

# MODEL 1:

DIGITAL EDUCATION FOR INTEGRATION AND IMPROVED LEARNING OUTCOMES FOR REFUGEE CHILDREN







## WHY IS THIS IMPORTANT?

Many refugee children, who make up more than half the world's refugees, will spend most of their childhood in exile. Education ensures that refugee children receive the knowledge, skills, and support to build a better future for themselves and their families. It also plays an essential role in promoting social cohesion, and is an effective tool for child protection, particularly in preventing child labour.<sup>1</sup>

Anderson and Brandt, 2018

The latest data indicates that more than 4 million refugee children are out of school and that the number increased by half a million in the last year alone. Only 61 percent of refugee children attend primary school, compared with 91 percent of



**SDG 4:** ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

> children around the world. Only 23 percent attend secondary school, and refugee girls at secondary level are half as likely to enrol as boys.<sup>2</sup>

Including refugee children in the formal education system is considered the best approach to education provision, but many schools are already struggling to meet existing demand for classrooms, materials, and teachers. They face difficulties absorbing an influx of refugee children or schools may be far away from where refugees reside. Another major challenge is the cost of schooling for families as a result of school fees, the price of uniforms, books and other learning materials and transportation.<sup>3</sup>

Many schools in refugee host countries resort to double shifts, putting pressure on teachers who are already poorly paid and often do not have the requisite training to support children dealing with the effects of conflict. Language and cultural differences can also lead to lower learning outcomes and difficulties integrating into local schools. These challenges are exacerbated by the fact that many refugee children are playing catch up after years out of school.<sup>4</sup>

These factors along with economic pressures on families contribute to high dropout rates, especially in

<sup>2</sup> UNHCR. 2018. "Turn the Tide: Refugee Education in Crisis." http://www.unhcr.org/5b852f8e4.pdf

UNHCR. 2018. "Her Turn: It's time to make refugee girls' education a priority." http://www.unhcr.org/herturn/
 Save the Children. 2018



### **EDUCATION**

DIGITAL EDUCATION FOR INTEGRATION AND IMPROVED LEARNING OUTCOMES

#### Benefits for refugees

Integrating technology into education can expand access to a wide range of learning materials and interactive methods at relatively low cost. It also makes it easier to customize learning and support services to the unique needs of refugee children. The model is particularly useful in helping kids whose schooling has been interrupted or for whom formal classroom learning may be out of reach. Ensuring children have access to education not only helps them achieve their full potential but is also an effective tool to prevent abuse and exploitation.

#### Benefits to business

This model can help companies, particularly in the education services and technology sectors, to strengthen their innovation capabilities and establish relationships with new customers, particularly from local and national governments as well as development and humanitarian agencies. Education is also key to ensuring future generations have the skills they need to succeed at work and in other aspects of life.

#### Benefits to host countries

Although there are often some upfront costs to integrating a digital education model, in the long run it can be a cost-effective way to make more content, especially in different languages, accessible to larger groups of people than is possible with traditional textbooks. It also enables more efficient monitoring of student performance. Improving children's digital literacy can also unlock employment opportunities later in life.

secondary school. In an interview, Naoko Imoto of UNICEF Greece explained that "many refugee and migrant adolescents find it hard to keep up and question the investment of time and efforts of a few more years of school for learning the language first and then having to catch up on the subjects that they have already missed. Many consider smuggling themselves to other countries in Europe where they think they have better chances in finding a job."

Addressing the education needs of refugees requires a range of learning pathways including both formal education and non-formal regulated education, and a focus on access, quality, and system strengthening. While education is "The sheer number of refugees in some countries presents challenges that go well beyond the capacity of the host government. It requires the mobilization of the private sector, in concert with the international community and established humanitarian and development actors."

UNHCR. 2018. "Turn the Tide: Refugee Education

considered the responsibility of local and national governments, the complex nature and scale of the needs calls for the engagement of a broader set of stakeholders, including the private sector, that can bring expertise, resources, and efficiency to education delivery.

## **DESCRIPTION OF THE MODEL**

Technology is a powerful tool to expand access to quality education and strengthen learning outcomes. The digital education model incorporates technology in the teaching of national curriculum subjects and other educational content through a range of pedagogies or practices. It can be offered in formal or non-formal school environments as a part of classroom learning or as a bridge or supplement via independent learning. This is especially useful for children whose schooling was interrupted or who may not be able to attend school because they lack required identity papers, are over age, or cannot demonstrate competency levels.

> By dramatically reducing content distribution costs, the model is able to reach large numbers of refugees with customizable lessons at a fraction of the cost of traditional textbook learning. It can also allow for easy monitoring of student performance and storage of education certifications for future use.

It would cost \$21.5 billion over 5 years to deliver quality universal pre-primary, primary and secondary education to the world's 7.5 million school-age refugees. That's \$575 per child per year.

Source: Save the Children

While not all digital education involves the private sector, companies, especially in the edtech sector, can bring incredible expertise, resources, and networks to digital education.

#### KEY FEATURES OF THE MODEL

#### Tools and formats

There are a number of digital tools being developed to support refugee education including e-learning, mobile apps, and video lessons. An important design feature of the model is the flexibility to be used in both high and low connectivity settings.

There are typically two ways digital educational content is delivered. One is independent learning, often outside classrooms, through handheld devices such as smartphones that already have relatively high penetration among refugee populations.

The other is through "connected classroom" infrastructure where educational content is provided on devices used by students and/ or teachers in the classroom. Some companies are developing holistic "school in a box" solutions that incorporate several types of digital learning tools.

To identify the appropriate digital tool, companies are engaging NGOs, educators, and refugee and local children in the design and development stages to ensure the tools align with children's and teachers' needs and their level of digital literacy.

#### Content

The content delivered is typically based on the national curriculum of the host country or country of origin. Research increasingly shows better student attendance and performance when refugee children learn using the curriculum of the country where they reside.<sup>5</sup>

While at a basic level, digital education makes the content available in digital format, companies often integrate other pedagogies and methods such as interactive games and videos, among others. The content is also tailored to the age and demographic, as well as being culturally sensitive.

In many cases, the model includes additional content, often open source courses, and functionality such as language translation. Supplemental lessons or services such as to support psychosocial health are also a key feature of digital education in refugee settings.

#### Teacher training

Teachers' acceptance and adoption of digital education is essential to the model. This is often done by strengthening skills, knowledge, and confidence of teachers through



training and engagement on the value of digital tools and how to integrate them into lesson plans and student engagement.

#### Protection

Effective execution of a digital education model includes strong protection mechanisms including safety features and data privacy. Tools to remotely monitor the connection and restrict access to content inappropriate to children are also important. Online safety training programs for teachers and in some cases, parents, can also help mitigate such risks.

#### **Partnerships**

Given the importance of the government in education provision, the model includes a strong partnership with ministries of education or other government departments to ensure alignment with national curriculums.



## **VERSIONS OF THE MODEL**

Different versions of the model of digital education are emerging. Some companies are developing their own **games and e-learning tools** that use fun and interactive features to help children stay engaged and learn quickly. Research also shows that games have a secondary benefit of boosting children's self-esteem, helping them make positive choices and providing psychosocial support. A recent New York University study found that digital games have helped Syrian refugee youth develop cognitive skills, coding, and new languages, while also improving their mental health.<sup>6</sup>

6 NYU, 2017

#### **Pearson and Save the Children's Every Child Learning partnership** is

using gamification to help accelerate learning and improve the wellbeing of refugee and local Jordanian children in the formal school system. It specifically aims to address high dropout rates for children of lower secondary school age using gamification.<sup>7</sup>

The Every Child Learning partnership was launched in 2015 and at the end of 2016, in partnership with the Jordanian Ministry of Education, Pearson committed to doubling its investment for an additional three years to support the research and development of new solutions through 2019.<sup>8</sup>

As part of the partnership, Pearson collaborated with refugee and Jordanian children to design "Space Hero" (Batl Al Fada'a), a fun and

 Pearson, Every Child Learning, https://www.pearson.com/ corporate/about-pearson/every-child-learning.html
 Pearson, Every Child Learning, https://www.pearson.com/ corporate/about-pearson/every-child-learning.html engaging maths learning app to strengthen maths skills for children aged 9-12. The app is part of a broader Save the Children-led in-school program that focuses on teacher professional development, schoolcommunity relations, after-school learning, and psychosocial support.

The personalized learning product is promoted in schools but primarily used outside the classroom, either in the home or as part of an afterschool program.<sup>9</sup> Space Hero is also available for download by any child in Jordan. It has been downloaded over 25,000 times and has thousands of returning users.<sup>10</sup>

Teodora Berkova at Pearson explained, "We wanted it to go beyond funding to use the company's core competencies. We weren't looking for a quick fix. We didn't want to take products off the

<sup>9</sup> Lebaron von Baeyer, 2017

<sup>10</sup> Space Hero in Google Play, https://play.google.com/store/ apps/details?id=com.beelabs.pearsongame

shelf so we worked with refugee and local Jordanian children to develop something that would meet their specific needs outside camp settings."

Personalized learning company, Cerego, teamed up with researchers at New York University, the City University of New York, and Turkey's Bahcesehir University to test online, game-based learning interventions for refugee children as part of **Project Hope.** It includes a range of tools, from Cerego-powered language training, to games designed to teach coding and executive function, to creating dream houses and schools using Minecraft.<sup>11</sup>

It aims to support Syrian children suffering from depression and post-traumatic stress syndrome as well as addressing the language barriers that prevent them from attending school. Data gathered from a controlled field experiment show significant improvements in Turkish language acquisition, coding, executive functioning, and overall sense of hopefulness.<sup>12</sup>

War Child Holland in partnership with various organizations and companies including IKEA Foundation and google.org has developed **Can't Wait to Learn**, a game-based learning approach for children to learn in their own communities even when there are no teachers. It is currently being implemented in Sudan, Jordan, Lebanon, and Uganda with the aim to support and supplement the traditional education model in conflict-affected areas in the short term, without displacing it in the long term.

The game allows children to learn at their own pace, with built-in

instructional videos oftentimes recorded by youth from the country. It also includes a built-in progress monitoring system and self-contained instructions.<sup>13</sup>

> Pearson and Save the Children's Every Child Learning partnership is using gamification to help accelerate learning and improve the wellbeing of refugee and local Jordanian children in the formal school system

Video learning and communications is also being deployed to help integrate refugee children into formal school settings. Intel, Intel Foundation and the United Nations Relief and Works Agency (UNRWA) are partnering on *Education for Emergencies* to create an online portal to improve access to the Agency's learning materials. The partnership has developed a comprehensive selflearning program that broadcasts lessons via the Agency's satellite and YouTube channel UNRWA TV, and a web-based Interactive Learning Program addressing the learning needs of students.<sup>14</sup>

It is also piloting a program called #myvoicemyschool with the social enterprise Digital Explorer and Skype in the Classroom to promote video conversations between classrooms

<sup>11</sup> Harlow, 2018

<sup>12</sup> Sirin, 2018

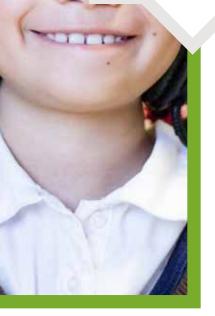
<sup>13</sup> Can't Wait to Learn, https://www.warchildholland.org/cant-wait-to-learn

<sup>14</sup> UNRWA, 2014. https://www.unrwa.org/ newsroom/press-releases/intel-helps-unrwa-expand-innovative-self-learning-programme-children

in Lebanon, Syria and Jordan with classrooms in the United Kingdom and US.<sup>15</sup> Through the use of these video conversations, online digital media and specifically-designed teaching resources, the aim is to promote a sense of solidarity across borders and develop the skills needed to advocate for their own education and future.<sup>16</sup>

*"Textbooks are expensive to print and ship. Using digital tools drops content distribution costs almost down to zero."* 

- Amit Chakrabarti, Vodafone Foundation Ventures



In Germany, Microsoft has made its YouthSpark Schlaumause program

available to 3,000 elementary schools, serving approximately 30,000 refugee children. At the heart of the initiative is the language learning software for children aged five to seven years old. This aims to address language deficits that keep children from starting school on the right foot.<sup>17</sup>

Other digital education tools being used include **virtual libraries and digital textbooks,** which put educational content into digital form. Hewlett-Packard is partnering with Education Cannot Wait, a global fund dedicated to education in emergencies, to pilot its **School Cloud** *initiative.* This provides schools that do not have internet with access to millions of e-textbooks and thousands of lessons on reading, science, and mathematics, among other subjects.<sup>18</sup>

Another example is **Kolibri**, an opensource educational platform especially designed to provide offline access to a wide range of opensource educational content in low-resource contexts like refugee communities. Content from Khan Academy and AfricanStorybook. org among others is available via Kolibri. It works in conjunction with Kolibri Studio, a curriculum tool used to organize content and build custom content channels aligned to the local curricula, or according to specific learning needs.<sup>19</sup>

Kolibri is a free and opensource software that can be installed in one location with internet connection and exported onto removable USB drives that can be used in offline locations. Content is currently available in nearly 20 languages including Urdu, Arabic, and Burmese among other languages, and can be used with the help of a teacher or as a self-learning tool depending on the content.<sup>20</sup>

Some companies are focused on strengthening connectivity to allow access to a variety of digital educational content. *Samsung Electronics Levant* has partnered with Relief International to open two smart schools for Syrian students in the Zaatari refugee camp in Jordan. The schools bring PCs, tablets and electronic blackboards into classrooms to create interactive learning environments to build children's digital skills in subjects such as languages, photography, filmmaking, art, and painting.<sup>21</sup>

<sup>15</sup> UNRWA, 2014. https://www.unrwa.org/newsroom/press-releases/intel-helps-unrwa-expand-innovative-self-learning-programme-children

<sup>16</sup> My Voice, My School, http://myvoice.digitalexplorer.com/ about/

<sup>17</sup> Microsoft, 2016. Language is the key to success. https:// news.microsoft.com/europe/2016/10/06/language-is-the-key-tosuccess/

<sup>18</sup> Breen, 2018

<sup>19</sup> Kolibri, https://kolibri.readthedocs.io/en/latest/

<sup>20</sup> Kolibri, https://kolibri.readthedocs.io/en/latest/

<sup>21</sup> Samsung, 2017. Samsung Opens its Smart Schools in the Zaatari Refugee Camp. https://news.samsung.com/global/samsung-opens-its-smart-schools-in-the-zaatari-refugee-camp

The two smart schools are housed within Makani centres, founded by UNICEF, which offer alternative education opportunities to Syrian children aged between 5 and 24 who have struggled with formal education in Jordan.<sup>22</sup>

In partnership with UNHCR, Vodafone has developed the *Instant Network Schools* programme, which connects classrooms that have no internet connectivity or electricity to internetenabled educational content and resources.<sup>23</sup> Each Instant Classroom is a "digital school in a box" equipped with a laptop, 25 tablets preloaded with educational software, a projector, a speaker and a hotspot modem with 3G connectivity. It takes 20 minutes to set up and includes a built-in charging solution.<sup>24</sup>

As Amit Chakrabarti of Vodafone Foundation Ventures explained in an interview, "Textbooks are expensive to print and ship. Using digital tools drops content distribution costs almost down to zero. Without electricity, connectivity isn't possible. We decided to create a product that addresses the supply chain challenges of providing a digital classroom environment in remote, regional and rural areas by packaging the necessary components such as power, connectivity, devices, content and teacher training."

With Instant Network Schools, a teacher can use the tablet to search for and download content to incorporate into their lesson plan, such as images, audio clips, videos or reading materials. During the lesson, this content is then displayed using a projector. Teachers can also hand out tablets to students to search for their own content online.<sup>25</sup> Initial evaluations indicate attendance rates have increased and children are more engaged in learning.<sup>26</sup>

There are currently 31 Instant Network Schools in 7 refugee camps in Kenya, Tanzania, South Sudan

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and the Democratic Republic of Congo, benefitting 66,805 refugee students and 970 teachers each month (as of April 2018).<sup>27</sup>

There are 70 trained Vodafone employees who make up the Instant Network team. These employee volunteers remain on standby ready to deploy to set up the schools and manage on-site introductory teacher training alongside UNHCR. The company also has a partnership with Columbia University's Teachers College to design a module curriculum to build core teacher competencies and provide training on how to effectively integrate technology into the classroom.<sup>28</sup>

#### For companies in the education and technology sectors,

<sup>22</sup> Ibid

<sup>23</sup> Vodafone Instant Network Schools, https://www.vodafone.

com/content/foundation/instant-network-schools.html 24 Collins, 2015

<sup>25</sup> GSM Association, 2017

<sup>26</sup> Collins, 2015

<sup>27</sup> Data provided by Vodafone Foundation Ventures

<sup>28</sup> Promising Practices for Refugee Education, 2017. Instant



## SCALING THE MODEL

developing products and services for refugee children is not only viewed as a way to contribute to the refugee response but also an opportunity to reach new markets, build new partnerships, and strengthen companies' innovation capacity. Teodora Berkova of Pearson explained that a key business driver for developing the digital maths app (Space Hero) for refugee children was to "build innovation muscle by challenging the company's innovation team to develop solutions, which deliver impact on learning and can be successfully deployed in low-resource environments."

> Most digital education examples have emerged out of foundation, CSR, or social innovation programs that draw on companies' core expertise and competencies. To make the model of digital education financially viable for companies and achieve scale will require overcoming obstacles such as financing implementation, availability of data on refugee education needs, shortage of skilled teachers, restrictive policy environments, and weak energy and education infrastructure.

### **ENABLERS OF SCALE**

## Better quality data on education needs and opportunities

To extend the reach of digital education requires a better understanding of the unique needs of refugee children and connectivity requirements in different local contexts.

According to a recent report on refugee education by Save the Children, refugees' "educational access and attainment are rarely tracked through national monitoring systems, meaning that refugee children and youth are not only disadvantaged, but their educational needs and achievements remain largely invisible." The organization suggests including refugees in national monitoring systems and disaggregating this data by refugee status.<sup>29</sup>

There is also a need for much more detail at a local level not only on traditional performance metrics such as literacy, numeracy, and number of classrooms but also wider socio-economic factors such

29 Save the Children, 2018

as availability of safe transport, relations between refugees and local community members, and access to communication devices. These are all important for creating a positive school experience for refugee children.

> "We want to engage with governments at the highest level. This is where we have the best opportunities to scale."

- Amit Chakrabarti, Vodafone Foundation Ventures

There is a further step of distilling this information into meaningful recommendations for the private sector. Companies consulted for this brief indicated that information can be overwhelming and difficult to give to a product designer or engineer.

## *Contracts with government backed by innovative financing*

To move from a good pilot to a scalable business venture, there needs to be local ownership of these programs and financial sustainability through government contracts, licence fees, or possibly the sale of similar tools and products to the wider public.

Most companies are developing an education product that can be provided free or at a reduced rate to refugees via NGOs or government as a way to provide proof-of-concept. Amit Chakrabarti of Vodafone Foundation Ventures explained that "we wanted to demonstrate that this [Instant Network Schools] is a viable model, but it has to be sustainable over the long term. Government is the biggest investor in education, so if we want to scale and make it sustainable we have to partner with the government."

An interview with Oisin Walton of Vodafone Foundation in Wired Magazine indicated that it took about six months to design the Box and source the equipment, but it was based on 18 months' work in refugee camps.<sup>30</sup> This reflects the significant investment companies are making to develop digital education tools.

Innovative financing including match-funding could play a role. The International Finance Facility for Education, supported by the G20, the United Nations Secretary-General, and more than 1.5 million people, is expected to mobilize more than \$10 billion for education, some of which could be used to support the rollout of digital education.<sup>31</sup>

31 International Finance Facility for Education, http://educationcommission.org/international-finance-facility-education/



<sup>30</sup> Collins, 2015



## Better collaboration and coordination

Another key enabler of scale is better coordination and collaboration by actors in the humanitarian and education ecosystem. While there remains a need for more education tools, there is also room to leverage respective expertise, merge or consolidate similar efforts, and pool resources to accelerate progress.

Some companies are working across sectors and with peers or even competitors to help scale efforts. Vodafone Foundation is actively leveraging Vodafone's corporate network to bring new specialist partners on board to strengthen the Instant Network Schools programme. This includes Network Operators (Connectivity), Hardware manufacturers (Huawei), and Tablet Management (Airwatch), among others.<sup>32</sup> Collaborating better in this space would not only enable faster implementation but also support greater equality in access to content across different schools.

One promising approach is the Global Business Coalition for Education's Rapid Education Action (REACT) system created by LexisNexis Risk Solutions and its parent RELX Group. It is an online tool that matches leading corporations with emerging education needs.<sup>33</sup>

## *Rigorous evaluation and quality assurance*

Deploying solutions quickly and costeffectively is essential to scale but there is also a need for assurance that these are achieving their intended goals and they are fit-for-purpose. As one representative of UNHCR explained, "Some ideas are not always aligned with refugee needs and have the ability to scale." Some solutions overemphasize new technology rather than the quality of the content.

Given education is typically the core responsibility of the public sector, business involvement also raises a host of ethical issues. This includes tensions between development goals and business interests as well as the rise of private provision of education at the expense of public education.<sup>34</sup> Putting in place a rigorous monitoring and evaluation process can also help mitigate some of this.

Digital education can create costeffective, data-driven performance monitoring but this needs input on the most appropriate indicators and to be complemented by qualitative insights.

<sup>Promising Practices for Refugee Education, 2017. Instant</sup> Network Schools: A Connected Education Programme
GBC-Education's REACT, http://gbc-education.org/initiatives/react-database/
Menashy and Zakharia, 2017

Removing policies and practical barriers that exclude refugee children from the formal education system is also essential. Although digital education can be offered outside the formal system, research shows that, particularly in protracted situations, inclusion in the formal system improves integration and is more sustainable. Of 25 UNHCR priority countries, only 16 allow refugees full access to their education systems at primary and secondary levels, with the rest placing limits on their access.<sup>35</sup>

Save the Children suggests that one way to address this could be to use inclusive, flexible registration systems that allow students to enrol in school without the usual documentation.<sup>36</sup>

There are promising efforts in this regard, with commitments by several African governments to include all refugees in National Education Sector Plans by 2020 under the Djibouti Declaration on Refugee Education.<sup>37</sup> There also needs to be coordination of policies across ministries to ensure that restrictions in areas such as freedom of movement or right to work do not inadvertently restrict access to education.

## Improved education infrastructure and systems

Digital education should not be seen as an alternative or substitute to traditional education but rather an integral part of the overall education system. Focusing on scaling digital education alone without building up the core education infrastructure and systems including classroom construction, teacher recruitment and skill acquisition, and management systems, will impede scale.

> The latest UNHCR report on education for refugees explains that high drop-out rates for online courses underscores the importance of face-to-face academic support as a component of what are known as blended learning programmes.

The latest UNHCR report on education for refugees explains that high drop-out rates for online courses underscores the importance of face-toface academic support as a component of what are known as blended learning programmes. "In the hands of a well-qualified teacher, technology is a powerful tool to improve the learning environment, but it must complement teaching, not replace it."<sup>38</sup>

There is also a need to strengthen energy and connectivity infrastructure. As a case study on Vodafone's Instant Network Schools explains, "Technology-oriented programs can quickly fall into disuse and become obsolete when an end-toend approach is not considered. For example, computer labs without power or Internet access or ICTtrained teachers with limited access to hardware ultimately limit impact."<sup>39</sup>

<sup>35</sup> Save the Children, 2018

<sup>36</sup> Save the Children, 2018

<sup>37</sup> Djibouti Declaration on Refugee Education, https://igad. int/divisions/health-and-social-development/1725-igad-ministers-of-education-endorse-djibouti-declaration-on-refugee-education

<sup>38</sup> UNHCR. 2018. "Turn the Tide: Refugee Education in Crisis." http://www.unhcr.org/5b852f8e4.pdf

<sup>39</sup> Promising Practices for Refugee Education, 2017. Instant Network Schools: A Connected Education Programme

## USEFUL RESOURCES ABOUT THIS BRIEF

There are a number of organizations and efforts underway to strengthen education in emergencies. These include:

- Promising Practices in Refugee Education - https://www.promisingpractices.online
- No Lost Generation https://nolostgeneration. org/page/tech collaborations
- Connected Learning in Crisis Consortium http://www.connectedlearning4refugees.org
- UNRWA Education in Emergencies https://www. unrwa.org/what-we-do/education-emergencies

This brief is part of a series showcasing different refugee-inclusive business models. The full series is intended to mobilize more business action and strengthen the foundation for partnerships to improve refugees' wellbeing, education, and economic inclusion.

The series is an output of the Business and Refugees Challenge launched by Business Fights Poverty in April 2018, which engaged more than 50 stakeholders through interviews, a survey, and two dialogues.

The Challenge was supported by Pearson and benefited from expert guidance and perspectives of the Challenge core group partners. This brief was written by the Business Fights Poverty Challenge team led by Jessica Davis Pluess. Business Fights Poverty would like to extend its appreciation to the following people for their invaluable insight and input on this brief.

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Additional experts: Amit Chakrabarti (Vodafone Foundation Ventures) and Annemieke Tsike-Sossah (IKEA Foundation).

For the business model taxonomy and other briefs as well as a full list of stakeholders consulted, see the Business Fights Poverty website. businessfightspoverty.org

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#### ABOUT BUSINESS FIGHTS POVERTY

With its origins dating back to 2005, Business Fights Poverty has grown into one of the world's largest business-led collaboration networks focused on social impact. Business Fights Poverty has launched a wide variety of Challenge-based collaborations with many of the world's leading companies, civil society organisations and development agencies.













