THE INTERNET IN A BOX PROJECT

A Visual Report on Edify's Launch of a New Technology Device for Offline Learning in East Africa

During our all-staff conference in January of 2020, Tiger Dawson introduced his vision to the Edify team that we would develop an education technology project that could be deployed broadly throughout Edify schools to help enhance student learning and to increase employable skills. Over the past two years, and amidst the pandemic's disruption to education, schools have been asking our Edify staff for help to deploy technology that will enable them to improve student learning. One area of focus has been that schools want their investment in education technology to not be locked away in a computer lab but to enable students to continue to learn from home so that they are protected from learning loss. The disruption presented by a global health crisis helped to clarify for schools what they would need for a more digitally connected future.

THE SMILE PROJECT

Edify launched the SMILE Project with a focus on improving critical thinking skills. Using a small computer called a Raspberry Pi, we integrated software to enable students to ask questions from their own devices and measured the improvement in their questioning skills over time. In addition to the SMILE software, we loaded up our device with software that enabled students to learn offline, without requiring access to the internet, and over time we learned from schools that this offline digital library had become a valuable resource for student learning.

The Jinja Parents School pictured below is one example of a school that benefited from the SMILE Project. Jackson, the dedicated proprietor of this school explained to us that he looks to improve his school by bringing the best consultants that he can find to help him learn how to make his school effective with the use of technology for learning. We have been a partner with Jackson on the journey to improve his school and he proudly showed me a classroom full of students learning with SMILE.

Students at the Jinja Parents School connecting to an Edify SMILE device to do research in class.

ANNOUNCING A NEW PRODUCT

The request that we have most consistently received from schools using our SMILE project is that they wanted to be able to add their own localized content to the device to align it with local curriculum needs. Recognizing the desire to customize student learning with relevant local content, we set out to create an upgraded offline learning device that would include a digital library and resources to teach technology skills, while adding a new set of digital tools that would enable educators to create contextualized content that could easily scale to all of the schools participating in the project.

> *We wanted to bridge the gap between the online and the offline world, by enabling schools to access, create and utilize technology for learning, without requiring access to the internet.*

Partnering with an organization called Internet-in-a-Box, we customized a Raspberry Pi 4 device, installing it into a special case that enables us to provide 500 GB of space on an integrated solid state drive for a growing body of learning content. In February and March of 2022, we provided the first trainings and deployed the first set of new offline learning devices in East Africa with ten devices going to schools in Uganda and another ten to schools in Rwanda.

1) A DIGITAL LIBRARY OFFLINE TO ENHANCE STUDENT LEARNING

2) A RESOURCE TO TEACH TECHNOLOGY SKILLS

3) A PLATFORM TO CREATE LOCALIZED LEARNING CONTENT

TRAINING SCHOOL LEADERS IN JINJA

During our first day of EdTech integration training in Jinja, Uganda, 283 school leaders from all over the eastern region of Uganda showed up. This remarkable turnout demonstrated the value that Edify is bringing to schools all over Uganda as these leaders trusted that spending a day with us to discuss EdTech integration would be an effective use of their time. Their presence also showed just how urgently these school leaders sense their need to improve their use of education technology in schools. It was a privilege to share with these leaders about technology integration and to introduce our new device for offline learning. The persistent questions that we received were about how much the device would cost and how soon they could access it for their schools.

School proprietors and head teachers gathered to discuss education technology integration in the classroom.

TEACHER TRAINING IN JINJA

Duuring our second day of training we focused on the teachers. Since teachers were coming from distant areas they could not all arrive at the same time so we divided up the experience into three sessions. The first session focused on EdTech integration and introducing our new offline learning device. In the second session, Denis O'Mario from the Edify EdTech team provided a hands on demo of how the new offline learning device works. The third session delivered by one of our training partners, focused on how to create engaging content for classroom learning using technology. Since the teachers moved through each 50 minute session with a break in between, we were able to make sure that every participant engaged with each part of the training experience.

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Teachers in Uganda engaging with the new Edify offline learning device.

Connecting with 120 teachers on the use of EdTech in the classroom was humbling and inspiring. These teachers dedicate themselves to student learning with limited resources and pay but with focused intensity on transforming the lives of students. That these teachers were choose to spend their Saturday with us learning more about how they can better integrate education technology with learning was truly a privilege. The persistent questions that we received as the teachers tested our new offline learning device were, how much will the device cost, how many students can connect and how soon can we use this new resource in our schools.

DESTINY CHRISTIAN HIGH SCHOOL

We visited four schools during our last day together in Uganda. At Destiny Christian High School, the proprietor showed us where they intend to build their new and expanded computer lab over the next few years. He then brought students and teachers into their existing lab and gave us the opportunity to share what a classroom session would be like with Edify's new offline learning device and the Internet-in-a-Box software. Students and teachers explored the content on their own, browsing maps of Uganda, watching videos on various subjects, researching in Khan Academy Lite, Wikipedia Offline and more, and demonstrating the enthusiasm for learning content that we found everywhere in Uganda.

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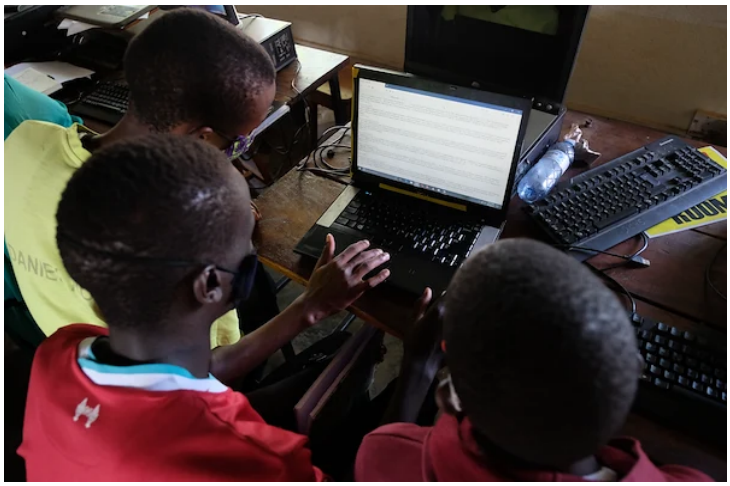

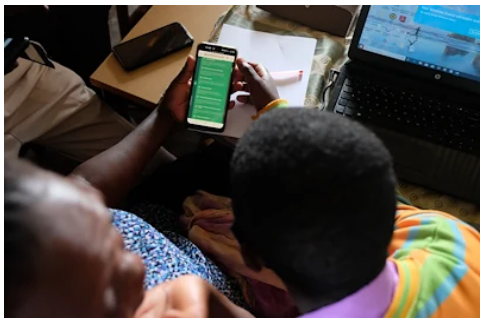

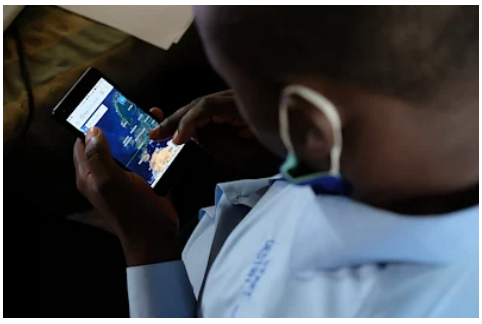

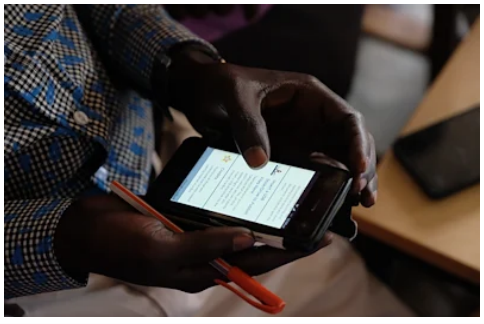

Toward the end of our time together at Destiny Christian High School, I shared a quote from William Butler Yeates with the classroom that education is not the filling of a bucket but the lighting of a fire. The proprietor liked this quote and shared as we stepped outside. "We have been filling buckets but with Edify's help we are going to start lighting fires." His energy and

enthusiasm for improving the use of education technology at his school was infectious and the growth and improvements in this school are already evident.

> *"We have been filling buckets but with Edify's help we are going to start lighting fires."*

Destiny Christian High School

SCHOOL VISITS

In each school we visited, we found students eager to learn and teachers and leaders doing what they can to improve their use of educational technology. Every school shared shared about how Edify has been encouraging them and helping them to improve. It was so refreshing after two years away from the field to encounter again what God is doing in these schools where dedicated Christian entrepreneurs and educators continue to serve the children in their communities. The future is bright for Uganda's schools with such committed educators and what a privilege to work with Edify supporting schools to expand and improve sustainable Christian education!

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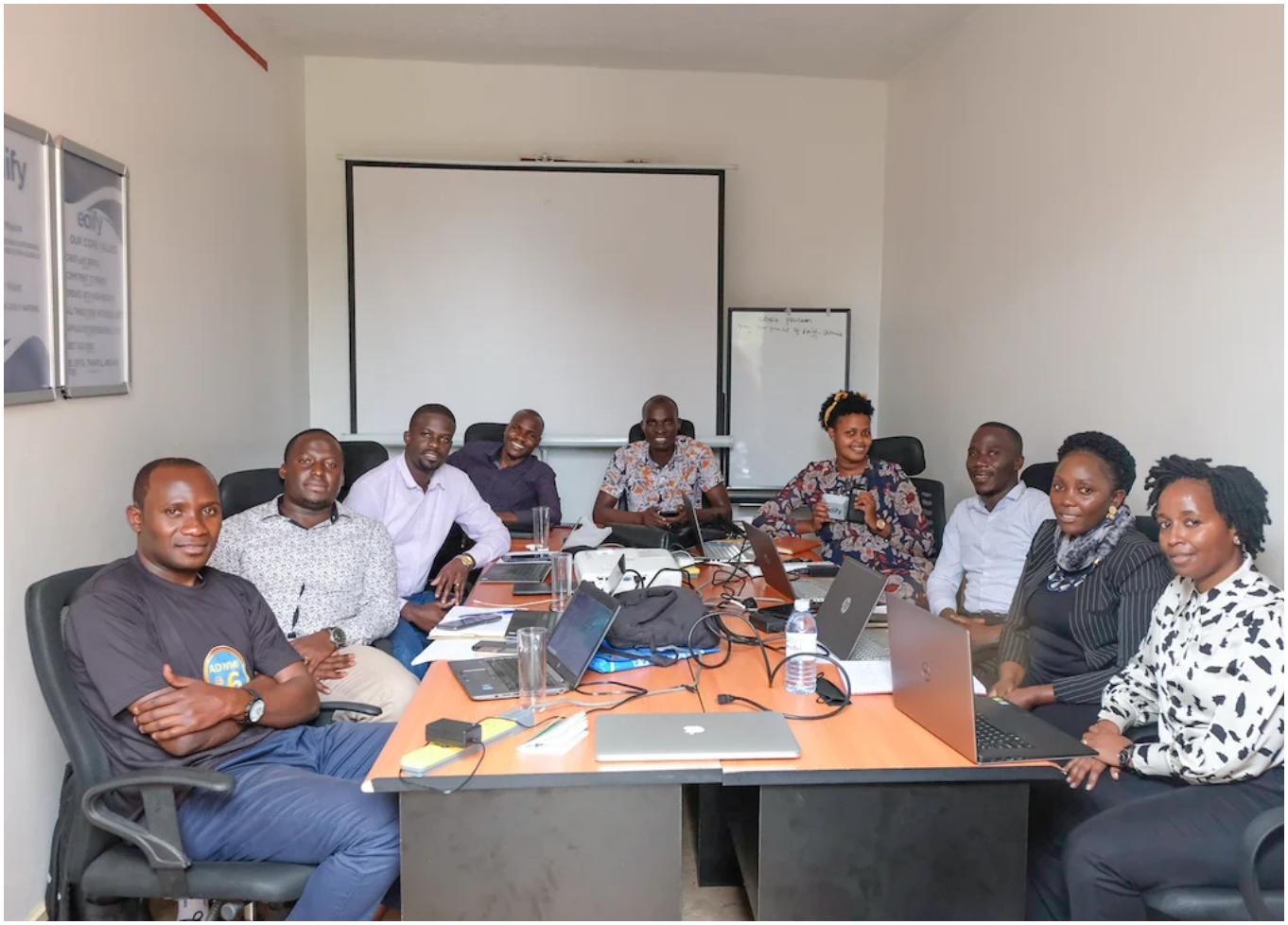
Visiting schools to witness their use of technology and to share about our new project.

EDIFY STAFF IN UGANDA

I want to give a heartfelt thank you to the Edify team in Uganda not only for welcoming me and filling the trip with opportunities to connect with schools but also for all that they do to help educators impact the lives of students. It is amazing to work with such a talented and dedicated team! I want to give a special thank you to Denis who works tirelessly to improve the use of education technology throughout Uganda and to Joel who did a remarkable job of organizing our two days of training in Jinja.



The Edify Uganda team.

TRAINING SCHOOL LEADERS IN RWANDA

After our time in Uganda, I traveled to Rwanda to conduct education technology integration training and to introduce the new Edify offline learning device to schools in the Kigali area. We conducted the Rwanda trainings specifically with the ten schools that will be testing our new learning device in the classroom. The schools represented have started down

the path of integrating education technology with learning so the questions and feedback they provided were excellent.

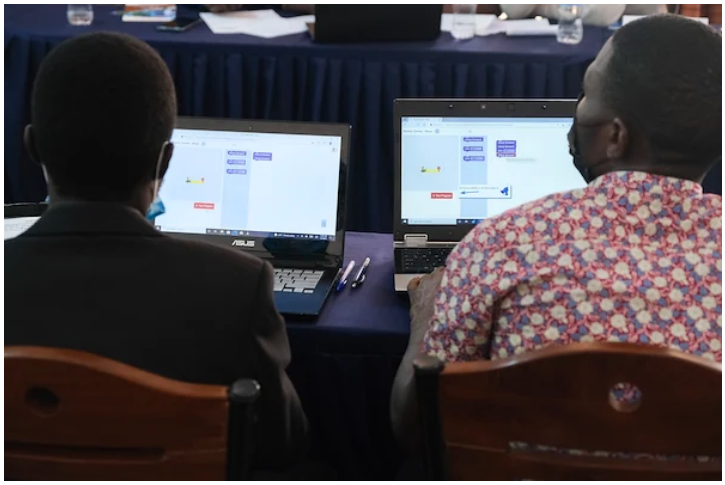
Training school leaders in Kigali, Rwanda.

TEACHER TRAINING IN RWANDA

For our second day of training, teachers from the same schools represented in the first day of training came to learn about using the new device in the classroom. This training represented a room full of educators skilled in education technology and ready to take their schools to another level. Innocent from our team offered a coding training that had the entire group engaged on their own devices and learning the critical skills that they will share with their students.

I also provided a demo on Kolibri and how to create content and organize students into classes for effective EdTech integration. Once I had added all of the teachers to Kolibri on screen to show them how it would work, I asked them to create their own classes and it was amazing to refresh the screen and see classes and content being organized by teachers around the room, all working offline and connected directly to our new device. One educator asked if we could take this project to his home

country of Cameroon since he's spent the last several years trying to figure out a solution like this for students learning without reliable access to the internet.

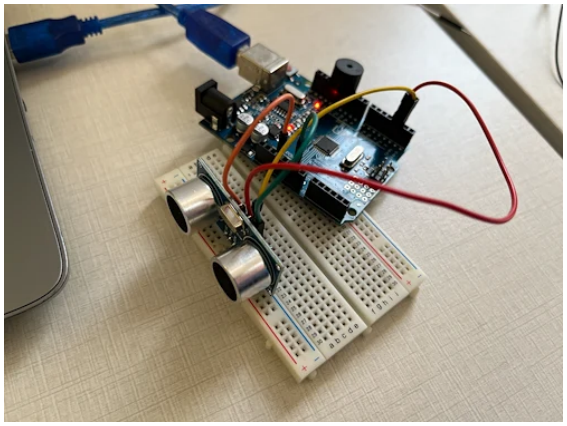


Training teachers in Kigali, Rwanda.

VISITING CREATIVITY LAB

We visited one of our Edify training partners in Kigali called Creativity Lab. The director of this project is named Ildephonse and he demonstrated for us how the many inexpensive products that they've designed enable students to learn about technology in a hands on way. The have a vehicle with a lab in it, called the Mobile Stem Lab, that they drive around so that they can give students a chance to engage with their programs in local areas. They are

also currently building a larger learning space for students and teachers. Students in Edify partner schools have already begun to learn at the Creativity Lab and we look forward to the tremendous potential that this resource brings to develop employable skills for students in Rwanda.



Students learning at the Mobile STEM Lab.

VISITING SCHOOLS

Visiting two schools that will be participating in our initial release of the offline learning device, helped to give me a sense of the conditions that the project will serve. At Rise to Shine School, Beatrice (the school proprietor) shared with us about the ways that Edify has helped her school. She described how a few months ago our Education Specialist for Rwanda, Robert Sande, visited her school and asked if she was interested in getting started with education technology. She expressed that they didn't have the space in the school for a computer lab yet so he asked if a mobile lab might work.

With help from our EdTech Integration Officer, Innocent Karuranga, she identified a vendor for laptops in the area and hired a student's parent to fabricate a metal case that could store the laptops and roll to individual classrooms where they would be used for learning. The students proudly shared with us what they are starting to learn with the integration of EdTech into their learning and Beatrice shared that she believes the new device will help to take their learning to another level.

EDIFY RWANDA TEAM

Thank you to the team in Rwanda for welcoming me and for facilitating the trainings that we offered in Kigali. This was my second trip back to Rwanda to visit this team and I felt sincerely welcomed and like part of the Edify Rwanda family. Special thanks to Innocent for working so diligently with schools on EdTech, to Callist for his support as the Country Director and to Jackie and Robert who helped us offer the trainings.

Edify Rwanda team minus Robert and Emmanuel who were out of town.

Uganda and Rwanda

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