

Bridge International Academies

Region: Africa, South Asia

Sector: Education

IFC Investment: \$10 million

From the creation of the United Nations Millennium Development Goals of 2000 to the 2015 Sustainable Development Goals there has been a notable shift in focus on the all-important issue of education. The previous set of goals focused on increasing enrollment. Today the emphasis is on providing an inclusive and quality education.

And for good reason: Rising enrollment must be accompanied by better quality education, and often it has not been. In Sub-Saharan Africa, for example, there was a 20 percent increase in the net enrollment rate from 2000 to 2015, yet while more children attended school, too often they were not progressing.¹ As of 2011, only three out of ten third year school children in Kenya could do second-year work.² Public schools were also associated with unofficial payments, including desk, homework, and other fees.³

It is not surprising, then, that parental dissatisfaction with the quality and cost of public primary schools pushed many families to look for other options. In many places

parents and entrepreneurs opened small schools to serve the needs of children in their communities. In informal settlements in Nairobi, it was estimated that 60 percent of children attended schools that were privately-run.⁴ Such schools charged fees, but those were often lower than or on par with public school fees. These schools took steps to improve quality, but most lacked the resources to invest heavily in new teaching materials, teaching methods, or school management.

Bridge International Academies was established to change the quality of education available to children in underserved, low-income communities. It is the first



educational organization to address the problem of quality at scale, allowing it to invest heavily in research and technology and to focus relentlessly on learning. Bridge has asked—and tried to answer—a fundamental question about education in low-income countries: How can learning outcomes for children in these regions be radically improved at a very low cost to parents, donors and governments?

Bridge has grown from two academies in Kenya with 300 students in 2009 to almost 100,000 students in over 470 locations in Kenya, Uganda, Nigeria, and India. It is also starting a pilot program with the Government of Liberia to run up to 50 schools.

The organization has developed unique systems that tackle some of the most challenging issues in education. And so far Bridge's plan seems to be working. Its first graduating class in Kenya had a 40% higher chance of passing the national primary exit exam than the national average. The organization's own studies show that its students outperform their peers in public schools in basic literacy and reading; further independent studies of learning outcomes are currently underway.

DEVELOPING AN IDEA

From 2005 to 2006, Shannon May was a resident anthropologist on a development project in China and an English teacher at the local village school there. May, who would go on to co-found Bridge International Academies, witnessed firsthand how a lack of resources and rampant teacher absenteeism contributed to an environment in which children were present in school but were not learning. She found that only 2-to-4 percent of children passed the examinations needed to move on to secondary school.⁵ Parents in these communities often made the economically rational decision to send children to work rather than to schools that were not improving their future prospects. Unfortunately, with no alternatives to state-provided education, parents were faced with the painful realization that their children were likely to grow up with less opportunity than they themselves had.



May and her future husband Jay Kimmelman began to explore ideas about how to provide children from the most marginalized, lowest-income families with a primary education that would give them the literacy, numeracy, and other skills necessary for secondary school and for life. Critical to their approach was that parents should be able to make their own decisions regarding their children's education.

With a background in computer science and electrical engineering, Kimmelman had co-founded and run Edusoft, an educational software company in the U.S. which he scaled to serve three million students. Kimmelman and May outlined the business model for Bridge based on research they conducted in informal urban settlements and villages across Sub-Saharan Africa. Kimmelman then invited Phil Frei, a former roommate, to join the team. Frei had a consulting background in commercializing new technologies and had moved to Malawi to apply his background to a social impact project with smallholder farmers.⁶

Committed to making data-based decisions, the three friends considered potential countries where they could launch their idea and ranked Kenya the highest. Core considerations in their assessment were:

- **Poverty Rate:** Countries where more than 50 percent of the population lived in poverty were ranked higher, as they demonstrated a greater need for affordable and improved diversity of education.



Bridge's Value Chain

An Overview of Challenges and Solutions



Value Chain



Challenges in Providing Low-Cost Education



Bridge's Solutions

| Product Development | Distribution | Marketing & Sales | Customer Service |
|---|---|--|---|
| <ul style="list-style-type: none"> Limited availability of teachers Disparate implementation of national curriculum Traditional modes of learning Language barriers when scaling | <ul style="list-style-type: none"> Ensure consistent quality at all locations Efficient communication with staff Manage geographically dispersed locations Need to scale quickly and cost-effectively | <ul style="list-style-type: none"> Families have limited money to spend on school Need for schools to be a part of the local community | <ul style="list-style-type: none"> Teacher absenteeism Lack of feedback loops to engage parents |
| <ul style="list-style-type: none"> Trains and supports teachers to deliver student-centric learning Develops custom teacher and learner resources, including teacher guides Prioritizes countries where English is already the language of instruction | <ul style="list-style-type: none"> Uses technology to track and monitor classroom learning Delivers and adapts lesson plans via tablets Decentralizes academy management with strong central support Embeds quality control functions in academy management structure Standardizes expansion process for new academies | <ul style="list-style-type: none"> Engages with parents and community to raise awareness Hires teachers from the local community Sets price point on par with public school costs | <ul style="list-style-type: none"> Transparent fee payment through mobile platforms Emphasizes relationship-management with parents (e.g. parent satisfaction surveys) Ensures teacher oversight by managers and tablet feedback |



- **Population:** To help ensure adequate demand and class size, the population density had to be at least 125 persons per square kilometer and total minimum population had to be at least 30 million.
- **Language:** English had to be one of the official national languages, enabling the founding team to more easily engage in all aspects of developing the academic, technological, and business aspects of the model.
- **Exam Pass Rate:** The co-founders looked at countries where a significant majority of poor children failed national or international exams even after completing primary school.
- **Private School Experience:** Where parents had already opted to take their children to small, community run, low-fee private schools, it was clear that there was demand for improved, affordable education and that a market existed.

In 2008 the three friends moved to Nairobi and launched Bridge International Academies. Their goal was to address a single yet seemingly intractable problem: How to create a school or system of schools that ensures children learn but that is still affordable and accessible to all?

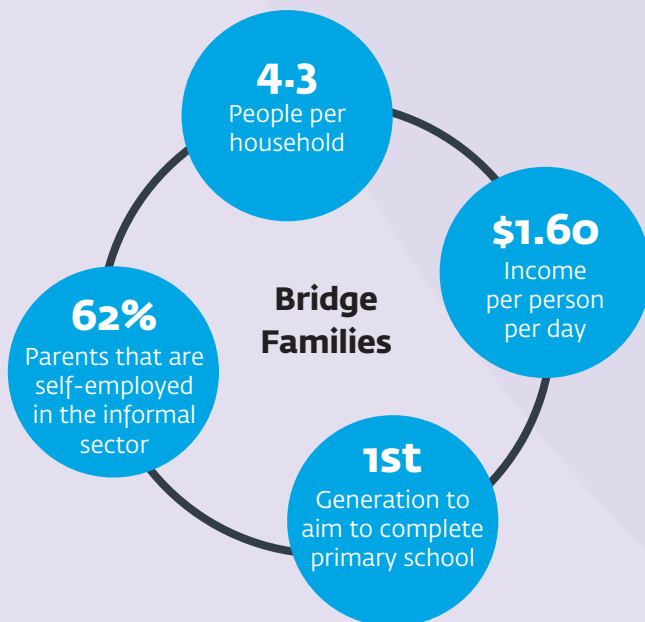
BUILDING THE MODEL

The co-founders knew that the success and sustainability of Bridge International Academies would rely on their ability to deliver a world-competitive nursery school and primary education at a cost that a parent living in poverty could afford. To do this, they would need to invest large sums in research, curriculum development, and technology. And to pay for that, they would need to base the model on scale. Through self-funding, they began the research and development phase, asking questions such as: What support does a teacher need to improve learning? What does a child need to feel engaged in the classroom? How can we lower costs? Bridge aimed to deliver higher results at a cost that was lower than or equal to government spending per child, and thus spur innovation across the entire system.

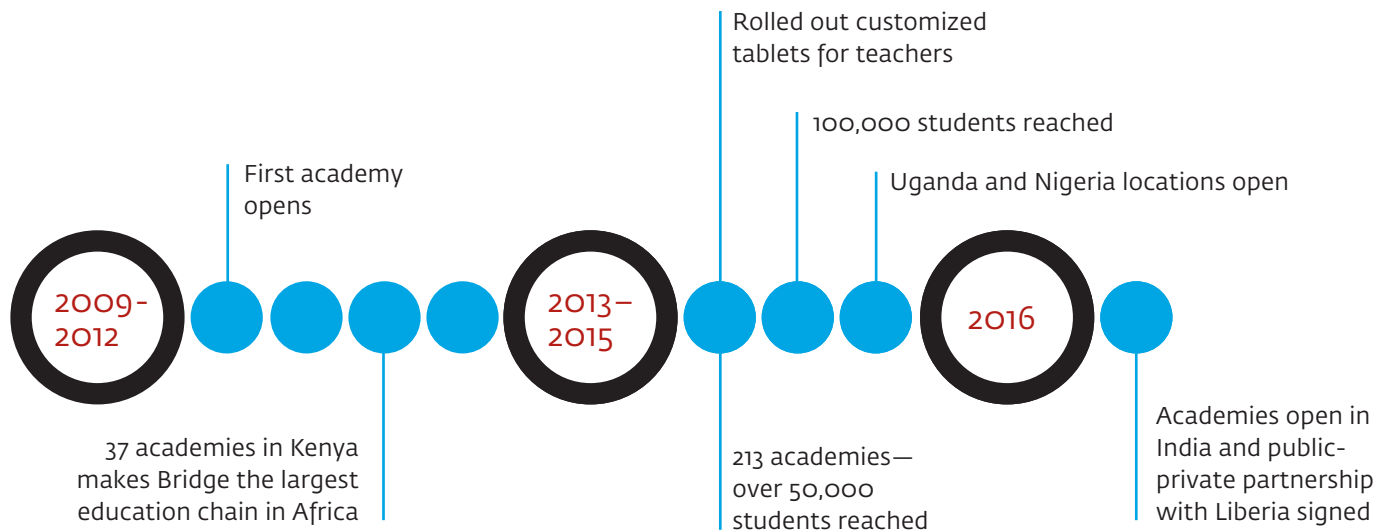
A Typical Bridge Family

Sabbir and Taban live with their four children in a one-roomed mud house. Sabbir sells fried bread and Taban runs their small business selling plants that they grow in their yard. Some 62 percent of primary earners in Bridge families run informal businesses like Taban's and like most Bridge families, they are working hard for a better life for themselves and their children.

Two years ago Sabbir and Taban decided to enroll their two younger children into Bridge. As Taban explained, "The little education I got has helped me get several jobs. I know that if my children can get more than I did then it would really change their lives and that of the whole family."



"We did not have much education, but we want that to be different for our children."

Figure 4: Key Milestones in Bridge International Academies' History

The first Bridge International Academy opened in Nairobi's Mukuru slum in 2009, offering kindergarten and two years of primary school. Bridge decided to only engage with neighborhoods where per capita income levels were \$2 per day or less. From the beginning, Bridge knew that close coordination with community leaders was vital. It worked with them to educate families about Bridge and invited members of the community to visit an academy. Bridge built new schools on leased sites using low-cost materials and standardized designs, ensuring cost-effective volume procurement and rigorous quality control.

Core to Bridge's approach was to train teachers to move away from the blackboard, using the teacher guide to provide in-class work according to the student's level of learning, and prompt teachers to walk around the room, check students' work for understanding, and ask questions to encourage inquiry.

Bridge developed its courses based on Kenya's national curriculum and government standards, with additional emphasis on reading and critical thinking skills. Bridge students would spend more "time on task"—a total of 47.5 hours from Monday to Friday and an option of five hours on Saturday.



GOING BEYOND TRADITIONAL METHODS

Learning from a technique it saw in the U.S., Bridge developed teacher guides that provided detailed, step-by-step instructions for teachers to use in every subject and learning period. The idea was to empower teachers to be fully equipped to focus on student engagement and comprehension—and free them from worrying about content by providing factually correct, engaging, and well-paced lessons.

To support early childhood development, Bridge used low-cost but effective learning tools—repurposed egg cartons, colored plastic rings, and mini chalkboards, for example—to reinforce colors, counting, and basic math with custom-designed educational toys and workbooks to develop students' motor skills and reinforce classroom content. At the primary level, students had access to workbooks for phonics, comprehension, and problem-solving, geoboards to practice math, science kits to learn by doing, and maps to learn about their community and the world beyond.

All of these tools were designed to help children learn in more constructive ways than traditional rote methods. At the same time, Bridge also prepared students for national exams and conducted monthly assessments to ensure that students stayed on track and to assess the efficacy of their pedagogy.



SETTING AN AFFORDABLE PRICE POINT

As of 2016, the typical household income of a Bridge target student was about \$1.60 per person per day.⁷ That income level makes the price point for Bridge tuition an extremely important factor. To set its fees, Bridge conducted extensive surveys to understand how much parents living in Nairobi's informal settlements earned and how much they were spending each month to educate their children, at both public and private schools.

Using an affordability limit of 20 percent of income, Bridge calibrated its fees to be competitive with existing suppliers in order to be cost competitive for parents. Because incomes and education costs vary by area, Bridge fees also vary depending on a student's grade and the location of the school. On average, a Bridge student in East Africa pays \$6.60 per month, which is inclusive of textbooks, homework books, and all learning materials. Parents also pay a one-time registration fee.



IDENTIFYING AND DEVELOPING TALENT

To identify potential teachers, Bridge engaged community leaders and held open houses. From the beginning, the organization was committed to recruiting from the local community for three key reasons:

- Bridge wanted its teachers to be able to empathize with students' circumstances and wanted students to be able to identify with teachers.
- Bridge operates in marginalized and under served communities, areas in which outside teachers are often

THE BRIDGE INTERNATIONAL TRAINING INSTITUTE

The goal of the Bridge International Training Institute (BITI) was to uncover local talent, identifying individuals with the potential to become Bridge teachers and developing their teaching skills. The institute's 235-hour intensive training course focuses on how to manage a classroom and ensure each child is learning, as well as how to use the teachers' guides.

In order to maintain its affordable fee structure, Bridge aims for a teacher-to-student ratio of 45:1, so the institute puts a great deal of focus on classroom management, leadership, and technology.



unwilling to relocate. Recruiting within the community means that Bridge schools are always staffed and open.

- Bridge knew it would be vital that its academies be community schools, run by members of the community and creating much needed local employment.

To develop potential teachers Bridge established the Bridge International Training Institute. The qualifications to apply to the institute would be the same as for the government

teacher training college. Beyond these requirements, Bridge looked for individuals with leadership experience in church or other community organizations, good communication skills, and a passion for teaching and children. Many were previously underemployed, working primarily in the informal sector without wage security or benefits.

ENSURING QUALITY AND EFFICIENCY

Bridge wanted a management structure that would allow for local-level decision making while providing consistent support and quality in the classroom. It developed a structure that operated at three geographic levels: local, area, and regional (*Figure 2*). The structure ensures that everything from logistics to relationship management is covered.

To make certain that teachers were supported academically, Bridge set up a travelling academic field team to engage with teachers and monitor them in classrooms. The organization's central academic research and development team improved lessons based on feedback from teachers and from the academic field

team while incorporating the latest developments in teaching methods. Other teams were created to facilitate improvements by filming lessons, identifying and testing new learning methods and programs, and performing quality audits.



TECHNOLOGY AND ANALYTICS

In 2011 Bridge deployed smartphones loaded with a custom-developed application that connects managers to a central cloud-based

server. The app tracks student admissions and billing in real-time and serves as a financial management tool for the overall academy, including fee payments, expense management, and payroll. Two years later Bridge rolled out tablets for teachers, enabling dynamic publishing of teacher guides and real-time data collection to and from the classroom (*Figure 3*). Through the use of mobile and other technologies, Bridge has been able to:

Simplify Operations. Academy Managers are able to focus on teacher support and parent engagement instead of administration. For example, to eliminate fraud and security risks inherent in collecting cash, Bridge decided to use the popular M-PESA mobile phone application available in Kenya to go cashless. Parents pay school fees either via mobile or by bank deposit and Bridge parents can see their payment status update in real time. In the other countries where it operates, Bridge uses similar cashless payment systems either through mobile payments or bank vendors.

Ensure Engagement. Bridge knew that their academies would only be as strong as the teachers in the classroom. Ensuring teacher attendance was a key part of that. The teacher tablet rolled out in 2013 allowed Bridge's central team to monitor when the teacher checks in and the pace at which the teacher progresses through lessons, helping to ensure that teachers are active in the classroom throughout the day. If a teacher fails to check in, Bridge can send a substitute teacher to ensure minimal loss to lesson time.

Figure 2: Field-based Structure

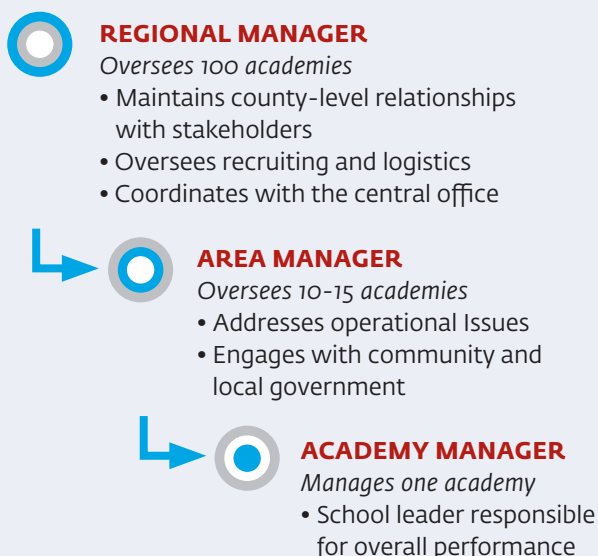
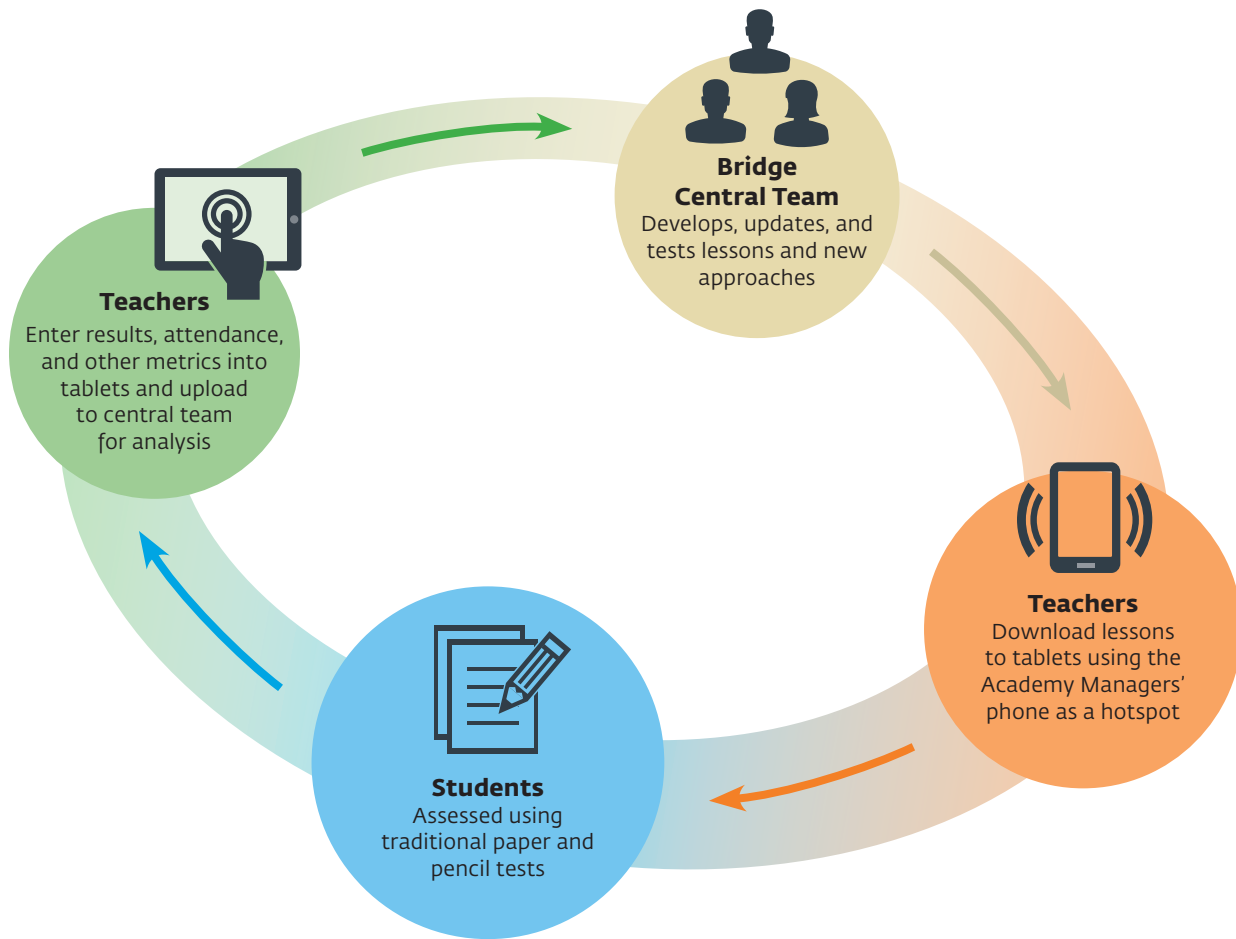


Figure 3: Bridge's Technology Cycle



Improve Learning Outcomes. The system created a direct link between Bridge's academic specialists and teachers in the classroom. Uploaded data on the timing of lesson delivery and student comprehension enables continuous improvement to lesson guides and teaching methods. For example, if a majority of students across the network are struggling with a lesson, the academic team can revise content and integrate it into future sessions. When the data shows outlier classrooms either falling behind or excelling, the academic field team can visit the location to further train the struggling teacher or learn from a teacher whose students are outperforming other teachers' students across the network.

EXPANDING BEYOND KENYA



ENGAGING NEW INVESTORS

By 2013 Bridge had opened 213 academies across Kenya, reached 57,000 students, recruited and trained over 2,000 people, and attracted investments from the Omidyar Network, Learn Capital and NEA. The organization knew it would need additional capital and investors if it wanted to continue to improve learning outcomes and expand beyond Kenya. So Bridge leadership sought investors that shared its goals.

A LEARNING LAB

As Bridge expanded it found that its growing number of academies, together with its real-time data collection capabilities, constituted an internal “learning lab.”

As the academic team identifies new methods or resources they believe can aid learning, they are able to test them within a small group of academies before replicating them academy-wide. In this way Bridge can determine how lesson pacing, format, or specific examples lead to more or less comprehension. This has important implications, not only for Bridge, but for wider pedagogy.



The next step for Bridge was to broaden its reach, creating more opportunities for children to learn.

Bridge approached IFC, a member of the World Bank Group, to become a lead investor with a \$10 million investment as part of an equity fundraising. Beyond seed financing, Bridge was also looking for advice in addressing the regulatory challenges that come with cross-border expansion. In addition to IFC, Bridge brought on other key investors such as the U.K.’s CDC, Novastar, PanAfrican Investment, Rethink Education, as well as high profile individuals like Bill Gates and Mark Zuckerberg.⁸ Bridge also got a loan from the U.S.’s Overseas Private Investment Corporation.



LOCAL ADAPTATION

As Bridge began to consider expansion outside of Kenya, it used many of the same factors it looked at originally—population density, English as the language of instruction, and government support. Bridge identified Uganda as the next logical country due to its many similarities with Kenya and shared border. In February 2015 Bridge opened its first academy in Uganda’s Busoga region.

Despite the similarities to Kenya, however, the new environment posed challenges for Bridge including:

- **Learning levels.** Numeracy and literacy levels were lower in Uganda, and levels in Busoga were among the lowest in the country. This had an effect on students and teacher candidates alike. Bridge’s remedy was a cross-age, homogeneous English learning program for two hours every day to enable students to rapidly acquire the level of English language comprehension needed to attend a Bridge school.
- **Payment system.** Over time, the M-PESA mobile payment system had become so widespread in Kenya that Bridge no longer had to educate parents on mobile money. In Uganda, Bridge had to again engage with parents on how to use a mobile-based payment system. Bridge also launched a partnership with the solar lighting company Fenix to provide loans for school fees to parents in Uganda who use Fenix’s solar systems.



DEVELOPING PARTNERSHIPS

Bridge continued to broaden its reach, both through its established model as well as through new modes of delivery. In September 2015, Bridge opened two nursery and primary academies in Lagos, Nigeria. Both schools had full enrollment and waiting lists within a week. Four additional schools opened across Lagos State in early 2016, with another 20 expected to open later in 2016.

Bridge's expansion to Nigeria was facilitated by a grant from U.K.'s Department for International Development (DFID). Through DFID's Innovation Fund for innovative business models and its Developing Effective Private Education Nigeria project, Bridge received a grant of approximately £3.45 million to share the risks associated with entry into the Lagos market.⁹

Also in 2015 Bridge entered into an agreement with the government of Andhra Pradesh in India. Bridge agreed to adapt its model in order to meet local needs by rebuilding and expanding decrepit, closed schools into model community schools. The first nursery and primary academies opened in June 2016 and include locally oriented activities, such as yoga, in the school routine.

Bridge's first engagement as a school management organization for public schools came in 2016 with the Liberian government. Bridge agreed to partner with the government in turning around 50 failing public nursery and primary schools in the 2016-2017 academic year. The program is part of a pilot initiative to see how such organizations can help improve education in the West African nation in partnership with the government. Bridge will work in existing schools, with existing teachers and pupils, but will use its own training and lesson delivery models. The schools will ultimately remain under government control and will remain free of charge to students. The government will continue to pay school staff salaries, while the intervention costs of the partnership are being funded by philanthropies, including the Mulago Foundation.

MEASURING RESULTS

To quantify its results, Bridge works with an external evaluator to conduct commonly used early grade reading assessments and early grade mathematics assessments. The results show learning improvements for children attending Bridge schools of over 32 percent in core reading skills and 13 percent in core math skills.

In 2015, Bridge graduates in Kenya took the nationwide exam for the first time. Approximately 60 percent of the 2,900 students sitting for the exam passed, demonstrating a 40 percent higher chance of passing the exam than the national average. The results showed that the longer students had been in the Bridge system the stronger their results. Moreover, Bridge students had a 65 percent higher chance of being accepted to national secondary schools in Kenya, and over 100 students were granted full four-year scholarships for secondary school.

A large independent impact evaluation of Bridge is currently underway, led by a team of World Bank research experts and independent academics. The evaluation will also look at—and deliver data about—the broader context of low-cost private schooling.



MOVING FORWARD

The Bridge International Academies of today may not necessarily be the Bridge of the future. Bridge plans to continue to innovate and expand and will continue to push toward its goal of reaching millions of children across the world. For example, Bridge sees the potential to sell resource materials to other schools, to use its teacher training methods for other organizations and governments, and to enter into additional public-private partnerships. Bridge is also focused on transitioning children to secondary school.

Bridge sees itself as one of many organizations that refuses to accept the status quo in education and one that is pushing the boundaries of how we teach and learn. Bridge will continue to innovate and strive for radical change in order to create the level of access and quality that all children deserve.

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ENDNOTES

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- 5 Company data
- 6 Harvard Business School Case Study, 2010, "Bridge International Academies: A School in a Box". Available at: <http://www.bridgeinternationalacademies.com/wp-content/uploads/2013/01/2010-Harvard-Business-School.pdf>
- 7 Calculated using World Bank methodology, based on a sample size of 17,986 Bridge households across Kenya. Median income of Kshs 12,000 per month was equivalent to \$136 per month or \$4.53 per day at the time of calculation. From the same periodic data, Bridge families consists of 2.01 adults and 2.26 children. The OECD equivalence scale of (ES) = $1 + 0.7 (\text{Nadults} - 1) + 0.5 \text{Nchildren}$ = 2.837 family members the Daily Per capita=Daily Household income/ES = \$4.53/2.837 estimates that Bridge family members live on \$1.60 per day. See: <http://www.oecd.org/statistics/OECD-ICW-Framework-Chapter8.pdf>
Simple calculations used by James Tooley of the University of Newcastle find the daily household income to be more like \$1.25 per person, per day.
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