Rohingya voiceover, provides children instruction in literacy and numeracy. Approximately half of the children are using Kitkit School (Enuma) software while the other half are using Can't Wait to Learn (War Child Holland). This study will also compare children's experience using the two different delivery models and two different software.

After our implementation study concludes in Spring 2020, we will launch subsequent proof-of-concept and efficacy studies in addition to expanding our work into the host community. We believe that this work has the potential to lead the field of humanitarian aid and investment by demonstrating a powerful model for cost-effective education opportunities for out-of-school primary age refugee children.

***Objective:** Continue to develop and refine plans for our portfolio of pilots and learn from prior experience*

With each pilot experience, we are learning about the conditions for success and adapting our pilot design as well as our overall portfolio. Based on our first year in Malawi, we have made the following adjustments for Year 2:

- Increase time on task by launching our pilot earlier in the school year and continuing to partner with local community groups to support children's attendance.
- Add benchmark assessments to the software product so that children's progress through the application will be regulated based on mastery of the learning material.
- Increase the amount of learning material in the software product so that learners have the opportunity to make even greater learning gains by covering more challenging content as time progresses.

Our portfolio is evolving to include work that serves children in schools and out of schools, in non-refugee, stable refugee, and emergency refugee contexts. As mentioned above, we launched a pilot in 2019 in Bangladesh with over 600 children, which is our first pilot in an emergency refugee context. We believe that this pilot provides a valuable learning opportunity to understand what works and what doesn't in this context.

Our increasingly diverse research portfolio will provide further evidence of the conditions required to support children's learning in different contexts. A summary of our existing and proposed portfolio of sites for 2020-2021 can be found on the next page.

Country	Malawi (UT)	Malawi (Dzaleka)		Bangladesh	Tanzania	Ghana	Country TBD with IRC
Start date	2018	2019	2019	2019	2020	2020	2021
Total duration	2-3 years	2-3 years	1-2 years	3 years	3 years	3 years	3 years
Language	Chichewa	English	English	English w/ Rohingya instructions	Swahili	English	French or English
Subject	Literacy / Math	Math	Literacy / Math	Literacy / Math	Math (2020)	TBD	TBD
Context	In-school; government	Informal school; refugee	Out-of- school; stable refugee	Out-of-school; emergency refugee	In-school; stable refugee	In-school; government	TBD; stable refugee
Implement- ation study		X	X	X	X	X	X
Proof of concept		X		X	X	X	X
Efficacy RCT	X	X		X	X	X	X
Action research	X	X	X	X	X	X	X
Key research questions	Can children attain reading comprehension and comparable numeracy skill level with daily use of the tablet? How long does it take?	Can children whose first language is not English achieve significant learning gains over standard instruction when using the tablet in English?	What implementation models work well in a community setting?	What implementation models work well with out-of-school populations in emergency contexts? Do children make significant learning gains over the status quo?	What implementation models work well with stable displaced populations? Do children make significant learning gains over the status quo?	Do children in a different country and language make significant learning gains over the status quo?	What implementation models work well with stable displaced populations? Do children make significant learning gains over the status quo?

*Goal 2: Expand our network and our understanding of the field*

*Objective: Explore potential new partnerships to support the work*

While we have deepened relationships with our existing partners (VSO, onebillion, University of Malawi) through our work in Malawi, we have also formed a transformational partnership with the International Rescue Committee (IRC) to bring child-directed, tech-enabled learning to children in crisis contexts (stable and emergency) across the globe. IRC and Imagine's complementary capabilities have the potential to scale this work globally through IRC's existing infrastructure, which currently serves over 26 million people in 40+ countries. In 2019, we launched our first pilot together in Bangladesh, laying the groundwork for future work in Bangladesh and other contexts.

We have also formed a promising new partnership with Enuma, creator of Kitkit School (co-winner of the XPrize). Enuma is participating in our inaugural pilot with IRC in Bangladesh as one of our two software partners. We engaged in a collaborative software contextualization process with Enuma to adapt their literacy and numeracy product in English, adding customized Rohingya instructions to support the needs of learners in the camp.

We are also working with the Ministry of Education in Ghana to plan a pilot in government schools in 2020 with the potential to scale nationwide.

*Objective: Develop a deeper understanding of the technology landscape*

We engaged an expert education technology firm, Education Elements, to conduct an extensive internal and external review of Kitkit School and onecourse. The goal of these reviews was to support a deeper understanding of each partner's product so that we could leverage their unique strengths in a given implementation context as well as consider investment opportunities to resolve potential product gaps.

We also completed a landscape analysis of 55 education software products to better understand how available products measure up against key criteria that we have identified as important for implementation in our contexts. The results of the landscape review will also support our understanding of gaps in the field that could be potential areas of investment for Imagine. As a result of the landscape analysis, we are currently in discussion with two software developers with products in French that we are considering for our upcoming pilots in Tanzania.

### *Goal 3: Set the stage for scale*

#### *Objective: Continue research on the conditions for large-scale implementation*

We started working with the Ministry of Education in Ghana to plan a pilot in government schools in 2020 with potential to scale nationwide. The Ministry of Education is our first direct government partner, and we believe this partnership is critical to understanding the necessary conditions for scaling within a government context. Additionally, we are building early relationships with other important scale partners, e.g. World Bank and USAID, that we see as instrumental to our strategy to reach millions of children.

In 2019, we have also refined our unit economics model. Based on our experience in Malawi and the experiences of our partners in other locations, we have estimated an average cost per child at scale of ~\$15 - \$22 (and declining). We will continue to refine our model as we expect costs per child to drop as tablet costs continue to decline over time.

#### *Objective: Codify learning from early pilot studies for later replication efforts*

In 2019, we conducted a complete overhaul of our [website](#) to improve our ability to share our work with the field. Since launching the website, we have received great feedback from existing partners as well as outreach from organizations regarding new opportunities for collaboration.

In addition, we have been working in partnership with colleagues at the University of Nottingham and VSO to codify our lessons learned from pilot implementations. We have developed a comprehensive set of implementation toolkits that will be publicly available for use by other organizations interested in designing and implementing tablet-based education interventions. These toolkits share our experiences and lessons learned from intervention design, preparation, launch, and post-launch monitoring. We will be publishing the toolkits in 2020.

### *Goal 4: Operate and grow a sustainable organization*

#### *Objective: Expand our team to strengthen our ability to execute the work*

We continue to build a small, but mighty team. In 2019, we maintained our core leadership: Susan Colby, Karen Levesque, and Jennifer Welsh, and our existing team member: Sarah Bardack. We also added to our team:

- Dr. Antonie Chigeda (Regional Director for Africa)
- Ignacio Mumbo (Manager, Program Delivery in Malawi)

- Rachel Boroditsky (Associate)
- Kristen Stipe (Manager of Operations and Administration)

Team bios can be found [here](#).

*Objective: Continue to deliver on a sustainable budget and ensure healthy cash flow in accordance with our budget*

2019 Budget and Actuals and 2020 Budget:

	2019 Budget	2019 Actuals	2020 Budget
<b>STAFF SALARIES AND BENEFITS</b>	<b>\$ 1,580,000</b>	<b>\$ 945,000</b>	<b>\$ 1,700,000</b>
Core team	1,580,000	945,000	1,700,000
<b>CONSULTANTS AND PROFESSIONAL FEES</b>	<b>\$ 135,000</b>	<b>\$ 142,000</b>	<b>\$ 180,000</b>
Legal	45,000	3,000	25,000
Consultants	75,000	124,000	125,000
Research Advisory Group	15,000	15,000	30,000
<b>INVESTMENTS</b>	<b>\$ 250,000</b>	<b>\$ 100,000</b>	<b>\$ 250,000</b>
Tech enhancement	250,000	100,000	250,000
<b>OPERATIONS</b>	<b>\$ 389,000</b>	<b>\$ 228,000</b>	<b>\$ 360,000</b>
Accounting and HR	35,000	33,000	50,000
Facilities, office expenses and computers	80,000	55,000	80,000
Website, branding and dissemination	75,000	33,000	40,000
Travel	135,000	100,000	160,000
Insurance	10,000	3,000	4,000
Statistical software and licenses	14,000	4,000	10,000
Staff development (training, conferences, etc.)	40,000	-	16,000
<b>PILOTS</b>	<b>\$ 435,000</b>	<b>\$ 285,000</b>	<b>\$ 2,789,000</b>
Malawi (UT, Integrity, TakenoLab)	230,000	285,000	290,000
Ghana	205,000	-	205,000
Pilot Development (including IRC sites)	-	-	2,294,000
<b>TOTAL EXPENSES</b>	<b>\$ 2,789,000</b>	<b>\$ 1,700,000</b>	<b>\$ 5,279,000</b>

The following are some highlights:

- We have grown our extraordinary team, including the addition of a Regional Director of Africa based in Malawi.
- We were under budget in 2019 mainly due to the careful, but slower, growth of our team, which resulted in lower personnel and operational spending.
- We accomplished our critical organizational goals including the completion of Y1 and launch of Y2 of our long-term RCT in Malawi and significant expansion of our portfolio of pilots.
- We formed a critical partnership for scale with IRC and launched our first pilot in Cox's Bazar, Bangladesh. As a result, we delayed the launch of our work in West Africa to 2020.
- Our budget increased significantly in 2020 due to our partnership with IRC and plans to scale our operations in Bangladesh and launch new sites in Tanzania in 2020.

2019 Organizational Milestones*	Status
Collect and analyze baseline usage and progress data from 1 <sup>st</sup> pilot	Completed
Launch pilots in Dzaleka refugee camp	Completed
Collect and analyze Year 1 data from UT long-term pilot	Completed

\* 2018 Organization Milestones were reported in the 2018 Annual Report.

## Operating Plan for 2020-2021

Based on our success in 2019, we have defined a set of ambitious goals for 2020-2021 in alignment with our organizational goals and our various grant agreements:

Goals	Objectives
1) Build an evidence base for child-directed, technology-enabled learning	<ol style="list-style-type: none"> <li>1. Continue building evidence from the Malawi pilots</li> <li>2. Build evidence through a series of pilots with IRC</li> <li>3. Launch new sites</li> </ol>
2) Expand our network and understanding of the field	<ol style="list-style-type: none"> <li>1. Deepen government partnerships to co-launch sites</li> <li>2. Deepen understanding of technology landscape and software partnerships</li> </ol>
3) Set the stage for scale	<ol style="list-style-type: none"> <li>1. Deepen our relationship with IRC and build successful sites and models</li> <li>2. Further develop and build new relationships with stakeholders in government or aid agencies to enable scale</li> <li>3. Work with software developers to improve products</li> <li>4. Codify and share lessons learned</li> </ol>
4) Operate and grow a sustainable organization	<ol style="list-style-type: none"> <li>1. Extend our team and capabilities, as required</li> <li>2. Raise additional capital to support new opportunities</li> <li>3. Manage budget and cash flow</li> </ol>

**Goal 1:** *Continue to build an evidence base for child-directed, technology-enabled learning*

Objectives	Metrics of Success
1) Continue building evidence from the Malawi pilots	<ul style="list-style-type: none"> <li>• Serve appropriate numbers of children to power our studies and produce statistically significant results that develop the evidence base needed to serve children well and build the models for scale.</li> <li>• Complete an RCT following a second cohort of children for up to 2 years in our long-term pilot in government schools in Malawi, addressing the question of how far learners can progress towards literacy and numeracy and whether the dosage is appropriate for significant progress.</li> <li>• Set aggressive, but realistic learning outcomes in all studies, recognizing we are learning and implementing in extremely challenging conditions. Analyze and share results with relevant parties.</li> </ul>

2) Build evidence through a series of pilots with IRC	<ul style="list-style-type: none"> <li>• Serve appropriate numbers of children to power our studies and produce statistically significant results that develop the evidence base needed to serve children well and build the models for scale</li> </ul>
3) Launch new sites	<ul style="list-style-type: none"> <li>• Operate pilots in 3+ different languages in 3-4 countries including: <ul style="list-style-type: none"> <li>○ Malawi</li> <li>○ Bangladesh</li> <li>○ And at least one other African country</li> </ul> </li> </ul>

*Goal 2: Expand our network and understanding of the field*

Objectives	Metrics of Success
1) Deepen government partnership to co-launch sites	<ul style="list-style-type: none"> <li>• Launch at least one of our pilots in partnership with a government or multilateral aid organization by EOY 2021</li> </ul>
2) Deepen understanding of technology landscape and software partnerships	<ul style="list-style-type: none"> <li>• Develop at least 1 new software partnership</li> </ul>

*Goal 3: Set the stage for scale*

Objectives	Metrics of Success
1) Deepen our relationship with IRC and build successful sites and models	<ul style="list-style-type: none"> <li>• Launch work in multiple locations with IRC as partner (see Goal 1 Objective 1)</li> </ul>
2) Further develop and build new relationships with stakeholders in government or aid agencies to enable scale	<ul style="list-style-type: none"> <li>• See Goal 2 Objective 1</li> </ul>

3) Work with software developers to improve products	<ul style="list-style-type: none"> <li>Invest in at least 1 localization and/or significant software improvement project</li> </ul>
4) Codify and share lessons learned	<ul style="list-style-type: none"> <li>Begin to make implementation toolkits available to partners in 2020; improve for broader use</li> </ul>

*Goal 4: Operate and grow a sustainable organization*

Objectives	Metrics of Success
1) Extend our team and capabilities, as required	<ul style="list-style-type: none"> <li>Maintain excellence and continuity of current team; add 1-2 hires in 2020 to build out team (research and team)</li> <li>Maintain and deepen our culture focused on children, impact, quality, and urgency</li> <li>Continue to support current team to develop and grow</li> </ul>
2) Raise additional capital to support new opportunities	<ul style="list-style-type: none"> <li>Raise significant capital to support planned work</li> </ul>
3) Manage budget and cash flow	<ul style="list-style-type: none"> <li>Manage expenditures carefully and in accordance with our board-approved budget</li> </ul>

## Conclusion

We continue to be even more convinced of the power of child-directed, technology-enabled learning for children all over the world. We are deeply appreciative of your past support and renewed commitment to our expanding work to empower every child, everywhere to build the literacy and numeracy skills they need to achieve their full potential.



Lilongwe, Malawi