



RESULTS FOR
DEVELOPMENT

Pathways to Employability

Lessons and Case Studies for
Closing the Youth Skills Gap

Results for Development Institute (R4D) is a non-profit organization whose mission is to unlock solutions to tough development challenges that prevent people in low- and middle-income countries from realizing their full potential. Using multiple approaches in multiple sectors, including Global Education, Global Health, Governance and Market Dynamics, R4D supports the discovery and implementation of new ideas for reducing poverty and improving lives around the world.

This paper was prepared for the Innovative Secondary Education for Skills Enhancement (ISESE) project, led by R4D with support from the Rockefeller Foundation. For more information on the ISESE project, please contact Shubha Jayaram: sjayaram@r4d.org.

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Results for Development Institute
1100 15th Street, N.W., Suite #400, Washington, DC 20005

Introduction

By 2020, the world will have a surplus of 90 million low-skilled workers, but a shortage of 45 medium-skilled workers.¹ However, access to secondary education has increased steadily over the past decade, with gross enrolment ratios in the developing world rising from an average of 52% in 1999 to 62% in 2010,² indicating that the skills imbalance may be due not to a lack of access to education but rather to a lack of adequate quality and relevance. With this in mind, we at Results for Development Institute (R4D) have in 2012-13 worked to answer two critical questions that are central to explaining these conflicting trends: (i) what skills do youth need in order to gain employment; and (ii) how can education and training models effectively deliver these skills at the secondary level, from where most youth now enter the workforce?

Supported by the Rockefeller Foundation, the core of the Innovative Secondary Education for Skills Enhancement (ISESE) project was a series of 12 background studies, now publically available at our website. Produced in partnership with regional partners, these explore a range of issues related to skills, education, and economic development in 12 focus countries across Africa and Asia. Our synthesis of them revealed that, while technical and basic cognitive skills are still important in the workplace, transferrable and non-cognitive skills such as communication, problem-solving, punctuality, and flexibility are increasingly important. Crucially, these skills are not, for the most part, sufficiently emphasized in existing curriculums and pedagogy. Importantly, non-cognitive skills are also much more important for the informal sector than previously realized. Further, while there are some regional and sectoral differences, these are not as important as the broader findings. We also identified some common key elements of successful skills development models, including multi-stakeholder partnerships, updated pedagogy, and innovative financing mechanisms.

Following this initial research, the second phase of the ISESE project identified exactly how these models address the critical skills gap identified in our background research, and how they could be potentially scaled up or replicated to increase workforce readiness. With this in mind, we selected six successful models—four from Asia and two from Africa—and conducted a deep-dive study on each, looking at factors such as program design and goals, context, cost, sustainability, and impact. One important finding is the need to engage multiple stakeholders to solve the youth skills problem. Locally-based partners are also crucial to adapting a program to a new context, while collaboration with local policymakers benefits programs pursuing scale and can also lead to systematic reforms.

Indeed, R4D has already begun to explore how to promote this collaboration through two regional skills convenings where findings from the ISESE models were discussed, but much more analysis and convening is essential. In particular, work is needed on the cost effectiveness of skills programs, and on how best to mobilize financing. Avoiding the 2020 skills imbalance will require a combination of innovative small-scale private skills training programs and state education and training programs. Only such collaboration among stakeholders to identify and adapt successful models will ultimately make the largest impact on youth employability.



Nick Burnett
Managing Director, R4D

¹McKinsey and Company. 2012. "The world at work: Jobs, pay, and skills for 3.5 billion people."

²UNESCO Institute for Statistics, Data Centre, "Gross Enrolment Ratio for secondary education" in developing countries (as defined by the Millennium Development Goals).

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Executive Summary

Introduction

Millions of youth around the world struggle to find meaningful employment.³ Even in economically prosperous times, youth unemployment is high, and developing countries in Africa and Asia, which have surging youth populations, struggle to help youth succeed in the labor market. The problem of youth unemployment is multi-faceted, with macro level economic factors undoubtedly playing a major role, but a lack of skills among youth seeking jobs is increasingly shown to be a key driver as well. Indeed, recent research has shown that there exists a fundamental mismatch between what employers are looking for, and what skills traditional academic and vocational education programs are providing, resulting in a youth population that is often unprepared to secure and maintain employment in an increasingly complex global job market.⁴

Supported by the Rockefeller Foundation, the Results for Development Institute (R4D) undertook its Innovative Secondary Education for Skills Enhancement (ISESE) program to better understand the dynamics of the youth skills gap and its implications for employment. The first phase of research found that there are three important skill sets for employment: cognitive, non-cognitive, and technical. While technical skills are valuable in helping youth secure jobs in the short term, the skills that employers value the most are cognitive and non-cognitive. Non-cognitive skills such as teamwork and the ability to problem solve are especially important in today's evolving workplaces. Secondary education, which is becoming the level from which most people in the world enter the labor force, is an important platform for developing these needed skills in youth. However, there is a misalignment between this reality and the fact that secondary education is still often conceptualized as a route to higher education, resulting in curricula that rarely specify non-cognitive skills. Additionally, when they are included, it is not in a way that helps teachers understand why they are important or how to facilitate their development. Therefore, finding new and effective ways to provide skills to youth at this stage is crucial to allowing policymakers and other stakeholders to implement programs that help close the skills gap.

After casting a wide net to identify innovative skills development programs targeting youth in Asia and Africa,

R4D uncovered a rich universe of models for skilling youth, including multi-stakeholder partnerships, innovative financing mechanisms, innovative uses of ICT for teaching and learning, and programs emphasizing the skills needed in the 21st century. Drawing from these models, R4D has studied six promising initiatives in depth in the second phase of the ISESE program (see Table 1 for more details). The case studies, which are found in Part II of this report, put forward valuable lessons for designing skills development programs for youth and expanding the reach of such programs.

Findings from Case Studies

Although the six programs that were selected for in-depth study have varying missions, they share a number of important characteristics:

- All employ active, experiential learning methods and expose students to industry.
- Many have had remarkable success in the post-training employment rate of students. For instance, in 2011-2012, India's National Skill Development Council's affiliated centers have trained over 180,000 students, 79% of which had found employment upon graduation, while 97% of students at Passerelles Numériques's Cambodia Center find skilled employment within 2 months of completion.
- A focus on developing a broad set of non-cognitive and ICT skills that are crucial to succeeding in the labor market. Indeed, some of the profiled programs develop particular skills in-depth, for instance teamwork (Yuwa) or entrepreneurialism (Educate!).
- Activities are often targeted to vulnerable, marginalized populations, with organizations working around a clear, well-defined mission.
- All seek to establish buy-in with key stakeholders and build strong partnerships with industry. For instance, Education de Base works in collaboration with the Ministry of Education in Senegal, Educate!'s entrepreneurship curriculum has been integrated into the national curriculum in Uganda, and Lend a Hand India's 'Introduction to Basic Technology' course uses local tradesmen to lead instruction to students.

³In this paper, 'youth' is loosely defined as ages 12-30.

⁴For example: UNESCO, 2012, Education for All Global Monitoring Report 'Youth and Skills: Putting Education to Work'; McKinsey and Company, 2012, 'The World at Work'; OECD, 2012, 'Better Skills, Better Jobs, Better Lives'.

Their collective experience also reveals challenges that may also reflect those common to many skills development programs worldwide. For example, stigma against Technical and Vocational Education (TVET) is widespread across many countries in Africa and Asia, and contextual cultural norms such as keeping girls out of

school can be a major impediment to equity. In addition, financial sustainability remains a serious challenge for many programs, and public and donor financing will continue to play an essential role in supporting skills development programs for youth.

Table 1: Overview of Six Promising Skills Development Programs⁵

	South Asia			Southeast Asia	East Africa	West Africa
Organization	Lend a Hand India (LAHI)	National Skills Development Corporation (NSDC)	Yuwa	Passerelles Numériques (PN)	Educate!	FHI 360
Skills Program	LAHI's 'Introduction to Basic Technology' diploma course (IBT) introduces secondary school students to vocational training alongside traditional academic coursework.	The NSDC supports TVET programs and sector skill councils (SSCs) throughout India.	Yuwa runs a soccer program and a related education initiative: 'Kicking it New School'	PN runs a residential training program to develop rural youths' skills in ICT and English.	Educate! runs a comprehensive entrepreneurship and leadership program that aims to help secondary school youth create small businesses and improve their livelihoods.	Run by FHI 360, the Education de Base (EDB) program works directly with the Ministry of Education to reform curriculum, train teachers, and enable ICT usage in Senegalese middle schools.
Program Overview	The pre-TVET program allows rural students to learn hands-on skills in a number of TVET areas so that they can make an informed choice as to whether and what type of TVET to pursue after graduation. The program emphasizes entrepreneurship, life skills, and technical skills.	The NSDC aims to contribute to the skilling and up-skilling of 150 million people in India by 2020. The NSDC aims to serve as a bridge to private industry, provides equity and debt financing to private sector skilling centers to improve the quality and scale of programs, and supports SSCs to address ecosystem challenges in specific sectors.	Yuwa facilitates a pre- and after-school soccer program for rural girls in Jharkhand. The soccer program encourages girls to save for supplies, hold one another accountable for attending practice, coach younger players, stay in school, and set long-term goals. Yuwa's education initiative aims to supplement girls' education with Khan Academy lessons accessed through e-readers.	PN offers two-year courses to high school graduates from disadvantaged backgrounds. The courses aim to provide skills for employability and to boost lifetime earning potential. The programs focus on English, ICT, and soft skills. PN offers a joint program with another organization that grants students short work placements.	The Educate! Experience program matches secondary school students with mentors that provide business and leadership training, mentorship and guidance in starting a business. Mentors also help students launch their own business, and high potential students continue to receive support after graduating. The Teacher as a Mentor Program trains teachers and school officials to deliver components of the Educate! Experience program.	EDB is a large-scale program to revitalize middle school education in Senegal. It focuses on 5 components: curriculum and pedagogy reform, ICT, good governance and management, Public Private Partnerships, and vulnerable children.
Reason Selected for Case Study Review	Incorporation of non-cognitive skills development, in-school program targeting rural youth.	Very large-scale, Public Private Partnership	Incorporation of non-cognitive skills development, targeting rural girls.	Incorporation of non-cognitive and ICT skills development, targeting rural youth.	Incorporation of non-cognitive and entrepreneurial skills development.	Large-scale curriculum reform; Public Private Partnership; targeting secondary students, including vulnerable youth.

⁵ All references to dollars are to U.S. dollars.

Lessons for Scale-Up and Replication

To hasten efforts to close the youth skills gap and improve employment outcomes while the youth population continues to grow, policymakers and development partners must adapt effective skills development programs for different labor market contexts and scale-up successful initiatives. The experience of the six programs reviewed in this report reveals three important lessons for replicating and scaling skills development initiatives for youth:

1. Replication is context-dependent; conducting market research and validating programs with locally-rooted partners is critical to adapting a program to a new context.
2. Working within government policy frameworks and collaborating with local policymakers benefits programs pursuing scale and can lead to systematic reforms.
3. Financial sustainability underpins a program's capacity for replication and scale, and experimenting with financial innovations can help programs move towards financial sustainability.

Continuing to follow the success of promising skills development programs for youth in low- and middle-income countries, such as those profiled in this report, can help policymakers understand what program principles should be widely replicated and adapted into national policy. Importantly, as programs expand and collect formal evidence of impact, further assessment and study may be needed to better understand strategies that foster non-cognitive skills and enable lifelong learning. Indeed, further analysis of the cost and cost-effectiveness of promising programs is also crucial, as this will allow a deeper understanding of the resources needed to replicate innovative components. Following the lessons raised by the six programs reviewed can help ensure that the successful strategies identified reach a wide number of beneficiaries and help close the youth skills gap.



Pathways to Employability

Part I: Lessons for Closing the Youth Skills Gap from Six Skills Development Initiatives

Prepared
by Aarthi Rao

Introduction

Youth unemployment is an accelerating global challenge. The International Labor Organization (ILO) estimates that, in 2012, 75 million working-age youth were unemployed, and another 200 million were working but earning less than \$2 a day.⁶ By 2030, the global labor force will swell to 3.5 billion people with 90-95 million of these workers constituting a surplus of unskilled labor.⁷ India and its fellow developing economies in South Asia and Africa alone will contribute 360 million new workers to the global labor force over the same timeframe.⁸ If current trends continue, then these countries, which along with China have the largest youth populations in the world, will find themselves with steadily growing rates of youth unemployment and underemployment.⁹

Part of this problem stems from an imbalance between countries' education systems and labor markets; the skills that youth need to secure employment are not the skills that they have developed through traditional education and vocational training. Secondary education is often designed as a stepping-stone to higher education, yet globally, the transition rate from secondary to tertiary level is low, meaning that most students enter the labor force directly from the secondary level. While some skills assessed at the secondary level, such as language, are very relevant to employability, curricula often lack any specific orientation toward directly preparing students for informal or formal employment. Technical and vocational education (TVET) is considered a better option for students seeking immediate employment, but in many countries TVET continues to be stigmatized and the curricula of many TVET institutes is not aligned with the skills demanded by a fast-paced economy.

To better understand strategies to close the skills gap and improve youth employability, the Results for Development Institute (R4D) explored a number of skills-related policy topics through its Innovative Secondary Education for Skills Enhancement (ISESE) program. The ISESE research

program has taken a broad look at the skills landscape in its first phase by profiling the skills demanded by employers in different regions, the skills provided by conventional education systems, and innovative models being explored to improve skills development at the secondary level.

Our research found that there are three basic skill sets for employment: cognitive, which includes skills such as numeracy and literacy; technical, such as computer or technological competencies; and non-cognitive skills,¹⁰ including traits like leadership and capacity for teamwork. Youth must draw on all of these skill sets to find and retain employment, and education and training programs must find effective ways to develop these traits in youth. However, in the context of today's rapidly evolving global economy, non-cognitive skills have emerged as those most highly demanded by employers.¹¹ Informal and formal employers in Asia and Africa have identified skills such as openness to learning, good work habits, and entrepreneurialism as critical for successful employment,¹² and these skills are associated with higher wages.¹³ Unlike more discreet skill sets, non-cognitive skills also provide a platform for youth to acquire additional skills, for example by enabling better on-the-job learning capacity. To address youth unemployment, policymakers and industry must find ways to foster skills at the secondary level that match real world labor market needs.

During the first phase of the research, R4D and its regional partners conducted landscaping work to identify models that delivered skills at the secondary level in innovative ways. A global ISESE competition was also launched to identify promising but lesser-known interventions. The competition included an expert jury representing funders, industry, and research/academia, which, in ranking submissions, considered criteria such as the program's impact, sustainability, potential for replication, and effectiveness of targeting skill development. The models

⁶ All references to "\$" are US Dollar. International Labour Office. 2012. "The Youth Employment Crisis: A Call for Action." Resolution and Conclusions of the 101st Session of the International Labour Conference, Geneva.

⁷ Dobbs, Richard, and Anu Madgavkar, Dominic Barton, Eric Labaye, James Manyika, Charles Roxburgh, Susan Lund, and Siddharth Madhav (2012). "The World at Work: Jobs, Pay, and Skills for 3.5 Billion People." *McKinsey Global Institute*.

⁸ *Ibid.*

⁹ International Labour Organization. 2013. "Youth Unemployment Rates Estimates and Projections by Region 2007- 2017." Accessible at: http://www.ilo.org/global/research/global-reports/global-employment-trends/youth/2013/WCMS_212431/lang--en/index.htm

¹⁰ Non-cognitive skills are often referred to as behavioral, attitudinal, or life-skills skills

¹¹ Burnett, Nicholas and Shubha Jayaram. 2012. "Skills for Employability in Africa and Asia: ISESE Skills Synthesis Paper." *Results for Development Institute*, Washington, DC.

¹² *Ibid.*

¹³ Guison-Dowdy, Anne . 2012. "Skills for Employability: Economic Return to Education and Skills." *Results for Development Institute*, Washington, DC.

identified through the landscaping work and competition entries embodied many different approaches to improving skills delivery, including: drawing upon the strength of multi-stakeholder partnerships; using innovative financing to counter demand-side constraints and target excluded populations; employing innovative ICTs to enhance teaching and learning methods and expand access to quality education; integrating workplace learning as a pathway to employability; and focusing on non-cognitive skill development to improve learning outcomes overall.

Out of the shortlisted competition entries and additional models put forward by R4D's regional partners, six initiatives have been selected for an in depth review in this report. These six programs were chosen for further analysis based on their broad lessons for establishing effective skills development programs targeting youth and their significant potential for scale-up or replication. All follow a number of the principles recognized as important in the Phase I research of the ISESE program, including an emphasis on non-cognitive skills, partnerships with the private sector, and a focus on marginalized youth.

Box 1: Winners of ISESE competition

Asia: Yuwa: Kicking it New School (India)

Africa: Improving the Quality and Relevance of Middle School in Senegal (Senegal)

More information about the runners up and finalists can be found at <http://www.changemakers.com/isesec>

Part I of this report provides an overview of the six programs chosen for further study, discusses common lessons from these programs' experiences such as their cost drivers, factors for success, and challenges, and concludes with a consideration of the lessons they provide for replicating and scaling youth skills development initiatives. Part II contains each individual program case study.

Overview of Programmatic Models

The program models analyzed in this report showcase some of the best ideas from Asia and sub-Saharan Africa to deliver skills to youth in developing countries and improve their chances at securing permanent employment. Unlike typical skills development programs, these initiatives make particular efforts at achieving social impact such as by targeting youth in hard-to-reach areas, subsidizing participation for low-income students, and designing programs for scale. They are analyzed from a number of different angles—including goals, approach, operating model, activities, cost, impact, and sustainability—understanding that all of these elements are variable and would affect the success of replication and scale in different ways. While none of these models is a catchall solution for closing the global skills gap, the experiences of these programs reveal useful lessons for reducing youth unemployment in different contexts.

South Asia

Lend a Hand India

India has a growing youth population, the unemployment rate among youth is high,¹⁴ and there is limited exposure to workplace skills in the mainstream education system. In secondary school, students often lack opportunities to learn about technical and vocational trades, and they must make decisions about whether to pursue TVET or higher education without professional guidance. Additionally, rote memorization methods of instruction are still pervasive, thereby denying students the non-cognitive benefits of hands-on learning. To foster active learning and expose students to technical and vocational occupations, Lend a Hand India (LAHI) works with Vigyan Ashram, an NGO, to refine and scale up the Introduction to Basic Technology (IBT) course in government schools.

The IBT program is a two- to three-year course that exposes secondary students to technical trades in basic engineering, energy and the environment, agriculture and animal husbandry, and home and health science and focuses on developing 40 different skill sets directly relevant to life in rural areas. Through the hands-on course work, which emphasizes application and not just theory, LAHI aims to foster life skills such as planning, problem solving,

teamwork, and entrepreneurship. Tradesmen from the surrounding community lead instruction so that students have direct exposure to their local employment markets.

To date the IBT program is operational in 62 government-aided schools in Goa, Karnataka, and Maharashtra. To offer the course, which is ultimately managed by the school but overseen by LAHI, schools must apply to LAHI and demonstrate a commitment to devoting resources to the course such as the necessary space and equipment. It costs about \$5,000 to start up the program, and \$4,000 a year to maintain it. This translates into a cost of \$318 per student to complete the three-year course. LAHI initially covers about 40% of total costs from its own fundraising efforts, but works to progressively transition the financing of the program to schools. Upon LAHI's recommendation, some schools charge students 100 rupees a month (less than \$2) to participate and establish fee-based service programs that allow students to practice their newly acquired skills through small community jobs.

To date 7,000 students have completed the IBT course, and 13,000 more are currently enrolled. Attendance for the program is near 100%, and 25% of graduates in LAHI's partner schools pursue TVET, whereas the state average for Maharashtra is only 5%. LAHI has designed internal tests to assess changes in life skills of its students and commissioned an impact assessment with donor support. At the state level the government of Maharashtra has included the course in its state curriculum and offers IBT graduates preferential admission to public TVET programs, which are less expensive than private institutes. LAHI is working to build a similar level of buy-in in other states.

Stigma towards TVET and effectively transitioning financial responsibility for the program to schools remain challenges for LAHI, but the organization has made impressive strides. LAHI is actively expanding the IBT program to new schools and states and has the potential to partner with low-cost private schools in the future.

National Skills Development Corporation

India faces a burgeoning youth population and by 2020 the country will add 110 million people to the workforce.¹⁵

¹⁴Biavaschi, Costanza and Werner Eichhorst, Corrado Giuliotti, Michael J. Kendzia, Alexander Muravyev, Janneke Pieters, Nuria Rodriguez-Planas, Ricarda Schmid, and Klaus F. Zimmerman. 2013. "Youth Unemployment and Vocational Training Background Paper for the World Development Report 2013." *The World Bank*, Washington, DC.

¹⁵"India Will Add 110m People to Global Workforce by 2020: Study." *The Financial Express*, 28 Jul 2010. Accessible at: <http://www.financialexpress.com/news/india-will-add-110m-people-to-global-workforce-by-2020-study/652968>

Table 2: Detailed Overview of Six Promising Skills Development Programs¹⁶

	South Asia			Southeast Asia	East Africa	West Africa
Organization	Lend a Hand India (LAHI)	National Skills Development Corporation (NSDC)	Yuwa	Passerelles Numériques (PN)	Educate!	FHI 360
Skills Program	LAHI's 'Introduction to Basic Technology' diploma course (IBT) introduces secondary school students to vocational training alongside traditional academic coursework.	The NSDC supports TVET programs and sector skill councils (SSCs) throughout India.	Yuwa runs a soccer program and a related education initiative: 'Kicking it New School'	PN runs a residential training program to develop rural youths' skills in ICT and English.	Educate! runs a comprehensive entrepreneurship and leadership program that aims to help secondary school youth create small businesses and improve their livelihoods.	Education de Base (EDB) program works directly with the Ministry of Education to reform curriculum, train teachers, and enable ICT usage in Senegalese middle schools.
Governance Structure	LAHI provides overall strategic management support to the program, but the organization works closely with partner schools who implement the program at specific sites.	The Government and private industry jointly own the NSDC, with industry associations taking a 49% equity stake in the corporation. A mutually representative board oversees the corporation.	Yuwa's cofounder, Franz Gastler, directly oversees the program in Jharkhand and is supported by a network of volunteers abroad.	PN is a non-profit organization based in France with a large field office in Cambodia.	Educate! is a non-profit organization directed by its cofounder, Boris Bulayev, and overseen by a board of directors and a separate board of advisors based in Uganda and the U.S.	FHI 360, a U.S. based non-profit human development organization, coordinated the technical work for this program and facilitated the involvement of the Government of Senegal and other stakeholders, such as members of the private sector.
Program Overview	The pre-TVET program allows rural students to learn hands-on skills in a number of TVET areas so that they can make an informed choice as to whether and what type of TVET to pursue after graduation. The program emphasizes entrepreneurship, life skills, and technical skills.	The NSDC aims to contribute to the skilling and up-skilling of 150 million people in India by 2020. The NSDC aims to serve as a bridge to private industry, provides equity and debt financing to private sector skilling centers to improve the quality and scale of programs, and supports SSCs to address ecosystem challenges in specific sectors.	Yuwa facilitates a pre- and after-school soccer program for rural girls in Jharkhand. The soccer program encourages girls to save for supplies, hold one another accountable for attending practice, coach younger players, stay in school, and set long-term goals. Yuwa's education initiative aims to supplement girls' education with Khan Academy lessons accessed through e-readers.	PN offers two-year courses to high school graduates from disadvantaged backgrounds. The courses aim to provide skills for employability and to boost lifetime earning potential. The programs focus on English, ICT, and soft skills. PN offers a joint program with another organization that grants students short work placements.	The Educate! Experience program matches secondary school students with mentors that provide business and leadership training, mentorship and guidance in starting a business. Mentors also help students launch their own business, and high potential students continue to receive support after graduating. The Teacher as a Mentor Program trains teachers and school officials to deliver components of Educate! Experience.	EDB is a large-scale program to revitalize middle school education in Senegal. It focuses on 5 components: curriculum and pedagogy reform, ICT, good governance and management, Public Private Partnerships, and vulnerable children.

¹⁶All references to dollars are to U.S. dollars.

Table 2: Detailed Overview of Six Promising Skills Development Programs (continued)

	South Asia			Southeast Asia	East Africa	West Africa
Costs	It costs roughly \$4,000 to launch the program in a new school and about \$5,000 a year to maintain it thereafter. LAHI shares the program costs with schools, which often charge a small fee to students. It costs roughly \$318/student to complete the three-year course.	The NSDC uses \$187 million in government funds to invest in skill related programs.	Yuwa relies on equipment donations, free use of fields, volunteer staff time, and participants' own contributions to fund the soccer program. The main cost of the education initiative is the cost of e-books.	PN incurred 1.2 million euros in operational expenses in 2011, 45% of which was spent directly in Cambodia. Students participating in the program receive a small stipend of \$55 a month to cover living, transportation, and insurance expenses for the duration of the program. The total cost of a student covering the full two year course is roughly \$5,774	The student mentorship program costs \$150 per student per year, and the teacher program costs \$50 per student per year. Donor funding supports the organization.	In total, EDB is a \$39 million program funded over five years. Given the complex set of activities undertaken, a cost per beneficiary has not been calculated and will vary across the initiative. It costs roughly \$10,000 to start the ICT component of the program in a new school.
Impact to Date	7,000 students have completed the IBT course, and 13,000 are currently enrolled. LAHI is actively expanding, and the government of Maharashtra has formally adopted the course into the state curriculum and offers IBT graduates preferential admission to public TVET programs. An early impact assessment suggests the program positively influences youth.	The NSDC's target is to reach half a million people per year, for a total of 150 million by 2022; it is currently reaching approximately 16% of this yearly target. The NSDC requires that the employment rate of students graduating from its affiliated centers is at least 70%. In the year 2011-2012 NSDC's affiliated centers have trained over 180,000 students, 79% of which had found employment upon graduation.	As a new program, Yuwa's impact has not yet been quantitatively measured, but staff and volunteers have noticed qualitative increases in participants' confidence levels and personal goals. About 280 girls participate in the program.	Since 2005, 455 students have completed PN's full two-year course in Cambodia, and of these graduates, 97% found employment within two months. Graduates' average starting salary is \$150/month (above the average starting salary in Phnom Penh of \$100/month) and many have also experienced rapid salary increases.	Educate! currently reaches 54 total schools and 7,000 students through its mentorship and teacher training programs, and the Government of Uganda has integrated Educate!'s entrepreneurship curriculum into the national curriculum, reaching 25,000 annually. Educate! has seen a 34% growth in graduates with businesses and a 41% increase in average income of those with a business.	EDB activities have been implemented in 607 schools, reaching 93,000 children. The program intends to reach all 1,300 middle schools in the country by the end of 2013. In addition to carrying out numerous teacher, parent, and school official trainings, EDB has equipped 408 schools with computer labs and the government has officially adopted the new curriculum developed through the initiative.
Reason Selected for Case Study Review	Incorporation of non-cognitive skills development, in-school program targeting rural youth.	Very large-scale, Public Private Partnership	Incorporation of non-cognitive skills development, targeting rural girls.	Incorporation of non-cognitive and ICT skills development, targeting rural youth.	Incorporation of non-cognitive and entrepreneurial skills development.	Large-scale curriculum reform; Public Private Partnership; targeting secondary students, including vulnerable youth.

If these job seekers are sufficiently skilled, then they will be assets to the country's growing economy, but if programs do not succeed in effectively skilling new workers, then unemployment and its associated social costs will rise. The Government of India has recognized this need and has launched the National Skills Development Mission with the aim of skilling 500 million people by the year 2022.¹⁷ The government is working to meet this ambitious goal by mobilizing generous public resources and a number of public schemes and programs. One of the most prominent is the National Skills Development Corporation (NSDC), which has been established to contribute to the government's goal by supporting the skilling/up-skilling of 150 million people.

The NSDC is a Public Private Partnership in which the private sector has taken an equity stake while public funding provides debt, equity, and grant financing to private sector vocational and technical training initiatives. About \$187 million has been set aside for this purpose.¹⁸ While the NSDC acts as a target-driven organization, its mandate includes strengthening the country's overall skills ecosystem. To this end the NSDC supports Sector Skill Councils (SSC) in 21 focus industries, including high growth sectors such as telecommunications, retail, and construction. SSCs, which are often founded in partnership with industry associations, take on a diverse set of responsibilities such as analyzing needs in the labor market, developing standards and curricula for sector specific training, certifying training institutes, and training trainers.¹⁹

The track record of the NSDC is mixed. It is certainly one of the largest skills development programs in the country, but it is only reaching about 16% of its yearly target of skilling/up-skilling half a million people.²⁰ However, the corporation faces trade-offs between reaching its quantitative goals and closely monitoring the quality of training programs and institutes in which it is investing. The NSDC requires that its partner institutes reach a minimum 70% employment among their graduates,²¹ but this metric does not shed light on the long-term employment outcomes such as duration of employment and wage/wage growth. Despite these challenges related to the quality of programs, the NSDC remains one of India's most significant skill initiatives.

Yuwa

Rural India is a tough place for young girls. Rates of literacy and education are low, child marriage is common, and economic opportunities are limited. In this environment it takes non-cognitive skills such as independence, self-confidence, and entrepreneurialism to break pervasive barriers and thrive. Yet girls are often denied opportunities to develop these skills through extra-curricular pursuits and in many cases are expected to spend their time completing household tasks instead. Yuwa, a new non-profit organization, is striving to reverse this trend in rural Jharkhand.

Yuwa works to empower young girls and bring them out of social isolation through sports. Yuwa runs a low cost soccer program that not only gives girls some leisure time, but also offers a clear channel to develop leadership, time management, financial, and teamwork skills as well as general self-confidence. Yuwa launched its soccer program at the request of local girls, and it continues to be a demand-driven program. Yuwa's participants, who range in age from 6-18 and come from about a dozen different villages, opt to join the program. If a new group of girls wants to participate, then they must work with Yuwa to save enough money to cover the cost of their gear, express a desire to come to practice every single day, and commit to attending school regularly. Yuwa asks players to hold one another to these standards. The organization also encourages older girls to coach younger players, and selects coaches from its most committed participants. By using peer coaches, Yuwa shows its teams that young women can successfully hold positions of responsibility, and experience from other programs suggests that exposing youth to female leaders can have significant effects such as an increase in the educational attainment of young girls.²²

Yuwa has recently partnered with a group in Mumbai and is offering the same program in the city's Dharavi slum. 250 girls are registered for the program in Jharkhand and about 120 appear regularly for practice; another 30 have registered in Dharavi.

In addition to running its soccer program Yuwa is in the midst of launching an education initiative, Kicking it New

¹⁷National Skill Development Mission." Ministry of Labour and Employment, Government of India, 16 Aug 2010. Accessible at: <http://pib.nic.in/newsite/erelease.aspx?relid=64862>

¹⁸Planning Commission, Government of India. 2010. "Mid-term Appraisal of the Eleventh Five Year Plan."

¹⁹NSDC. "An Approach Paper for Setting Up a Sector Skill Council." Accessible at: <http://www.nsdcindia.org/pdf/approach-paper-ssc.pdf>

²⁰KPMG. 2012. "A Skilled India @75—NSDC's Role, Challenges, and Opportunities." *KBuzz Sector Insights*, Issue 16.

²¹NSDC. 2012. "Annual Update 2012."; and Banerjee, Basab. 2011. "Approaches to Skill Formation, Enhancement, Refinement." Presentation at Advancing Strategies to Deliver Welfare & Livelihood Development.

²²Beaman, Lori, and Esther Duflo, Rohini Pande, and Petia Topalova. 2012. "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India." *Science* 335 (6068): 582-586.

School. The organization has downloaded and categorized 600 Urdu-medium lessons from Khan Academy and is training peer leaders to guide participants through the lessons and associated activities. Yuwa is currently using e-readers to display the web media. Once the program is fully functional, it can complement participants' schooling and help encourage active learning.

By relying on donated goods, free use of fields, and volunteer time, the organization incurs limited expenses. The costs of administering the soccer program in particular are minimal. Coaches receive 30 rupees per practice, but beyond that all staff work on a volunteer basis. The education initiative must cover the costs of e-readers. The initial cost of this technology was low, but once the program is operational, the cost may increase as the current e-reader technology has proven unreliable for playing the desired lessons.

The impact of Yuwa's programming has not yet been quantitatively measured. Measuring impact is particularly difficult for a small program running on a tight cost structure and without staff or funds set aside for monitoring and evaluation. However, staff members have noticed increases in the confidence level of participants, and the program continues to be popular among rural youth.

Yuwa faces many challenges from a lack of infrastructure to resistance from families, but it hopes to reach more girls by helping other groups replicate its soccer program. Given the minimal resources needed to launch the program, Yuwa can share its lessons about how to design practices, encourage saving, etc. with youth organizations who are willing to learn the details of its experiences. Through this kind of collaboration, the organization can enable its model to expand at a low cost.

South East Asia

Passerelles numériques

Passerelles numériques (PN), a non-profit organization based in France, runs a skills program in Cambodia that aims to give rural youth the skills they need to find urban jobs and earn desirable wages, in the long-term. While Cambodia's economy has made significant progress since the early 1990s, economic growth and job opportunities are concentrated in urban areas, yet 80% of Cambodia's population remains rural.²³ To find meaningful employment, youth must navigate the urban labor market and apply non-cognitive skills that allow them to succeed in the workplace.

To facilitate access to urban employment, PN offers residential training programs focusing on developing skills in ICT, English, problem solving, and critical thinking. The program offers two two-year diploma courses, recognized by the government, and a short 6-month course. Students in the two-year program can choose one of two tracks, Systems and Network Administrator or Web Programmer, after participating in the program for 3 months. Students in the 6-month Data Management Operator course, which is run in conjunction with a partner organization, receive work placements that often lead to full-time employment. PN developed their course material after conducting market research within the country to identify which skills are in highest demand by employers. In addition to direct course work, PN arranges visits to over 50 employers so that students can better understand the dynamics of the urban labor market.

High school students must apply to join the program. The program does not require previous technical knowledge, but PN does seek out students who are highly motivated and who demonstrate the capacity to live away from home. PN does not charge students to participate, and instead provides students with a stipend of \$55 a month to cover the costs of lodging, transportation, health insurance, and board. The organization relies on donor funding and has benefitted greatly from in-kind support from leading companies. For example, Accenture, a global leader in ICT, has not only made significant financial contributions to PN's center in Cambodia, but has also helped conduct much of the market research that shapes the program's design.

Since 2005, 779 students have graduated from PN's programs in Cambodia; 455 of these students completed one of the two-year courses. Within 6 months of graduating from the two-year programs, 97% of students had secured employment, and within 2 two years of completing the course, graduates report an average salary of \$300 a month, three times the average monthly salary in Phnom Penh. Through PN's Solidarity Act, many of these alumni will contribute back to the program, which not only benefits the organization financially but also helps maintain the program's alumni network.

As the program continues, PN will focus on expanding the program to reach more students in Cambodia in addition to strengthening similar but more nascent initiatives in the Philippines and Vietnam. The organization will explore ways to address one of its core challenges of high staff turnover and will continue to adapt the curriculum to the changing needs of employers.

²³UNESCO. 2010. "Cambodia – UNESCO Country Programming Document 2009-2010." UNESCO, Phnom Penh.

East Africa

Educate!

The informal economy and entrepreneurship play a big role in providing jobs in sub-Saharan Africa. One way for youth to secure employment is to learn to thrive in this dynamic sector by either finding work in the informal economy or launching their own enterprise, but the skills needed to do so are rarely imparted by secondary or tertiary education.²⁴ The non-profit organization Educate! provides youth with mentors who work with them to develop their skills in business and leadership so that they can generate and find their own employment opportunities. Educate! operates in Uganda, which has the youngest population under 30 (by percentage) in the world and the highest youth unemployment rate, at 83%²⁵

Through its 'Experience' program, Educate! trains recent university graduates to mentor students in their 36 partner schools through a two-year experiential learning program. The program emphasizes business and leadership skills and provides students with hands-on opportunities to design business plans and launch community ventures. Through these activities, students not only learn well-defined business skills but also have the chance to refine non-cognitive skills and to network. Graduates of this Educate! program have access to a life-long network of alumni and peer learning activities. Secondary school students must apply to join the program, and Educate! selects those that demonstrate commitment and motivation. Given the breadth of the youth unemployment challenge in Uganda, the organization does not judge applications by the income level of students.

In addition, the organization offers the Teacher as Mentor (TAM) program. Through TAM, Educate! helps teachers and school administrators foster entrepreneurship among students through the school's own programming and course structure. With training from TAM, schools have the ability to implement components of the Educate! Experience program.

Given the heightened level of engagement in the Educate! Experience program, its costs exceed those of TAM. It costs about \$150 per student per year, and Educate! does not impose any student fees. While it does not currently charge schools for the program, it will begin charging partner

schools up to \$200 a year to help cover costs. In contrast, TAM, which does not require the participation of mentors, only incurs expenses of \$50 per student per year. Educate! meets the costs of its programming through donor support.

Together, the Educate! Experience and TAM programs reach 7,000 students a year with 36 and 18 schools participating in the programs, respectively. Educate! has seen a 34% growth in graduates with businesses and a 41% increase in average income of those with a business. More data on the impact of the Educate! Experience program on students will soon be available as a randomized control trial of the program is underway. In the meantime the Government of Uganda has nationally endorsed Educate!'s entrepreneurship curriculum by integrating it into the national curriculum; 25,000 students throughout the country study entrepreneurship under the tenets of Educate!'s program.

Looking ahead, the organization is focused on growth, and another group is already replicating its model in Tanzania. While Educate! faces challenges of financial sustainability and in overcoming the stigma around entrepreneurship in the country, it hopes to reach 100,000 students in 1,000 schools within ten years and expand in three different countries. It is taking a big step towards that goal in 2014 by growing to directly serve 200 schools and 20,000 students.

West Africa

Education de Base

In 2000, the Government of Senegal launched a widespread effort to improve school enrollment in an effort to meet the Millennium Development Goals, but it quickly found that the country needed a complementary push to improve the quality of education. Thanks to the enrollment efforts, secondary schools in particular received a flood of new students, many of whom would go on to seek employment after graduation, yet pass rates in middle schools were low and the rate of dropping out remained high.²⁶ To improve the quality of middle school education, the government entered into a partnership with FHI 360, a U.S.-based NGO, and USAID to launch 'Education de Base' (EDB), a large-scale initiative to revitalize middle schools throughout the country.

²⁴Omidyar Network. 2013. "Accelerating Entrepreneurship in Africa."

²⁵Bwambale, Taddeo. 2012. "Uganda Has the Youngest Population in the World." News Vision, Dec 14 2012. Accessible at: <http://www.newvision.co.ug/news/638120-uganda-has-the-youngest-population-in-the-world.html> and World Bank, African Development Indicators (from <http://www.experienceeducate.org/about/>)

²⁶DeStefano, Joseph and Mark Robert Lynd and Barbara Thornton. 2009. "The Quality of Basic Education in Senegal: A Review." USAID, Senegal.

This multi-faceted program emphasizes five core components:

1. **Curriculum and Pedagogy Reform:** improving the quality and relevance of middle school curriculum content and delivery;
2. **Information and Communication Technologies:** enhancing teaching and learning through access to ICT resources, including infrastructure and training;
3. **Good Governance and Management:** building the capacity of actors involved in education governance (local ministries, school boards, parent associations, and others) to collaborate and effectively oversee administration of middle school resources;
4. **Public Private Partnerships:** facilitating partnerships between public and private sectors to improve middle school education;
5. **Vulnerable Children:** ensuring that vulnerable and marginalized populations in Senegal have access to high quality, relevant education, and training.

FHI 360 provided technical inputs across these areas and worked closely with the Ministry of Education, schools, the private sector, and other stakeholders to advance curriculum and programmatic reforms. EDB developed a curriculum relevant to the skills needed to succeed in the 21st century, created complementary trainings and materials for teachers, introduced computer labs in schools across the country, strengthened school governance systems, and partnered with the private sector to offer students industry-relevant coursework and opportunities to learn about the world of work.

The program required \$39 million in funding over five years, and plans are underway to transition the maintenance of the initiative to the Government of Senegal. EDB activities have reached 607 schools and 93,000 students. Estimates suggest that 50,000 vulnerable children have received access to better education through EDB's engagement with Koranic schools and at-risk youth. EDB has also trained about 9,000 teachers and

Box 2: Lessons to consider for youth skills development initiatives

- Target vulnerable or marginalized populations that have few opportunities to develop skills for employability
- Define a clear mission and adapt programs accordingly
- Design programs that:
 - Foster and assess non-cognitive and ICT skills
 - Incorporate experiential learning methods
 - Leverage talent from the local workforce
 - Reach students navigating choices about employment and further studies
 - Focus on context-relevant learning
- Build strong partnerships with the private sector
- Seek recognition and collaboration from local communities and government
- Implement protocols to monitor program results

2,500 school administrators. At the national level, the government has institutionalized EDB's new curriculum and other select school activities.

As USAID transitions out of the program, the Government of Senegal will have to step in to coordinate further EDB activities. While this is an enormous challenge, this is one of the best examples of a strategic and targeted attempt to implement large-scale secondary education reform in a developing country.

Common Lessons and Underlying Factors for Success

These diverse programs bring to light important common lessons²⁷ that can help skills development programs flourish in different country and community contexts. Each program has unique objectives, but the programs' experiences have broader relevance for the many countries around the world struggling with a youth employment crisis. While each program has its own set of features related to its core objectives and target beneficiaries, the six programs share a set of success factors such as focusing efforts on the populations that can benefit most, defining a clear mission, designing strong programs, linking with the private sector, and establishing buy-in with the community and government. The lessons discussed below can help policymakers and program implementers design initiatives that build on existing experience and have a greater chance of sustainably and effectively skilling youth.

Targeting Marginalized and Vulnerable Youth

All of the programs reviewed have an explicit strategy to target vulnerable or marginalized youth. One of the most common strategies is outreach to rural populations. LAHI takes a direct approach to rural outreach by incorporating the IBT program into rural schools, similar to Yuwa, which has located its main soccer program in a village in Jharkhand. By contrast, in Cambodia, PN reaches out to rural schools through site visits where they present the program to students, but the program itself is set up in the city in order to introduce disadvantaged rural youth to urban work environments.

Another targeting strategy is charging low or no fees for participating in a skills development program. This opens up programs to youth from low-income groups. Educate!, PN, and Yuwa do not charge any fees for participation, and LAHI encourages only a small charge of 100 rupees (under \$2) a month. Evidence from Colombia suggests that subsidizing vocational training has employment benefits for disadvantaged youth, especially women.²⁸ The NSDC model is different given its scale, and most

of its partner institutes charge students tuition. However, the corporation is lobbying banks to provide student loans with deferred payment plans to individuals pursuing TVET in hopes of increasing access to TVET among low-income groups. Similarly, while EDB targets all middle school students in Senegal, it specifically reaches out to vulnerable children by working with Koranic schools, out-of-school children, and other at-risk groups.

Besides targeting low-income or marginalized groups, nearly all of the programs established opt-in systems, sometimes accompanied by an application or a set of qualifying criteria, which allow them to target individual youth with specific characteristics. While this may deter some youth, programs generally seek participants that show some level of motivation or willingness to commit to the program, even if they do not have financial resources to contribute. For example, Yuwa requires girls to regularly attend practice and save money for their own gear. PN and Educate! stipulate that students apply for the program and demonstrate basic personality traits that will help them succeed in their courses. LAHI, however, takes an alternative approach. While students do not need to submit an application to enroll in the IBT course, they must transfer into the school division offering the program. This small barrier ensures that participating students demonstrate interest in the course, while not excluding students who fail to meet predefined criteria. Creating an opt-in system encourages buy-in from participants and helps organizations with limited resources (that are not seeking to reach all youth in a particular place) screen for youth who will most benefit from their programs.

Mission-Driven Decision Making

For a program to succeed by leveraging its resources in the most effective way, it must have a clear mission and goals that guide decision making. While the means for achieving a mission may evolve depending on ground realities uncovered as a program is assembled, having a well-defined overarching goal allows program

²⁷These lessons have been derived from individual program case studies; to review these case studies, which include detailed discussions of success factors, challenges, and costs for individual programs, see Part II of this report.

²⁸Attanasio, Orazio, and Adriana Kugler and Costas Meghir. 20. "Subsidizing Vocational Training for Disadvantaged Youth in Columbia: Evidence from a Randomized Trial." *American Economic Journal: Applied Economics* 3(3): 188-220.

management to make strategic decisions to best serve the target beneficiaries. Although Yuwa started out as a more holistic youth organization, the leadership reoriented the organization towards soccer when the demand and need among its target group became clear. The organization had always intended to empower rural girls, and adjusting the course allowed Yuwa to pursue this goal in a way most aligned with the organization's capacity and resources.

In a similar vein, PN set out to improve the employability of rural youth with limited resources. Rather than pursuing all of the many different avenues for doing this, the organization conducted market research, enabling it to tailor its courses towards the skills most demanded by employers. Although EDB operates on a much larger scale than programs like PN and Yuwa, it also took a phased approach to its programming, testing different methods of improving middle school education before committing to its final rollout strategy. Having a clear mission is especially important for large-scale programs such as EDB and NSDC who must galvanize hundreds of actors around a common purpose and have less room to maneuver later.

Program Design

Details of how a skills development program is designed affect whether it will truly impart the skills needed for employability in the contemporary economy and empower youth to seek out and create the opportunities that they need to obtain and retain employment. Each of the six programs has made thoughtful decisions to give youth the best chance at success, with several noteworthy approaches and characteristics:

- **Non-cognitive Skills:** Nearly all of the programs profiled recognize non-cognitive skills as critical tools for youth to succeed in the labor force. Some programs develop particular skills at depth, for instance Yuwa pays close attention to teamwork and Educate! to entrepreneurialism, but the structure and content of the programs also develop a broad set of non-cognitive skills in participants.
- **ICT and Other Technology:** Every program incorporates some elements of ICT and other technology, which develops an important and relevant technical skill set for securing employment in the modern economy. While the focus on ICT ranges from EDB's explicit goal of bringing computer labs to classrooms and PN's ICT specific course, to NSDC's support of an SSC in the telecommunications industry, each program recognizes ICT and other technology as necessary elements of skills development for youth.

- **Experiential Learning:** Except for NSDC, whose individual partner institutes drive the course structure of programs, every program incorporates experiential learning such as hands-on problem solving, designing business plans, use of technology, temporary work placements, and active learning methods in their courses. This strengthens students' non-cognitive abilities and gives youth the confidence to adapt to new situations and solve unforeseen problems, qualities that employers highly value.
- **Locally based instructors/mentors:** Many of the programs have capitalized on local talent to lead instruction for youth. LAHI and PN draw technical and vocational instructors from the local labor force, Educate! employs graduates from local universities as mentors, and Yuwa encourages peer coaching. In the first three cases, the use of locally-based instructors and mentors gives youth an entry point into the local labor force and allows them to start building a professional network. This is essential, as some estimates suggest that nearly half of all jobs are found through informal networks.²⁹ Importantly, this also ensures that youth are taught context-relevant skills and trades. Yuwa's development of peer coaches gives younger players a role to aspire to and contributes to positive perceptions about young women in positions of responsibility. The use of local talent may also encourage more youth to participate in the program as familiar faces and relevance to local life may signal the value and cultural acceptability of participation to youth.
- **Relationship with formal education:** Many of the programs work explicitly to enhance or complement the existing formal secondary education system, recognizing that this can help to increase the sustainability and scale of the intervention. For example, LAHI uses existing public school infrastructure to provide its complementary skills curriculum, while Educate! also works within existing schools and its entrepreneurship curriculum has been adopted into the Ugandan national curriculum. EDB employed a top-down method to reaching national scale, providing technical assistance to an initiative that was conceived and implemented in full by the Senegal education ministry, allowing for an even higher likelihood of sustainability, as government buy-in was explicit from the start. These all provide examples of how innovations supported outside the formal system can be successfully mainstreamed to increase scale and impact.
- **Timing:** All of the programs reviewed were chosen for specifically including secondary school students, and it is worth noting that engaging with youth at this time is critical. At this stage, youth face important decisions about whether to remain on academic tracks, pursue

²⁹Topa, Giorgio . 2011. "Labor Markets and Referrals." *Handbook of Social Economics* 1: 1193-1221.

TVET, or immediately seek jobs. These choices will influence their lifetime employment trajectories. Some students will receive useful support and advice from peers and adults about which path to choose and what educational and training programs will impart practical skills, but many will not. Fostering skills for employability and giving youth a supportive network of mentors, peers, and instructors along with access to the workplace is vital at this juncture.

Industry Participation³⁰

Industry participation is critical for any skills development program intending to improve the odds of labor market success for its participants. Every program, except for Yuwa, which incidentally develops skills highly sought after by employers without taking an explicit goal of helping to employ youth, relies on a high degree of industry participation. Linkages with industry primarily manifest in three ways: programs involve employers in developing curriculum and course materials, they engage the private sector to help financing and sustainability, and they expose students to the world of work through internships and by providing information on career opportunities.

EDB, Educate!, PN, and NSDC take a deliberate approach to involving industry in the developing the content of their programs. EDB included employers in redesigning the middle school curriculum for Senegal to ensure that the curriculum captured skills needed in the labor market. Educate! brings in local entrepreneurs and industry experts to provide students with more hands-on, specialized training as they work to create their own businesses. PN conducted in-depth labor market research to design its course and regularly asks local employers to assess their courses to make sure that they are still effective. NSDC, which works across a broad mandate, involves industry at every step. The corporation was founded in partnership with industry associations, industry sits on its board, and it encourages SSCs to work with the private sector to create and validate training programs.

EDB, LAHI, and PN also involve industry by giving youth direct exposure to local labor markets. LAHI employs local tradesmen as instructors, and all of the programs organize site visits to markets and workplaces to introduce students to work environments. This exposure can help youth choose a career path and better appreciate the skills that they need to hold a job while also opening channels for internships and full-time employment.

Finally, many programs benefit from direct or indirect resource support from the private sector. In-kind donations such as the consulting services that Accenture provides

to PN or the discounted utilities that companies supply to EDB's ICT-enabled schools benefit organizations by granting them additional expertise and financial support. Additionally, scholarships provided to PN by employers, or the private sector foundation established by EDB, are examples of how industry can provide direct financial support.

Establishing Community and Government Buy-in

Creating buy-in with the community and the government allows programs to be embedded in local institutions and lays the foundation for long-term operations and scale-up. Community and government groups can provide important feedback about what aspects of a program are most relevant and sustainable in a particular area, and their involvement can build credibility in the program itself.

Community level buy-in is particularly important for programs directly engaging with small communities. Yuwa's program creates a space for girls to do something that they have never done before in rural Jharkhand; generating radical behavior change in conservative areas cannot occur out of the blue. For families to allow their daughters to participate, Yuwa had to spend significant time establishing trust with community members. LAHI, which operates on a larger scale but collaborates with individual rural schools, also takes deliberate steps at creating buy-in with community members. It requires schools to apply into the program, and in doing so, stipulates that they pass resolutions with school management and parents' associations endorsing the IBT course. Enforcing such practices requires school officials to commit to and advocate for the program from the beginning.

Achieving government recognition of a skills course is one way to establish the credibility of a program and enables the content of a course to potentially reach thousands of more students. LAHI, Educate!, and EDB have succeeded in having their courses officially integrated into state and national level curricula. The Government of Cambodia recognizes PN's two-year diploma courses, verifying their value to students and employers. Government recognition is particularly valuable in countries with a large number of unorganized private sector skilling programs that attract students and employers with the promise of quality, but which may or may not actually offer useful courses.

EDB and NSDC present a different case in which the programs launched directly align with government priorities and policy frameworks. In these cases, the government is a key decision-maker from the start, and the government's commitment to the program unlocks large amounts of

³⁰For the purposes of this report, the term industry refers to both private and public sector employers in the region and/or country.

funding, enabling large-scale rollout. The publicity and importance of such initiatives likely attracts additional partners, such as industry and development partners, which can increase the reach and quality of skills programs.

Striving for Financial Sustainability

The organizations reviewed rely on philanthropic and public funding to maintain their activities. Some, such as LAHI and Yuwa, combine contributions from individuals with larger grants from private corporations and donor agencies; EDB and NSDC rely on large amounts of funding from the U.S. and Indian governments, respectively. In EDB's case this responsibility will soon shift to the Government of Senegal. Many of the programs have created revenue models that will help maintain cash flow: PN through its alumni contribution program; LAHI through fee-based community services; and the NSDC through the returns it expects from loans made to private sector skilling centers. These are promising steps towards financial sustainability, but in the near term none of these organizations can maintain full operations without public or donor support.

The costs of running a skills development program for youth vary greatly by the type and depth of the program. For the models reviewed, the costs for completing the full program range between \$25 and \$5,774 per student,

not counting Yuwa and the NSDC, whose costs per participant are not strictly quantifiable at this time. PN's costs are higher than most since it hosts a residential program for which it bears a number of student living expenses. It is clear that further analysis of the cost and cost-effectiveness of promising programs is crucial, as this will allow a deeper understanding of the resources needed to replicate innovative components.

Although each program model is unique in the type of service delivered and the resources needed to operate, the programs share a key cost driver: staff. The staff members charged with actually providing the skills development program to youth, whether they are vocational instructors, mentors, or teachers, constitute a significant portion of program cost. Investing in staff, however, has important payoffs for the quality of programs.

Each program must strike a balance between having a lean cost structure and having the staff and other resources it needs to perform well. Yuwa addresses this problem by running on volunteer time, but this is not a practical model to follow for programs requiring technically skilled staff in full-time positions. Another tradeoff between extra staff and operating costs is the capacity to dedicate personnel to non-core activities such as fundraising and assessing program impact.

It is important to note that some programs could recover a higher portion of their costs, but doing so could damage their mission. PN in particular, whose program has yielded

Table 3: Cost Drivers in Profiled Skills Development Programs

Program	Estimated Cost per Student to Complete Program	Cost Drivers	Main Funding Sources
LAHI IBT Course	\$318	Training and compensating instructors	Individual donations and philanthropic contributions to LAHI, partner school budgets, tuition fees and revenue generated from community jobs
NSDC	N/A	Investing in partner institutes and SSCs, consulting groups to carry out due diligence for new investments, staff	Government of India
Yuwa (Soccer and Kicking it New School)	No significant costs for soccer program, tablets for education initiative cost \$13 per student per year	Equipment and gear for soccer program, e-reader technology for education program	Philanthropic contributions, volunteer staff time
PN	\$5,774 (2 year course)	Staff, student stipends	Philanthropic contributions, in-kind donation of time from businesses
Educate!	\$150	Mentors	Philanthropic contributions
EDB ICT	\$10,000 per school, or approximately \$25 per student	ICT infrastructure	USAID

high wages and rates of salary increase for graduates, could likely charge middle-class students for the course in order to subsidize the participation of poorer students. The organization conscientiously decides against this step to protect their programmatic focus on disadvantaged rural youth. Moreover, moving away from this mission could compromise support from socially driven donors.

Strategies for Reaching and Measuring Impact

Having a measurable impact on employability and empowerment is the underlying goal of any socially driven skills development initiative for youth, but organizations prioritize measuring and tracking impact in different ways. The programs reviewed here primarily use 4 approaches for monitoring their work and establishing its value:

- **Setting Quantitative Output Targets:** Every program has set quantitative output targets for itself, such as the number of schools or youth reached. For EDB and NSDC, which are working on a country-wide scale, reaching these targets—working in every middle school in the country and skilling 150 million people, respectively—are the primary measures of program performance. For the programs working on a relatively smaller scale, quantitative targets complement other measures of impact, understanding that education outcomes are often better reflected through qualitative methods. However, setting ambitious but achievable quantitative targets encourage program staff to work towards a defined goal.
- **Assessing Stakeholder Impressions:** Most of the programs dedicate some time to assessing key stakeholders' impressions of their initiatives. PN regularly checks-in with local employers about the quality of their courses and runs a voluntary alumni contribution program, which can serve as an imperfect proxy for alumni satisfaction. Educate! conducts on-going qualitative assessments of students' and mentors' performance, and LAHI maintains close communication with all parties involved in the IBT program. Collecting stakeholder impressions, which may reveal unforeseen benefits and complications of a program, is a dipstick approach to monitoring an on-going initiative.
- **Internal Testing:** Some organizations have created internal tests to assess participant performance. LAHI has developed a life skills test to gauge changes in their students and Educate! is creating a psycho-social assessment tool to understand how their program is impacting participants' non-cognitive abilities. Internal assessment tools, which can be regularly deployed, give managers the feedback that they need to make adjustments to their programs.
- **Measuring Outcome Indicators:** Measuring participants' outcomes is the most credible way for establishing a program's impact. PN, for example, has followed its graduates and found that they not only command higher starting wages than the average worker in urban Cambodia, but that they also experience accelerated growth in their earnings. LAHI and Educate! worked with their partners to implement impact evaluations. LAHI conducted an impact assessment and used the process to create an on-going data monitoring system in its schools in Maharashtra. Educate! is undergoing a randomized control trial of its program. Impact evaluations are one of the best tools for attributing impact to a program, although they require significant expertise and funding to carry out.

Finally, while it is not a measure of impact in itself, replication of a program model suggests that the model has value in new locations. Educate!, LAHI, and Yuwa are actively working to disseminate their lessons learned through web-based media and in-person networking opportunities to catalyze program replication.

Challenges and Measures to Mitigate Them

Every program reviewed in this report faces a unique set of challenges that relate to the socio-political context in which they are working, their target beneficiaries, and program design. These individual challenges are detailed in Part II of the report, but three broad challenges affect all six programs. Some of these challenges, such as stigma, may subside with time as populations become more familiar with the programs. Others include difficulties in finding and retaining good staff and creating viable financial models demand closer attention from program managers. These shared challenges, which shed light on obstacles encountered by many skills development programs, are discussed below.

Cultural Norms and Stigma

Skills development programs that are targeting hard to reach or vulnerable youth must break cultural norms to give youth a new way of thinking about and approaching their own professional development. Often, entrenched cultural norms contribute to why youth are experiencing skill gaps in the first place. In Jharkhand, for example, parents are reluctant to allow their daughters to spend time out of the house because they otherwise perform valuable household labor. The use of rote memorization in Indian schools clashes with the active learning principles that Yuwa and LAHI try to impart in students. PN misses the chance to reach out to the many students who drop

out of school before reaching high school in Cambodia. EDB must navigate “aid culture” in Senegal, recipient of millions of dollars in development assistance, which has contributed to an environment where people seek out trainings not for the content but for the per diem. These entrenched norms are difficult to reverse and generally require the efforts of many different actors to change. Programs can counter these norms by highlighting the benefits of their methods or weeding out insincere participants, but change is gradual.

Stigma towards the behaviors that programs promote can be particularly destructive. In many countries, communities look down on students who choose TVET or entrepreneurial pursuits. Even though higher-level academic education is not suitable for every student, many feel that it is the “right” choice. These attitudes may lead friends and families to discourage youth from participating in skills development programs. LAHI finds that stigma towards TVET remains in rural India, and Educate! has experienced resistance from families towards entrepreneurship. It is important to note that these opinions may be rooted in concrete experiences with poorly designed TVET and entrepreneurship programs that have not improved youth employment outcomes in the past. Consider India, where there is a highly disorganized private market for skills training in which the quality of programs varies widely.

Rather than trying to build trust in all skills development programs, one of the best ways for programs to counter stigma is to showcase the results that they have achieved. LAHI, for instance, observes that stigma towards TVET and reservations about female participation in vocational trades decline in a particular area as local schools complete more cycles of the IBT course. As graduates secure livelihoods, trust in the program grows. Another mitigating strategy that the programs practice is to employ local talent as instructors and mentors, which can legitimize programs in the eyes of community members. Community outreach can lead to buy-in and greater acceptance of these projects.

Human Resources

Human resources pose challenges to the programs in a handful of ways, namely difficulties in finding and retaining talent and executing all necessary elements of a program with limited staff. Except for NSDC and EDB, which are public programs, all of the programs are non-profit entities. As such, they have limited resources to spend on staff, so finding and retaining the best instructors and mentors strains bottom lines. PN has experienced a high rate of staff turnover given their limited capacity to pay high wages for local staff. LAHI has found that instructors

demand increasing payments once they complete a few cycles of the IBT course, and Educate! has faced similar difficulties. If organizations can only afford low skilled or somewhat inexperienced staff, then they must invest additional time and resources in training new staff members. Although training staff benefits the organization, it also makes new recruits instantly more marketable to competing employers. One way to mitigate the risk of losing new recruits is to offer non-monetary benefits to staff. LAHI’s instructors receive up-to-date training in their own trade (beyond the initial training post-hiring) along with access to potential new customers. PN also offers on-going high quality training to their trainers, incentivizing them to remain with the organization.

A related challenge to staff retention is ensuring that all necessary activities are carried out with limited staff. Yuwa, which runs mostly on volunteer time, has limited capacity to evaluate its programming. Even NSDC, which has significant resources for investing in partners, has a defined budget for its core staff and must divide its 28 employees among dozens of activities. One way to ease this burden is to contract additional support, which the NSDC has done, but this increases costs. Another strategy is to seek support from donors for discreet activities such as conducting evaluations or piloting new program components.

Financial Sustainability

Financial sustainability is a top concern for all of the programs. Non-profit groups must constantly fundraise to finance their operations, and even the large-scale public programs, must protect their government budget lines. EDB, which was originally funded by USAID, is being transitioned to the Government of Senegal. Although the government is working with the private sector to identify ways to maintain pieces of the initiative, the transition will likely reduce overall funding for the initiative, resulting in less programming. Yuwa minimizes some financing needs by utilizing volunteer support, but this leaves gaps. LAHI has calculated that schools can self-finance the IBT course if they charge modest fees to students, but schools are reluctant to impose fees, and the organization must fundraise to support start-up costs in new schools regardless of student fee structures. PN is beginning to require that all employed graduates donate a small percentage of their salary back to the program. This will certainly strengthen the organization’s budget, but it will not obviate the need for donor support. Many private sector skill development programs are for-profit programs that charge participants to enroll, but this shuts out vulnerable groups, the target beneficiaries for the majority of the programs reviewed.

Conclusion: Expanding Our Efforts to Close the Youth Skills Gap

There are many unanswered questions regarding how to best design policies and programs in developing countries to foster cognitive, non-cognitive, and technical skills in youth in order to prepare them for the demands of employment. One of the best ways forward is to evaluate programs such as the six profiled in this report, which have achieved high uptake, buy-in from governments and communities, and show signs of positive impact. The programs are pursuing calculated strategies such as making strategic mission-driven choices, targeting vulnerable youth, emphasizing the skills most needed for employability, and focusing on expansion and scale to help close the youth skills gap. Evaluating these programs and generating more evidence of what works is critical for implementing the best policies and programs to impart needed skills in youth in developing countries; this is one area where there is a paucity of formal evidence.³¹ The six programs reviewed in this report have all exhibited initial indications of impact, and their experience to date suggests that there are three important considerations for replicating and expanding skills development programs for youth. These considerations are discussed below.

1. Replication is context dependent; conducting market research and validating programs with locally rooted partners is critical to adapting a program to a new context.

Replication can be a cost-effective way for the benefits of programs to reach thousands of more youth, and a number of the programs reviewed are collaborating with other organizations to launch their models in new places. For a model to be replicated, it must be well defined and locally validated. This report has raised a number of important program design and implementation principles for effectively skilling youth; for any given program to replicate its model, management must understand which of these principles are most fundamental for the program's effectiveness and which can be eliminated or adjusted in a new context. Educate! has started to do this by distilling the core elements of its flagship Experience initiative into its TAM program, which can be rolled out in new partner schools quickly and cheaply. It is particularly important

for programs that are founded on the principle of being demand-driven, such as Yuwa and Educate!, to ensure that a program is not being replicated to a context where that demand may not actually exist.

There is one set of unanswered questions about designing youth skilling programs, which if answered, could be catalytic in sparking replication of successful models. While there remains a need to better understand how to impart discreet technical and cognitive skills and to plan new programs in line with these best practices, perhaps the most important puzzle to solve is how to design youth programs that enable lifelong learning. Proliferating models that allow youth to not only learn one set of skills but that also give them the confidence and capacity to constantly update their competencies will help them succeed in a fluid economy.

The success of PN's graduates in commanding progressively higher salaries is a poignant example of this. Although PN's graduates go on to work for various employers, their ability to perform well in these different contexts speaks to their capacity to adapt to different workplaces and establish their value. The programs profiled in this report have turned to experiential learning approaches and industry exposure to build these characteristics in youth. Analyzing these programmatic choices and continuing to follow participants from programs like PN can help us understand how youth programs can impart traits like adaptability and versatility, allowing policymakers to replicate such practices in national policies and programs.

Once the DNA of a successful skills development model is understood, then local actors who can adapt the model to fit the labor market context must be responsible for replicating the program. The programs reviewed have gone to great lengths to validate their curricula with local employers and industry partners; replicating their models in new locations requires similar labor market research so that coursework can be duly adapted. Working with local partners can also help foster community buy-in. Yuwa conducted extensive efforts to build trust with families in Jharkhand. When it decided to test its program in the slums of Mumbai, it reached out to an established organization in Dharavi that has already earned the trust of residents, reducing the time needed to launch its second soccer program.

³¹J-PAL . 2013. "J-PAL Youth Initiative Review Paper." Cambridge, MA: Abdul Latif Jameel Poverty Action Lab.

2. Working within government policy frameworks and collaborating with local policymakers benefits programs pursuing scale and can lead to systematic reforms.

Another strategy to skill more youth is to scale-up on-going initiatives, but this requires significant resources and cooperation amongst public and private stakeholders. One way to unlock support for program scale-up is for the mission of a program to align with government priorities and policy frameworks, such is the case with NSDC and EDB. Tying into policy frameworks can bring more actors to the table, including the private sector and government agencies not solely focused on skills development and education. The Ministry of Finance in Senegal has played a key role in preparing for the transition of the EDB program, and many actors had to come together to successfully pass curricular reform throughout the country. The NSDC is couched in the National Skills Development Mission, which elevates the skills development agenda to the prime minister's office and reinforces the government's commitment to the corporation.

Aligning with government priorities can also help organizations cut costs. By working in government schools, LAHI avoids paying for workshop space. An organization that aligns with the NSDC's mission can access financing to expand or improve its program.

Finally, working with local governments to integrate a program into state curricula encourages scale by validating courses and encouraging enrollment. After integrating the IBT course into the state of Maharashtra's secondary school curriculum, LAHI succeeded in creating preferential access to post-secondary TVET for its graduates, an advantage that likely draws students to the course. Educate!'s principles of entrepreneurship reach thousands of more students through the government's adoption of its entrepreneurship curriculum into the national curriculum. Government acceptance of an independently developed curriculum signals its value to students, donors, and the private sector.

In addition, explicit linkages with government curricula frameworks, or with a National Qualifications Framework, enables that program's assessment methods to be more easily understood and accepted by employers, contributing to the success of the program's students in securing employment overall. Translation of qualifications can be critical to ensuring transferability of skills training, an important consideration with the fluidity of today's job markets.

3. Financial sustainability underpins a program's capacity for replication and scale, and experimenting with financial innovations can help programs move towards cost effectiveness.

Financial sustainability underpins a program's capacity to scale-up and others' ability to replicate the model. Financial sustainability can stem from long-term government and philanthropic commitments, alumni support, or revenue models. Skill acquisition is something that stakeholders are willing to invest in; India and Senegal have mobilized millions of dollars to support skills development and growing markets for private TVET and education demonstrate that individuals are willing to invest in themselves. Even though the programs reviewed do not fully meet their costs, innovations such as alumni contribution programs and fee-based community services ease program operation costs and make the most of available funding. Experimenting with program innovations that support financial sustainability can help an organization reserve resources to expand its activities and can encourage other groups to take notice of its potentially cost-effective model. Encouraging these types of innovations that do not burden program participants can uncover how to achieve the best returns from the significant amount of financing that has been dedicated to skills development initiatives.

Despite the progress made, financing skills development programs on a large scale and simultaneously ensuring that the quality of the content reaching youth remains high are two of the biggest challenges for expanding skilling programs. The experience of the programs reviewed suggests that the role of public and philanthropic funding in seeking out and supporting the best skills development initiatives will remain critical for closing the youth skills gap at a meaningful pace in low- and middle-income countries.



Pathways to Employability

Part II: Case Studies of Six Innovative Programs to Enhance Skills for Employability in Youth

Prepared by

Eleanor J. Brown and Jose M. Rueda Acedo

Michelle Engmann

Shubha Jayaram

Aarthi Rao

Opening Doors to TVET in Secondary School: A Case Study of Lend a Hand India's Introduction to Basic Technology Program³²

India is poised to either reap the benefits of its demographic dividend or to pay the social costs of millions of youth ill-equipped to join the productive labor force. Youth unemployment in India is more than double that of adults,³³ and although India has succeeded in expanding enrollment in primary and secondary education, most graduating students have not had the opportunity to explore different sectors for employment and make decisions about vocational and higher education career counseling or obtain guidance from seasoned professionals. Apprenticeships that youth can access are usually hereditary or based on a family's social ties, effectively shutting out youth who lack these connections and limiting others to their families' traditional trades.³⁴

In addition to not being exposed to vocational and technical sectors, the practice of rote learning applied in schools across India imparts students with limited behavioral or life skills. These skills include problem solving, leadership, teamwork, and self-management, all of which have been cited as important by vocational employers and are crucial for securing and maintaining long-term employment.³⁵ Learning through rote memorization excludes hands-on learning opportunities that give youth a glimpse into the activities of a technical trade.

To help combat this trend, Lend-a-Hand India (LAHI) has refined and adapted a pre-vocational training module developed by an NGO, Vigyan Ashram, and has worked with schools and state governments to scale-up its implementation. The module is a two- to three-year secondary course that exposes rural students to a wide range of skills needed for technical and vocational employment and entrepreneurship in rural areas. The program not only delivers practical skills training, but also offers students the opportunity to explore their own vocational interests. In the traditional post-secondary TVET

system, students must pick a specialization upon enrolling, but they often lack exposure to any particular area of work and so make uninformed decisions. Once enrolled, mobility between different training institutes is limited.³⁶

LAHI's program allows students to discover an area of interest in advance and helps them develop the life skills necessary to succeed in seeking employment or starting their own rural enterprise. Exposing students and their families' to vocational training at the secondary level may also help reduce the stigma that prevents many individuals from pursuing TVET education in India. The program has not only successfully expanded, but the state government of Maharashtra has also formally adopted the module into its curriculum and offers graduates of the program preferential access to public training institutes.

This case study reviews the Introduction to Basic Technology (IBT) program, its costs, impact to-date, success factors, and challenges. Given its impressive growth and achievements in aligning with local policy frameworks, this case study concludes with a discussion of the potential to replicate the program in other locations. This review relies on LAHI's application materials to the Results for Development Institute's Innovative Secondary Education for Skills Enhancement competition, internal program documents, and conversations with the organization's cofounders.

Program Overview

Description and Curriculum

LAHI launched its Introduction to Basic Technology (IBT) program in 2005 in partnership with a local NGO, Vigyan Ashram, which had developed the prototype course.

³²This case study draws heavily on interviews conducted with LAHI's co-founders in April 2013.

³³Biavaschi, Costanza and Werner Eichhorst, Corrado Giulietti, Michael J. Kendzia, Alexander Muravyev, Janneke Pieters, Nuria Rodriguez-Planas, Ricarda Schmidl, and Klaus F. Zimmerman. 2012. "Youth Unemployment and Vocational Training Background Paper for the World Development Report 2013." *The World Bank*.

³⁴*Ibid.*

³⁵World Bank .2007. "Skill Development in India The Vocational Education and Training System." Human Development Unit, South Asia Region.

³⁶Mujumdar, Swati .2011. "Need for Vocationalisation of Education in India." *India Education Review*. Available at: <http://www.indiaeducationreview.com/article/need-vocationalisation-education-india>

Table 4: LAHI Case Study Highlights

Approach	Lend-a-Hand India (LAHI) has refined and adapted a pre-vocational training module and has worked with schools and state governments to scale-up its implementation. The module is a two- to three-year secondary course that exposes rural students to a wide range of skills needed for technical and vocational employment and entrepreneurship in rural areas.
Governance and structure	LAHI provides high-level oversight of the Introduction to Basic Technology (IBT) program, selects sites for expansion, maintains quality control over the course material, and monitors partner schools. At individual sites, the management body of the school is in charge of implementing and coordinating the course.
Cost and finance	It costs about \$4,000 to initiate the IBT course in a new school and \$5,000 a year to maintain, as enrollment in the course grows. LAHI shoulders a significant amount of this cost for its partner schools, but encourages schools to increasingly self-finance the program by exacting modest tuition fees and implementing a fee-based community service program. It costs roughly \$318 for one student to complete the three-year course.
Impact to date	LAHI has already reached 7,000 students in government-aided schools through the IBT course, and 13,000 are currently enrolled in the IBT program. The Government of Maharashtra has incorporated the course into the state curriculum and opened doors for IBT graduates to complete further TVET. The program is actively expanding in new regions of India.
Underlying factors of success	LAHI has taken important steps to ensure its success, such as scaling-up an existing promising initiative, developing a broad curriculum that targets numerous skill areas including behavioral skills, positioning the course at a time when students can choose between academic and vocational education, engaging local communities, and requiring schools to apply into the program. It has also taken a gradual but conscientious approach to state level buy-in by building the program's credibility within an area before approaching state officials.
Challenges	There are a handful of challenges that threaten the success of the IBT program. These include financial sustainability if partner schools do not start increasing their own contributions, stigma towards vocational education, and the reliance of IBT graduates on the existing post-secondary TVET system, which is weak.
Future priorities	LAHI's major priority for the future is continued expansion to new schools and engagement with new state governments to align the course to more and more local curricula. There is potential to adapt the program for urban environments and low cost private schools.

The IBT program follows a two- to three-year curriculum designed for students in the 8th, 9th, and 10th standards between the ages of 14 and 17. Classes are divided into “study teams” consisting of 10-15 students that meet once a week for 4-5 hours a day during school hours. The IBT program focuses on 40 different skill sets relevant in rural areas such construction, animal care, electrical maintenance, carpentry, sewing, performing simple health tests, etc. These skill sets are divided across the four core training areas of the curriculum:

- Basic engineering
- Energy and the environment
- Agriculture and animal husbandry
- Home and health science

The program has a gender-neutral approach; every student must complete each of the sub-modules, ensuring that girls receive training in traditionally “male” occupations such as carpentry and electrical wiring and that boys receive training in traditionally “female” occupations such as home science. About 40% of all IBT students are female, and an equal percentage of female and male graduates

pursue polytechnic education after completing the course.³⁷ By gaining exposure to these different technical areas, LAHI hopes that students are better equipped to make choices about specialized vocational training after completing the 10th standard. The course also exposes students to sub-fields with which they might otherwise be unfamiliar such as clean/alternative energy.

In addition to technical skills, the program aims to develop practical life skills such as planning, problem solving, teamwork, comfort in co-ed environments, and others. The program emphasizes entrepreneurship and the skills that students would need in order to excel in managing their own businesses. The course is designed to encourage active learning so that students understand why a problem is occurring and how to create the solution. For example, one of the first activities in the carpentry and electrification sub-modules requires students to repair a broken desk in the classroom or fix/install electric wiring as needed in the school premises to learn and understand the theory as well as the skill. The course includes some theory, but emphasizes hands-on activities that give students experience with specific tools and team-based problem solving.

³⁷LAHI .2013. “Impact Assessment Final Report.”

The IBT program currently operates in 62 government-aided schools in Goa, Karnataka, and Maharashtra, and LAHI is planning expansions into Orissa, Gujarat, and Uttar Pradesh. 7,000 students have completed the course, and 13,000 more are currently enrolled.

Staffing

Rather than relying on the schools' fulltime teachers, LAHI requires schools to contract local micro-entrepreneurs to serve as instructors for the program up to 20 hours a week. It is the school's responsibility to identify and hire instructors, after which LAHI trains them so that they are prepared to lead classroom sessions. Using local micro-entrepreneurs as instructors brings local market trends and contacts into the classroom and gives students a window into the day-to-day life of a particular vocation. In exchange, instructors receive access to formal training networks, monetary compensation, and community work orders.

Process for Initiating a New Program and the Role of LAHI

LAHI designed the IBT program to encourage commitment and buy-in from partner schools from day one. For a school to implement the IBT course it must visit an operational site at a nearby school and submit an application to LAHI that acknowledges its commitment to, and preparedness for, the program. LAHI uses basic criteria such as an electricity connection, availability of workshop space, access to land for farming instruction, and minimum student enrollment to vet applications. If a school is tentatively accepted, then it must pass a management resolution in consultation with teachers and the parents' association that commits adequate resources to the program.

Once the program is launched within a school, LAHI plays an important quality control role. LAHI trains instructors and closely monitors program performance. A LAHI field officer visits each school one to two times a month to assess instructors, the infrastructure and tools provided for the program, student attendance, regularity of disbursements to instructors, and areas for improvement. As the program continues, LAHI's role decreases, and the school's management plays a bigger role in overseeing the program.

While LAHI had to proactively approach schools to sell the program when it was first launched, in recent years this pattern has reversed. Local communities' increasing appetite for the program and high attendance rates at existing partner schools have encouraged new schools to seek out the IBT course.



Girls learning electrical wiring techniques.

Program Costs

General Costs

It costs about \$4,000 to start the IBT program in a new school, which includes expenses such as training instructors, acquiring the necessary tools, and distributing lesson materials. Training instructors constitutes about 40% of total start-up costs. Schools may also have to invest in upgrading their infrastructure if it does not meet the full program's standards.

A year after launching, it costs about \$5,000 to maintain the program as the school increases the number of classes delivered, but these recurring costs can come down as more instructors are trained and enrollment increases. Instructors receive 500 INR (about \$10) for each day that they teach, which is comparable to a normal day's wages/earnings. The total cost for a single student to complete the three-year program is roughly \$318.

LAHI assumes about 40% of the total costs of the program in the first year through its own pool of funds (drawn from donations) and aims to scale down its contribution as the program continues. The remaining costs are covered via the school's own financial reserves, tuition fees and fee-based community services (see below).

Plans for Sustainability

When a new school launches the IBT program, LAHI assumes a significant amount of the start-up costs, but the organization has laid out steps that schools can take to sustain the program. The first is a small tuition fee. LAHI calculates that if schools charge students 100 rupees (under \$2) a month, then the program can sustain itself once it is fully operational. Half of schools have partially followed this advice and charge students around 20-100 rupees a month, but most are reluctant to impose the full fee. Since the program operates in government-aided

schools, families expect free services from the school and charging for a particular course requires a change in school culture. Attitudes may change as the community observes the success of progressive batches of graduates.

The second step that schools can take to self-finance the program is to promote fee-based community services. For example, students can use the program's equipment to run a plant nursery, conduct soil testing for local farmers, and perform repairs. Besides generating income for the program, fee-based services give students direct channels into the local market for vocational services. Many schools have adopted this practice and earn between \$400-500 a year; partner schools in Maharashtra, however report earning about \$2,400 to \$3,300 a year from all three grades of the course,³⁸ but this constitutes only a small portion of total program costs.

Impact

LAHI's work in promoting the IBT program has achieved impact across three dimensions. The first is its impact on students. The IBT program has already reached over 7,000 graduates and helped them navigate choices in technical and vocational education and offered youth a new way to approach learning and the world of work. Program staff find that students who participate in the course not only embrace the learning atmosphere of the course itself, but also demonstrate greater engagement and interest in their other classes. Student attendance in the IBT course is near 100%, enrollment is growing, and one third of LAHI's partner schools report an increase in overall secondary enrollment because of the program. LAHI also administered a hands-on test to assess the skills that students gained from participating in the IBT program. The test was designed to gauge the extent to which a student understands a particular subject and allows students to demonstrate practical knowledge in using tools and completing tasks. The test was administered in the local language to over 1000 IBT students, and the results showed that students were retaining the knowledge they had gained through the program.

The effect of students' enthusiasm for the program and the skills it imparts is apparent in the near-term. Enrollment in post-secondary TVET has reached about 25% of graduates in LAHI's partner schools in Maharashtra, whereas the average for the state is 5%. In addition, a survey of 1,200 recent graduates found that 20% of the respondents wanted to start their own enterprise, which would generate employment for themselves and

others. An initial assessment suggests that IBT graduates are up to three times as likely to be self-employed than students who did not complete the course.³⁹ Since the IBT program is a conduit to further TVET training, data on the employment of its graduates is not available, but this is critical information that the organization could track in the future. A small review of graduates from a 2008/2009 student batch in Maharashtra reveals that only 15% of the IBT respondents were unemployed whereas 39% of non-IBT graduates in the sample were unemployed; more robust evidence from partner schools could better validate this difference.⁴⁰ In the meantime, the growing interest among new schools to partner with LAHI is an initial indication of the program's value. LAHI is currently working to expand the program to 100 schools and reach 20,000 students.

The increase in TVET enrollment reflects the second dimension of LAHI's impact—reducing stigma towards vocational education. There is a persisting stigma in India that vocational education is only for students who perform poorly in their academic studies. While LAHI alone cannot reverse this perception, exposing students and their families to vocational training when the stakes are still low and introducing them to successful micro-entrepreneurs from their community can help chip away at this entrenched stigma. As more students complete the course and establish secure livelihoods, local communities may come to respect the benefits of vocational training. Students also report assisting with repairs at home and in the village, which can validate the skills gained through the IBT course to local families.⁴¹

The final dimension of impact for LAHI's work on implementing the IBT program is its influence on state policy. LAHI and Vigyan Ashram have taken a small-scale grassroots innovation (the original course), adapted and refined it, scaled-up its implementation, and successfully incorporated it into state policy. The Government of Maharashtra formally grants credit for the course, includes the course in its 10th standard public examination for enrolled students, and provides IBT graduates preferential admission to government-subsidized post-secondary industrial training institutes (which are generally cheaper than private TVET institutes). Through this mechanism, the state government actually incentivizes students to participate in the program, potentially attracting new students to TVET and encouraging life skills development more broadly. LAHI is working with municipalities in other states to demonstrate the success of the IBT course in order to establish similar buy-in from more state governments and is working with the central government

³⁸*Ibid.*

³⁹*Ibid.*

⁴⁰*Ibid.*

⁴¹*Ibid.*

to include the course in the National Vocational Education Qualifications Framework.

LAHI has achievements across all three of these dimensions, but its impact could be more clearly delineated through outcomes data on program graduates. In particular, employment outcomes and earnings data from TVET students who have completed the IBT program and those who have not in partner schools could help demonstrate the effect of the course on participants' future prospects. An independent third-party impact assessment of LAHI's program in Maharashtra has recently been completed and offers initial insights into participant outcomes. The assessment reveals that graduates in the assessment sample have launched over 161 entrepreneurial initiatives after completing the 10th standard, show a greater interest in active learning methods than the sample's control group, and may perform better in post-secondary TVET programs than non-IBT graduates.⁴² A review of a sample of 2008-2009 graduates indicates that girls were three times more likely to go onto higher education if they had completed the IBT course. Given that most IBT graduates are still completing higher education, the assessment could not capture the effect of the IBT course on livelihoods.

Success Factors

Taking a grassroots innovation to scale is not a simple task, and the decisions that LAHI has taken to drive the IBT program forward reveal important factors that contribute to the program's success. While these factors may be especially important in rural India where there is pervasive stigma towards TVET and little if any emphasis on hands-on technical and vocational learning in secondary school, they are relevant to any initiative aiming to incorporate introductory vocational training into the traditional school system in urban or rural areas.

Selecting a Local Innovation that Works

Rather than inventing a program from scratch, LAHI worked with Vigyan Ashram to refine and scale-up a programmatic innovation that was already showing promise. For example, LAHI conducted a survey of 600 early IBT graduates and found that incorporating a significant life skills component was a valuable addition to the program. By seeking out an existing idea and refining it, LAHI cut down the time needed to launch a program and was able to plan for growth from an early stage. Improving existing initiatives and creating opportunities to

reach thousands of more beneficiaries is just as important and innovative as creating a new idea, which will start with limited reach.

Broad Curriculum

As a prevocational curriculum, the IBT program gives student broad-based exposure to dozens of different skill areas. Upon finishing secondary school, students must choose a specific academic or vocational route; getting a taste of different vocational tracks arms students with enough experience to make a decision that reflects their interests and strengths and hopefully leads them to a career that they enjoy. If the curriculum was too specific, then students who have not yet committed to a skill area might avoid the program.

Timing

LAHI targets students at an important juncture; they will have to make important decisions about further education in the short-term but still have the flexibility to choose between vocational and academic tracks. Positioning the program at a low-stakes time when students can still plan for higher education likely eases parents' concerns about children committing to TVET and missing out on academic opportunities. This opening allows LAHI to introduce students and their families to the benefits of vocational education while they still have the chance to reconsider their future options.

Methods of Instruction and Focus on Technical and Life Skills

Breaking away from typical classroom-style lectures and encouraging active learning keeps students interested in the IBT program and willing to try new vocational areas. The practical skills that they gain will serve them well in any subsequent TVET program they may join, and life skills that they develop will benefit them in many future academic or employment endeavors. By including a life skills focus, LAHI ensures that the IBT program is not only valuable to graduates who go onto seek specialized TVET training but to all of its participants.

Application Process

The application process for a school to initiate an IBT program helps LAHI identify schools that will be committed to the program and avoid lackluster partners. By ensuring that school officials visit operational

⁴²LAHI . 2013. "Impact Assessment Final Report."

sites, set aside the needed resources, and discuss the implementation of the program with teachers and parents, LAHI ensures that the entire school community is aware of the IBT course and has an opportunity to voice concern or doubt. A school's responsibility to prepare the workshop space and identify potential instructors keeps school management engaged from the beginning and encourages schools to take ownership of the course.

Use of Locally-based Instructors

By contracting local tradesman and entrepreneurs as instructors, the IBT program gives students direct insight into the skills needed to succeed in the local labor market. Having this information can help students make decisions about what types of vocational tracks to pursue after finishing the 10th standard and whether or not they should travel outside of the local area to seek employment. Including community members in the implementation of the course also keeps the community engaged with students and the program.

Approach for Building Government Buy-in

Maximizing the impact of any school-based program requires reaching more and more students with an effective intervention; establishing buy-in with the government is a great way to help introduce an intervention to new sites. LAHI's success with the state government in Maharashtra and its approach to creating state-level buy-in in new areas has helped build its credibility. Rather than immediately approaching a new state government, LAHI follows a gradual evidence-building process.

First it identifies schools that are eager to initiate the program. Once the organization goes through the four-month process of identifying interested schools and introducing them to the program, LAHI collaborates with the local District Education Officer (DEO) to launch the program in 3-5 local schools. It shares its implementation manual and other course materials with the DEO and lays out the success achieved in other localities. Once LAHI has the DEO's support and the program is fully underway in the pilot schools, the organization begins approaching state-level officials. At this point there is likely already evidence of initial success in the pilot schools and a committed group of local stakeholders who can advocate for the program.

⁴³*ibid.*

Challenges

While LAHI has achieved much in launching and expanding the IBT program, the organization has encountered a handful of significant challenges that relate to broader trends in education and TVET policy. These challenges are discussed below.

Schools' Reliance on Rote Learning Methods.

Though LAHI conscientiously employs active learning methods in the classroom, students are generally accustomed to follow rote learning in all other classes. Therefore, when students join the IBT course, staff members find that they often cannot see the bigger picture of why they are solving a problem. IBT instructors have to impart a new way of thinking to their students and address the conflicting expectations of other teachers. Students also struggle to justify the course to their parents, who expect them to come home with reading assignments, not projects and hands-on activities.

Financial Sustainability

For LAHI to expand to more schools and for the IBT course to be truly institutionalized into existing schools, schools must implement strategies to fully finance the course. LAHI can help pick up initial startup costs for the program, but it cannot indefinitely maintain a cost share for recurrent expenses. In some categories, recurrent costs will even rise after the first few years. For example, instructors receive a slightly higher payment when they have worked with the program for a prolonged period, and they often demand even higher compensation.

LAHI finds that schools are reluctant to implement the full fees suggested by the organization, and those that have, struggle with consistent fee collection, as parents are unwilling to shoulder the cost. Since LAHI only partners with government subsidized schools, many families within partner schools are accustomed to receiving free services. The IBT course breaks this pattern. If subsequent batches of graduates from partner schools succeed in accessing quality TVET and securing employment, then families may be more willing to pay for the course. Until then, schools struggle to fully fund the IBT program.

Stigma towards TVET

LAHI's program and engagement with the communities where the IBT course operates helps combat stigma

towards TVET, but this stigma is a limiting factor for the course itself. LAHI can introduce students to the idea of vocational training, but students, in conjunction with their families, must decide if they want to stay enrolled in school divisions that require the course and whether they want to pursue TVET after graduation. Many families, across income classes, aspire for their children to pursue higher education; fulfilling this dream is a high priority for students whose parents may not have completed much schooling themselves. Until TVET is equally valued, many students will face familial opposition when opting for vocational education.

Partial-Reliance on Existing TVET System

While LAHI can maintain strict quality control of the IBT course, graduating students who are interested in TVET will go on to pursue the further vocational training needed for a particular profession. Although students may have a sound foundation of basic technical and life skills, they might still enroll in low quality TVET programs that deliver mediocre skills at more advanced levels, and offer poor employment outcomes. By feeding into the mainstream TVET system, LAHI's students depend on TVET centers to maintain reasonable standards of quality.

Many IBT graduates will enroll in subsidized government centers, especially in Maharashtra where graduates have easy access to public programs, yet quality varies; one study found that three years after graduation, 60% of students who complete government vocational programs in India remain unemployed. Many will recognize that they have limited opportunities for employment and will go on to invest in further higher education. This is a lengthy, costly, and inefficient process.

Conclusion: Expanding Adoption and Replicating the Model

There is significant potential to continue expanding the IBT course throughout India to reach thousands of more students and to replicate the program in new countries. Education is a state topic in India, and LAHI is taking a successful approach to government recognition by working with state governments. As more states come on board and the evidence base for the impact of the IBT course builds, more states will be attracted to the program. Although LAHI only currently partners with government-aided schools, there are no significant roadblocks to partnering with low-cost private schools in India in the future, which would allow the program to reach even more students. There is similar potential to develop such a program for urban populations, although the course material would have to be duly adjusted.

Replication is a complementary track that could introduce LAHI's strategy into other countries facing similar challenges in skills development. Sunanda Mane, the co-founder of LAHI, has already taken initial steps to share the program model with social entrepreneurs in other countries with the help of the Ashoka Globalizer Fellows program. While the curriculum of the IBT course will likely need to be adapted to suit labor market trends in other countries, the defining principles of the model – that is a school-based prevocational program that exposes youth to a wide range of technical skill sets and develops non-cognitive life skills – are relevant to many other developing countries with growing youth populations and palpable skills gaps.

⁴⁴World Bank . 2007.

⁴⁵*Ibid.*

Catalyzing Skills Development in India: A Case Study of the National Skills Development Corporation⁴⁶

As India has opened up its economy and allowed the private sector to flourish, new job opportunities have been created, and the country has come to rely on its pool of qualified human talent to sustain this growth. Although this scenario holds immense promise for millions of Indians who strive to take advantage of new employment opportunities, there is an imbalance between the skills that youth have as they enter the workforce and those demanded by employers. In fact India tops the global average for the difficulty that employers face in filling jobs,⁴⁷ and some estimates suggest that only 25% of professionals are considered employable by the formal sector.⁴⁸ Strengthening skills development within India is a critical step to ensuring that the burgeoning youth population is prepared for meaningful employment.

The Government has embraced this priority. The 11th Five Year Plan the Planning Commission, in recognizing that the

skills training opportunities available did not fully fulfill or fit the needs of industry, laid the groundwork for the National Skills Development Mission to coordinate and scale-up skills development efforts across the government.⁴⁹ In line with this mission, the government created the National Skills Development Corporation (NSDC) in 2008 to facilitate effective training through vocational institutes and to support the skills development ecosystem in the country. As a Public Private Partnership, the NSDC was designed to serve as interlocutor between industry and the government and to encourage more private sector skilling initiatives.⁵⁰

Based on interviews with select key experts and available literature, this case study provides an overview of the NSDC's approach to countrywide skills development, discusses its organizational tenets, and considers its framework for results. Since the need for better secondary skills development is global, this case study concludes

Table 5: NSDC Case Study Highlights

Approach	The NSDC supports the skills development ecosystem in India and facilitates effective skills training programs through vocational training centers. It was designed to serve as interlocutor between industry and the government and to encourage more private sector skilling initiatives.
Governance and structure	The NSDC is a Public Private Partnership that is jointly owned by industry associations and the Government of India. With oversight from a diverse Board of Directors, the NSDC funds initiatives to strengthen the skills ecosystem in India.
Cost and finance	Although industry holds equity in the NSDC, the \$187 million dedicated to its key investment activities comes exclusively from the government.
Impact to date	The NSDC's goal is to skill or up-skill 150 million people, or half a million people per year. It has thus far reached about 16% of this annual target.
Underlying factors of success	A number of factors have contributed to the NSDC's early success, including strong leadership, a clear mission, a high level of collaboration with industry, and flexible funding. These factors are important for any large-scale skilling initiative worldwide, but are particularly important in India where skilling efforts have to date been largely unorganized and untied to broader policy agendas.
Challenges	Key challenges for the NSDC include developing enough new investments to reach its skilling targets, balancing the drive for meeting skilling targets with considerations in the quality of programming, and nurturing industry buy-in for the norms and standards laid out by Sector Skill Councils (SSCs).
Future priorities	To fulfill its larger mission of helping to significantly close the employment gap in India, the NSDC will have to significantly increase its investments made and focus on the quality of its partners programs. Its current level of activity is insufficient to meet its 150 million skilling target.

⁴⁶This case study draws heavily on interviews with key NSDC staff conducted in February 2013.

⁴⁷FICCI . 2012. "Knowledge Paper on Skill Development in India Learner First."

⁴⁸Talwar, Sharad. "A Skilled India." 28 Jul 2011. India Today. <http://indiatoday.intoday.in/story/a-skilled-india/1/146363.html> Accessed 10 Dec 2012.

⁴⁹Planning Commission, Government of India. 2008. "11th Five Year Plan (2007-2012)."

⁵⁰Interview with Santosh Mehrotra

with lessons that other countries can draw from the NSDC about taking such a program to scale. Highlights from this review are presented in Table 5 below. Although the organization was founded in 2008, it took about two years for it to gain effective leadership and begin acting on its mandate. The experience of the NSDC thus far is preliminary and its full results and impact will only be known in the coming years.

Governance and Structure

Governance and Funding

The NSDC is a Public Private Partnership that was created under the aegis of the Ministry of Finance. The government owns 51% of the corporation, and private sector shareholders hold the remaining 49% of the 10 crore rupees (about \$1.9 million) equity base.⁵¹ The government elected to keep the equity base small so that the barriers for industry participation would remain low. Private shareholders largely consist of India's most prominent industry associations.⁵² The corporation also maintains the National Skills Development Fund (NSDF), which has an initial corpus of 995.1 crore rupees (or approximately \$187.8 million), that is wholly owned by the government.⁵³ This funding base is used to invest in the NSDC's partner organizations.

A Board of Directors representing various elements of the economy governs the corporation, overseeing an executive council and the NSDF, which is run by professional fund managers. Stakeholders explain that the fund views itself as a venture capital-like organization that makes catalytic and ultimately sustainable investments.

Goals

The NSDC's explicit goal is to meet 30% of the government's target to skill/up-skill 500 million people by 2020 by providing catalytic funding and supporting private sector initiatives. The organization's overall mission includes developing frameworks for industry standards, accreditation, and relevant curricula; investing in private sector skilling initiatives; focusing on underprivileged

segments of society and skilling the informal sector; and supporting initiatives that will have a long-term impact in national skills development.⁵⁴

Staffing

The NSDC has a small number of in-house staff and relies on extensive support from outside consultants. The organization has about 28 internal staff and outsources due diligence and project monitoring to external consulting groups.

Activities

The NSDC's primary function is to financially support private sector skilling initiatives. It provides funding mostly in the form of loans and equity to training and vocational institutes and sector-based skill groups. On average, the loans and other financing provided by the corporation constitute 70% of total project costs, although this figure is slightly higher for the organization's top 4 projects.⁵⁵ The NSDC funds industry, training and skill development organizations, NGOs, business associations, and social entrepreneurs based on the strength of their proposals.

Between April 2011 and March 2012, NSDC approved 30 new projects, requiring about 693 crore rupees (about \$130.8 million) over the next ten years.⁵⁶ Although the NSDC has approved 71 projects, only 37 have started operations, and of those, only 10-15 have fully begun their proposed activities, which reflects the organization's youth. The corporation seeks projects that are sustainable, large-scale, and partnership-based. Proposals are typically reviewed within three months of submission.⁵⁷ Although NSDC funded projects are designed to be self-financing in the long-term, the corporation aims to fill short-term financing gaps by providing patient capital to skilling enterprises and offering low interest rates. The long timelines for earning returns on new skilling investments may deter traditional financiers.

In addition to traditional vocational training institutes, NSDC invests in a number of Sector Skill Councils (SSCs) to strengthen the labor market in select sectors and coordinate up-to-date labor market information. The next section discusses SSCs in greater detail.

⁵¹NSDC Website, Organizational Profile. <http://www.nsdcindia.org/about-us/organization-profile.aspx> Accessed 10 Dec 2012

⁵²"RAI Becomes Ninth Private Sector Shareholder of NSDC." 28 Oct 2011, *Business Standard*. <http://www.business-standard.com/india/news/rai-becomes-ninth-private-sector-shareholdersdc/453911/> Accessed 14 Dec 2012

⁵³The Planning Commission, Government of India. 2010. "Mid-term Appraisal of the Eleventh Five Year Plan."

⁵⁴*Ibid.*

⁵⁵KPMG. 2012. "A Skilled India @75—NSDC's Role, Challenges, and Opportunities." *KBuzz Sector Insights*, Issue 16.

⁵⁶NSDC. 2012. "Annual Update 2012."

⁵⁷NSDC. 2012 and Banerjee, Basab (2011). "Approaches to Skill Formation, Enhancement, Refinement." Presentation at Advancing Strategies to Deliver Welfare & Livelihood Development Services to India's Informal Sector Workers, February 3-4, 2011.

Finally, the NSDC engages in significant labor market research to better understand skill gaps throughout the country. The NSDC has mapped skill gaps across 12 states and documented human resource and skill requirements in 20 sectors.⁵⁸

Sector Skill Councils

Following in the footsteps of select high-income countries, the NSDC champions the establishment of SSCs in its 21 focus industries⁵⁹ that can conduct research on the labor market, improve the quality of existing skill delivery platforms, and ensure the quality of skilling institutes. Investments in SSCs can have multiplier effects—a study of SSCs in the UK estimates that a public investment of £5 million can yield economic and social returns of up to £130 million (although these returns will vary greatly between SSCs).⁶⁰ In India, approximately 21 SSCs have been established so far in a wide range of industries.⁶¹ The NSDC takes a partnership approach to SSCs, and industry associations or organizations familiar with a particular sector usually play a significant role in founding an SSC. In addition, multilateral organizations such as the Asian Development Bank, the International Labor Organization, and the World Bank are providing technical and funding support to select SSCs. Target activities of a SSC are summarized in Table 6 below.

One of the most important activities of a SSC is to contribute labor market data and forecasts to the NSDC’s Labor Market Information System, which aims to provide

a comprehensive picture of the skills gap in the economy. The NSDC intends for SSCs to aggregate all of the needed and relevant demand data about a particular industry.

The NSDC provides grant-based seed funding to SSCs to assist with start-up costs, but intends for SSCs to be financially self-sustaining over time.⁶² The NSDC acknowledges that SSCs have an important role to play in ensuring the quality of training institutes rather than simply meeting targets. Accordingly, the corporation expects SSCs to reach a point of financial viability within 5-7 years, unlike its partner training institutes, which are expected to be self-financing within 2-5 years. The small number of SSCs interviewed did not raise the goal of becoming self-financing as a challenge, but did note that for some industries, especially fragmented ones, SSCs would require a longer time horizon for financial viability. An additional consideration is the balance that SSCs should take between performing no- or low-profit activities such as reviewing the quality of training curricula and conducting the services that industry is willing to pay for. Sustained government support may lead to a greater emphasis on activities related to quality and monitoring.

Engagement with other Stakeholders

In addition to its core funding work, the NSDC works closely with other stakeholders and engages in targeted advocacy to strengthen the skills ecosystem and elevate the skills policy agenda.

Table 6: Potential Activities of an SSC

Conducting Research	Improving Delivery Mechanisms	Quality Assurance
<ul style="list-style-type: none"> • Create skill databases • Develop sector-specific competency standards • Act as career guidance center for industry • Analyze productivity of human resources in industry • Identify technologies that can be used for teaching 	<ul style="list-style-type: none"> • Develop training delivery platforms • Train trainers in industry and skilling institutes • Train existing employees • Develop and update existing course modules 	<ul style="list-style-type: none"> • Streamline certification framework • Develop and administer certification tests for trainers at institutes • Develop and administer certification tests for employees • Accredite sector-specific and other relevant courses

Source: Adapted from NSDC. "An Approach Paper for Setting Up a Sector Skill Council."

⁵⁸NSDC Website, NSDC Skills Gap Analysis Reports. <http://www.nsdccindia.org/knowledge-bank/index.aspx> Accessed 10 Dec 2012

⁵⁹The NSDC’s focus industries include: Automobile/auto-components, electronics hardware, textiles and garment, leather and leather goods, chemicals and pharmaceuticals, gems and jewelry, building and construction, food processing, handlooms and handicrafts, building hardware and home furnishings, IT or software, ITES-BPO, tourism, hospitality and travel, transportation/ logistics/ warehousing and packaging, organized retail, real estate, media/entertainment (including broadcasting, content creation, and animation), healthcare, banking/ insurance and finance, education/ skill development, and the informal sector.

⁶⁰Baker Tilly . 2010. "Evaluating Economic Impact" *Alliance of Sector Skills Councils*

⁶¹NSDC. "Formation of Sector Skill Councils."

⁶²NSDC. "An Approach Paper for Setting Up a Sector Skill Council."

Table 7: NSDC's External Engagements

Partner	Engagement Type
Federation of Indian Chamber of Commerce and Industries (FICCI)	Drawing upon its membership base, FICCI is working with the NSDC to establish five SSCs. Additionally, FICCI aims to provide the private sector's perspective on skills development to the NSDC through its annual Global Skills Summit.
Centre for Civil Society (CCS)	Drawing from an existing voucher program designed and implemented by CCS to improve access to quality training for marginalized youth, the NSDC is working with the organization to pilot a voucher program that will aim to provide training to 50,000 marginalized youth by 2015.
Indian School of Business (ISB)	NSDC partnered with ISB to champion access to credit for students seeking to participate in vocational training programs. The goal is to develop a financial loan that is collateral-free and tied to a borrower's future earnings. The NSDC already extends a first-loss guarantee to financial institutions providing loans to vocational students.
World Skills Competition	NSDC leads India's participation in the annual World Skills Competition that brings together 1,000 young people under the age of 22 to compete in various skill-based competitions.
India@75	India@75 is a national initiative, led by the Confederation of Indian Industry (CII), to realize the vision of an inclusive, sustainable, and developed India by its 75th year of independence (2022). NSDC co-led a business plan competition with India@75 to encourage students to develop new models of skills development.

Source: NSDC (2012) and NSDC website and DASRA, "Leveraging the Dividend Enhancing Employability in India."

The corporation also works closely with other ministries and state governments to support regional and sector-specific labor market studies, design targeted skills programs, and create training initiatives in order to staff large government ventures.

Measuring Results and Impact to Date

The NSDC measures success against its core mandate of contributing to the skilling/up-skilling of 150 million people. The NSDC's goal is to train half a million students a year, but thus far has managed to achieve about 16% of this target or about 75,000 students a year.⁶³

Similarly, partner organizations must set explicit targets for their work. Although they are permitted to fluctuate on these targets in the short term based on implementing realities on the ground, in the long term, they are expected to meet these goals.⁶⁴ If a project is struggling but makes a good faith effort to improve or is faced with unavoidable difficulties in the labor market, then the NSDC will work with the partner to overcome these challenges and reach scale. However, if the project has no plan in place to improve performance, then the NSDC holds the right to withhold future tranches of funding.

Box 3: How are SSCs evaluated?

The NSDC measures SSCs against their core functional areas, such as establishing labor market information systems, training trainers, and accrediting institutions. They must submit monthly and quarterly financial and progress updates and participate in regular calls with their NSDC liaisons (SSC Monitoring Policy). They are subject to a formal financial audit every two years.

Reviews of SSCs considers elements like their finance and IT capabilities, how they have utilized funds, the institutions accredited, the standards they have established for their sector, the wage gap between those trained at their accredited centers versus those trained in unaccredited centers, and whether their partnerships reflect the major players in their respective industries (SSC Monitoring Policy).

SSCs themselves vary in how they assess their own results. Well-developed SSCs, such as NASSCOM's Information Technology and Information Technology Enabled Services SSC, lay out explicit goals in collaboration with industry. Others that are just starting up or who focus on informal or fragmented industries are only beginning to create results frameworks and measure progress beyond reaching training targets.

⁶³KPMG . 2012.

⁶⁴NSDC. "Monitoring Policy for Skill Development Partners."

The NSDC requires that the employment rate of students graduating from its affiliated centers is at least 70%. In the year 2011-2012 NSDC's affiliated centers have trained over 180,000 students, 79% of which had found employment upon graduation.⁶⁵ Telecommunications and education skills development were two major areas of focus for these students.⁶⁶ Long-term retention among employers has not been measured.

Factors for Success

Although the NSDC is still a relatively new organization, the underlying factors for its success so far offer initial lessons for other countries considering a large-scale public-private skilling initiative. The factors needed for planning an initiative of such scale are particularly important in India, where the need for skills enhancement is vast and previous initiatives were fragmented.

The NSDC's main success factors to date include:

- **Strong leadership and clear mission.** To effectively mobilize and deploy funding across dozens of sectors and partners, the NSDC relies on strong leadership and a clear mission. Although there may be drawbacks to its target-driven approach, it gives staff and partner organizations a clear vision to follow.
- **Collaboration.** Investing in skills development at the country-level requires a high degree of collaboration with industry partners in every sector. The role of industry associations in founding the NSDC and establishing SSCs has helped ensure the relevance of the organization's programming. The private sector's equity stake in the NSDC was a good first step in securing industry participation.
- **Flexible funding.** The NSDC's ability to make loan, grant, and equity investments allows it to pursue a wide range of partnerships and to find the right mix of financing for a particular skilling initiative. For example, training institutes for capital-intensive industries may require longer and more flexible repayment terms than service-focused institutes.
- **Attention to the Ecosystem.** NSDC's support of broader labor market issues will be valuable for the country in the future. Encouraging SSCs to continuously collect data on the labor market, for instance, can help ensure that skilling programs are responsive to market changes.

⁶⁵NSDC. 2012.

⁶⁶*Ibid.*

Challenges

Although stakeholders view the NSDC as a promising, if nascent, mechanism to stimulate skills development across the country, a few challenges were identified, some of which may be resolved as the organization continues to grow and develops new systems. These challenges include:

Reaching Scale

To fulfill its mission of contributing to the skilling and up-skilling of 150 million people, the NSDC must support hundreds of private sector initiatives. Although it has already approved about 70, many more projects must be initiated. Yet members of NSDC management note that the process of identifying partners and helping them develop sustainable business plans and write proposals has been difficult and time-consuming. While the organization receives many applications, many are not suitable for support. Some applications include requests for land or building acquisition, which are outside of the NSDC's mandate. Out of the 28 full time staff at NSDC, at least 7 are devoted to developing fruitful partnerships. The amount of work required to nurture partners may decrease as the skills ecosystem develops, but at present, it stretches staff time.

Balancing Quality with Scale

Building the NSDC's mandate around a clear skilling target has certainly helped focus the organization's mission and activities, but it does not capture quality considerations. To reach its 150 million skilling target, the NSDC will have to continue aggressively investing in new projects, but this growth in volume could detract attention from quality. Careful evaluation of training institutes' curricula, quality of instruction, and long-term employment success are important if India is to close its employability gap. Given that the organization currently operates as a venture capital-like investor driven by returns in the number of people skilled, its staff has limited capacity to aggressively track quality in partner organizations and faces few incentives to withdraw support from poorly performing partners.

Funding Fungibility

The NSDC has clear priorities for how partners can leverage NSDC financing and requires partners to set explicit targets. Investments intend to grow or strengthen existing skilling programs, and the NSDC's financing is not

to be used for asset heavy investments such as land or building acquisition. However, other government initiatives also support skilling initiatives, and in cases where one program receives funding from multiple sources, there is no procedure in place to track whether the NSDC's investment has been used for unintended activities and whether the same targets are reported as unique results to multiple funders. This information is important as NSDC begins to establish its cost effectiveness for reaching skilling targets.

Potential Mission Drift

With its mix of experts and knowledge gained from interacting with its partners and industry, the NSDC is uniquely placed to address a number of objectives around skills development in India. One staff member explained that many ministries and state-level departments approach the organization seeking technical assistance on individual skilling initiatives. Although the NSDC is usually willing to help, this may detract scarce staff time from focusing on the broader ecosystem, its primary purpose.

Autonomy

Although the private and public sectors jointly govern the NSDC, the government has set its objectives and supplied its core funding. This commits the organization to respond to the government's priorities and maintain a set course. Similarly, although the NSDC freely selects its own skilling and sector partners, it cannot receive financial or technical support from international partners without approval from the central government. As a consequence, some international partners must directly engage SSCs or partner institutes rather than the NSDC itself. While this does not limit its core functions, international support could help the organization widen its reach and strengthen existing programs.

Challenges for SSCs

Apart from the NSDC, SSCs face a number of challenges in meeting their core objectives.

- **Industry buy-in:** SSCs face difficulties in getting industry to fully buy into the norms and occupational standards that they are setting. For example, SSCs explained that establishing quality standards and accrediting programs is the first step in a long consultative process. To

establish their credibility, firms must hire according to these guidelines and show a preference for accredited institutions when hiring. Otherwise low-cost low-quality programs that have not been accredited will continue to flourish.

- **Quality vs. results:** SSCs may also face a tension in pursuing activities that ensure quality versus meeting discreet targets. The expectation of self-financing may discourage SSCs from spending too much time reviewing the quality of training curricula and monitoring. No SSC has reached a point of financial sustainability yet, although most have been in operation only for a very short time.

There is an opportunity to establish strong peer learning mechanisms among SSCs. Interaction with established SSCs may help start-up SSCs put critical systems in place more quickly. Similarly, learning about the experience of SSCs in other countries may help management better adapt to an evolving labor market.

Future Priorities

The NSDC faces an ambitious mandate of contributing to the skilling/up-skilling of 150 million people and strengthening India's skills ecosystem. As the NSDC moves forward in attempting to fulfill this enormous expectation, it will have to pay close attention to quality and scale and aggressively begin new partnerships. At its current pace, the NSDC is unlikely to reach its target by 2020 unless lessons from engagements with existing partners allow the organization to make new large-scale investments more quickly and existing partners ramp up activities. This may be possible as the organization grows. In addition, the NSDC must prioritize the quality of the programs delivered by its partner institutes and SSCs to ensure that its investments make a meaningful difference in long-term employment trends.

Empowering Girls in Rural India through Soccer: A Case Study of Yuwa⁶⁷

Employment does not only require technical skills specific to a particular job, but also so-called “soft” or “behavioral” skills that help people find, secure, and retain employment in the long-term. These skills include capacity for management, entrepreneurialism, ability to problem solve, dependability, commitment, and many others.⁶⁸ An analysis of the skills in-demand for employment in South Asia suggests that Indian employers value employees that possess critical thinking, leadership, communication/ social interaction, and time management skills.⁶⁹ Unlike technical skills, youth accumulate these competencies from a wide variety of sources such as family life, school, extracurricular activities, etc. Youth that miss out on opportunities to develop these soft skills may struggle to secure meaningful employment.

There are different approaches to fostering these skills in youth, but sports are attracting attention as one vehicle for empowering participants with soft skills. Sports are an evolving platform for international development initiatives,⁷⁰ and the UN has passed a resolution endorsing sports as a broad tool for social development that can be leveraged to empower and educate women and girls.⁷¹

One program following such an objective is Yuwa, a fledgling non-profit organization based in rural Jharkhand. Yuwa aims to empower young girls through the practice of soccer in one of the toughest environments for Indian women. Jharkhand is one of India’s newest states and was created to return land to Bihar’s tribal populations in 2000.⁷² Female literacy has only reached 56.2%, although this is even lower in rural areas and among scheduled castes and tribes,⁷³ and 55.7% of women in Jharkhand experience early (“child”) marriage.⁷⁴ For many families, educating female children is a low priority, and girls are expected to spend their time contributing to housework and conducting other physical labor. Leisure time is

rare for girls, and even when they have it, few, if any, opportunities exist to play organized sports.

In this environment, Yuwa works to bring girls out of social isolation, fight gender inequality, and empower girls with the necessary skills to shape their own futures. Yuwa uses soccer as a platform to bring girls together in a supportive and safe context and ultimately strives to increase their school attendance and equip them with the skills to pursue further studies, secure employment, and empower them in everyday life.

This case study reviews Yuwa’s program model drawing from an in-depth interview with the founder of the program, Franz Gastler, and the program’s application materials to Results for Development Institute’s Innovative Secondary Education for Skills Enhancement competition. This case study considers Yuwa’s two main components: soccer and technology-enabled supplementary schooling, its costs, impact to date, success factors, and challenges. It concludes with a brief discussion of how the model could be diffused into other organizations in order to reach a greater number of youth.

Program Overview

Franz Gastler founded Yuwa after moving to rural Jharkhand in 2009. After working in New Delhi, he had spent some time in the area working with another non-profit organization and teaching English. Unimpressed with the quality of the non-profit organizations operating in the region, he planned to launch a holistic youth-focused organization. Yuwa’s core soccer programming took shape when local girls asked for an opportunity to learn soccer.

⁶⁷This case study draws heavily on interviews with Yuwa founder Franz Gestler, conducted in March 2013.

⁶⁸Srivastava, Aarti and Mona Khare . 2012. “Skills for Employability: South Asia.” Results for Development Institute, Washington, D.C.

⁶⁹*Ibid.*

⁷⁰UK Sport. 2011. “Next Step Conference 2011: Promoting Global Partnerships for Sports in Development.” Reflection Report, *UK Sport*.

⁷¹United Nations. 2012. “Sports as a Means to Promote Education, Health, Development, and Peace.” *GA Resolution, United Nations*.

⁷²Jharkhand.” Ministry of Health and Family Welfare, Government of India. Accessed on 9 Mar 2012. Available at: <http://www.mohfw.nic.in/NRHM/State%20Files/jharkhand.htm>

⁷³Jharkhand Population Census Data 2011.” Population Census India. Accessed on 9 Mar 2012. Available at: <http://www.census2011.co.in/census/state/jharkhand.html>

⁷⁴UNICEF. 2011. “Child Marriage UNICEF Information Sheet.” Accessed on 9 Mar 2012. Available at: http://www.unicef.org/india/Child_Marriage_Fact_Sheet_Nov2011_final.pdf

Table 8: Yuwa Case Study Highlights

Approach	Yuwa uses soccer as a platform to bring girls together in a supportive and safe context, working to increase school attendance and equip them with the skills to pursue further studies, secure employment, and empower them to break through social constraints.
Governance and structure	Yuwa’s founder, Franz Gastler, provides oversight for the organization’s programs. He makes strategic decisions for the organization, but is supported by volunteers abroad and his local coaches. Rotating coaches from Jharkhand and a local NGO oversee the complementary soccer program in Mumbai.
Cost and finance	Yuwa maintains a low cost structure by relying on volunteers rather than full-time staff. The soccer program uses field space free of charge, receives donated jerseys, and encourages participants to help pay for new gear. The supplementary education program utilizes free lessons from Khan Academy, but the organization must cover the cost of e-readers to run the tutorials.
Impact to date	As a fledgling program, Yuwa’s impact has not yet been quantitatively measured, but there is ample room to implement outcomes monitoring of Yuwa’s participants in the future. Yuwa’s own staff has observed changes in the confidence level and goals of participants.
Underlying factors of success	Yuwa has a number of general success factors such as its demand-driven start, the use of peer coaches and volunteers, and the dedication of its co-founder. The level of trust between the local community and the organization and its flexible capital base have helped Yuwa succeed in rural Jharkhand.
Challenges	Yuwa faces many challenges related to working in rural, conservative areas of Jharkhand including resistance from families to allow girls to participate, entrenched educational and social norms, unreliable infrastructure, access to fields, and a lack of existing soccer practice designs suitable to the environment. The most important challenge for the organization is designing and implementing a strategy to measure its impact, setting the stage for further scale.
Future priorities	As Yuwa continues to develop, there is significant potential to reach more girls through replication of the soccer model. If the organization can document its approach and standardize its tools, such as practice designs and methods for using peer coaches, then it can support other youth organizations in initiating girl-focused soccer programs with minimal start-up costs. Once the education program is off the ground, it may also present opportunities for growth. Replication on both fronts would benefit from more systematic impact monitoring protocols.

Soccer Program

This simple request went on to shape the heart of Yuwa’s programming. Yuwa organizes two-hour soccer practices for youth before and after school. The organization targets girls, but also runs a small boys’ program, which constitutes about 20% of its roster. Its current participants range in age from 6-18, although most are between 12 and 13. They come from 10-15 different villages, normally

by foot, to one of Yuwa’s three sites in Jharkhand. Their parents are usually farmers and daily wage laborers. About 250 girls have signed up for the program, and on any given day, about 120 appear for practice. There are currently 14-15 girls on each team. Yuwa has also launched a soccer program in Mumbai’s Dharavi slum in partnership with a local responsible-tourism organization. As a new initiative, this program has about 30 registered players of which 10 regularly appear to practice. Yuwa aims to register 80 girls for the program by the end of 2013.

Box 4: Why soccer?

Although Franz Gastler, the founder of Yuwa, had no previous experience playing soccer, he has spent hundreds of hours learning the rules of the game, designing practices appropriate for rural Jharkhand, and starting soccer teams. Why? Because girls asked for it.

Gastler explains that soccer is a good way to bring girls together in a team environment, but most importantly, it’s what girls want to play. Yuwa’s participants regularly attend practice and have never asked to play another sport. As long as soccer continues to attract and motivate young girls, it will remain the focus of Yuwa’s athletic program.

Unlike a typical soccer program, Yuwa’s soccer teams are self-initiated, peer-led, and designed to encourage financial saving and planning. These are important design principles as they encourage the core skill set needed for employment. When a group of girls expresses interest in starting a team, Yuwa poses three questions to them: 1) How often do you want to play? 2) What do you need to play? 3) How can you get what you need? The first question establishes the girls’ commitment to the sport. They usually answer that they want to play every day, which is what Yuwa encourages. The other two questions initiate a longer process that encourages participants to plan and budget for the gear that they need.

Yuwa requires that girls save a portion of the money needed to obtain the gear necessary for a team, namely sneakers and soccer balls. Yuwa subsidizes the gear

and requires regular attendance at practice for girls to be eligible for the gear. For example, a player must save 100 rupees (under \$2) and attend practice for 6 months (playing at least 20 days a month) to receive a pair of sneakers. Although a small number of girls may take on work at local farms to earn additional income, most girls save the few rupees that their parents provide them every week for candy and basic supplies. They forego purchasing these products in order to save for their gear. Through this mechanism, players mentally invest in their team from day one.

In addition to encouraging financial planning and independence, the program focuses on leadership by encouraging peer coaching. As girls regularly attend practice and advance through the program, they are charged with training younger players. This places young women in a position of respect and authority, something that young girls in Jharkhand may not see on a regular basis. This not only helps improve their perceptions about the capabilities of women, but it may also encourage reluctant new players to join the program. Girls who have never played soccer before may be nervous to try, but working with older girls whom they already know or recognize helps overcome this barrier. Finally, this aspect of the program helps build the self-worth and confidence of the peer coaches. Some even rotate through the program in Mumbai and have the opportunity to coach young children in Dharavi; this journey would have been inconceivable to most of Yuwa's participants before joining the program.

The overall coordinating coaches, who are largely female, aim to create an atmosphere of positive peer pressure. They emphasize the importance of regularly attending school and soccer practice and encourage girls to monitor and help one another in meeting these goals. This positive peer pressure helps create a culture of high expectations that girls may not experience at home.

Kicking it New School

'Kicking it New School' is the newest component of Yuwa's work in Jharkhand. It is in the early stages and intends to provide supplementary education through technology. Yuwa uses five Nooks⁷⁵ and 600 Urdu-language lessons freely downloaded from Khan Academy to train 11 peer educators. Yuwa has categorized and documented the 600 available videos by level and subject. The peer educators are generally between 12-14 years old and will be "guides on the side" for the subsequent batches of

Box 5: Differences between the Jharkhand and Dharavi programs

Yuwa's soccer programs in Jharkhand and Dharavi follow the same basic program design, but have a few differences. Whereas Yuwa provides direct daily oversight to the sites in Jharkhand, a local partner organization and young coaches who have risen through the program in Jharkhand oversee the program in Mumbai. Yuwa is not currently running its Kicking It New School education initiative in Dharavi (see below).

The demographics of participating families differ between the two sites. Yuwa finds that families in the slum are more financially secure than families in rural Jharkhand, and girls in Dharavi are usually able to quickly generate the money needed for gear. Girls in Dharavi are also much more likely to be enrolled-in and regularly attending school, and the local government has taken small steps to support the program. For example, the local authorities installed lights around the soccer field to make the space safe for the players. In contrast, the Government of Jharkhand has demonstrated limited interest in Yuwa.

children to use Yuwa's learning resources. The program will run after the regular school day, and the Nike Foundation has provided a grant to build an appropriate classroom to house this program.

Once the program is fully initiated, one peer educator will work with four girls at a time. After the girls watch the day's videos, the peer educators will lead them through an interactive supplementary lesson designed by Yuwa. The organization hopes to build classroom curiosity, transition girls from being passive learners to active ones, and raise participating girls' math and science levels by two standards. The program's use of e-readers, and perhaps eventually tablet computers, familiarizes girls with technology, an opportunity that many low-income girls lack, and a necessary experience for many of the jobs available to youth.⁷⁶

The program is still starting up in Jharkhand, but if carried out successfully, it could be expanded to Dharavi and other sites.

⁷⁵An e-reader marketed by Barnes and Noble

⁷⁶Campbell, Kim and Hila Mehr and Ben Mayer. 2013. "Education Technology in India: Designing Ed-Tech for Affordable Private Schools." IDEX. and Srivastava and Khare. . 2012.

Costs

Yuwa operates at a modest scale with low costs. Thus far, Gastler and his co-founders have invested \$32,000 of their personal funds in the organization. In addition, Yuwa has received small philanthropic grants and individual contributions.

The basic soccer and education programs incur minimal expenses. The tablet program, for instance, costs about \$13 per student per year, assuming each Nook lasts for at least 3 years. The soccer program relies on the free use of fields and donated jerseys. Yuwa purchases shoes and balls from local retailers drawing from its own funds and the pre-determined contributions of the players.

Notably, the organization does not pay for full time staff. Gastler and a rotating international volunteer work with the program full-time, but all other staff members are part-time coaches and unpaid volunteers; 6 volunteers reside in the United States and provide back-office support such as administrative and budget oversight. Yuwa hopes to add two full time staff members dedicated to fundraising and mentorship in the future. Coaches are paid a small sum of 30 rupees per practice for their contribution. The coaches that are sent to the Dharavi program from Jharkhand receive 5,000 rupees for three months of service and free accommodation. The organization currently has 11 coaches in total.

Over the last year, the organization has spent \$100,000, but most of this was discretionary expenditure. For example, the organization tested a pilot nutrition program to improve participants' diets.

Impact to Date

Yuwa's vision is for every girl in the program to become empowered to steer her own life. Similar to other youth sports programs,⁷⁷ the organization struggles to effectively measure and track progress towards this goal, but is open to the adoption of new tools and strategies to better quantify its impact. Part of this challenge lies in the organization's youth. So far, no girls have fully graduated from the program; once they do, Yuwa will have the opportunity to track their progress in educational attainment, delayed marriage, and employment. Similarly, once the Kicking it New School program is fully implemented, Yuwa can test participants before, during, and after the program to measure changes in learning outcomes and school performance. Initial anecdotal experiences suggest that the

Khan Academy videos played on the Nook help participants grasp new concepts more quickly.

In the meantime, the organization relies on school and practice attendance rates to monitor the program; both of which are high for participating girls. In addition staff have qualitatively observed increased levels of confidence, leadership, and commitment in participants.

Success Factors and Lessons Learned

Yuwa's experience in launching its initiative offers lessons for designing similar programs to develop soft skills in young girls through athletics. These success factors are discussed below. However, given the organization's small scale and nascent results framework, "success" is an early term noting Yuwa's impressive achievements in launching and sustaining this program in an incredibly challenging cultural environment. Long-term success will be determined in the years to come as more girls complete the program and their progress is measured.

Contextual Factors for Success

Establishing Trust in Rural Jharkhand

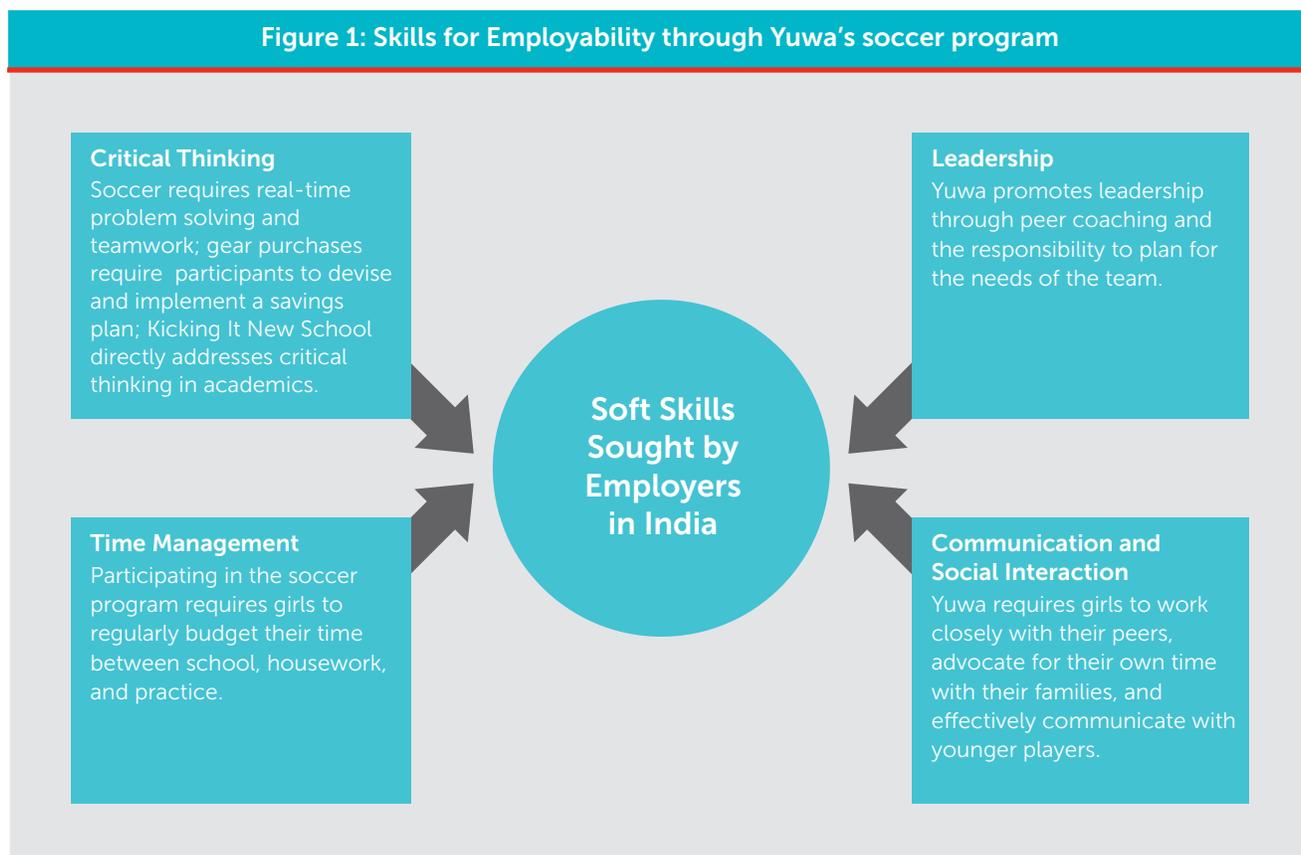
Families in Jharkhand are reluctant to allow their daughters to join Yuwa's soccer teams on two accounts. First, female children perform valuable household labor, and mothers in particular lose support when daughters spend time away from home. Second, playing soccer is not a traditionally "female" activity and may be viewed as culturally unacceptable. To overcome these cultural barriers, Yuwa had to establish a significant level of trust and credibility with the community. Gastler's on-going presence in the areas in which Yuwa works and his repeated engagement with families were critical factors in building Yuwa's reputation. His earlier work in the area, such as teaching English in a local government school, was likely contributed to demonstrating his commitment to the community.

Flexible Capital

Yuwa's co-founders provided the initial financial capital for the organization. At the outset, Yuwa was intended to be a holistic youth organization that provided a variety of services to the local community. However, since the founders self-financed the operations, they had the flexibility to

⁷⁷Doherty, Clay . 2011. "Measuring the Impact of Sports on Youth Development." USAID. Accessed on 9 Mar 2013. Available at: <http://blog.usaid.gov/2011/03/measuring-the-impact-of-sports-on-youth-development/>

Figure 1: Skills for Employability through Yuwa's soccer program



respond to the demand and observed need for the soccer program. The flexible capital base allowed Yuwa to take the organization in a new, well-defined direction.

General Factors for Success

Demand-driven

Yuwa's soccer program requires girls in poor areas to spend time away from their families, coach younger children, and save money. None of this would be possible if girls did not want to participate in the program. Yuwa's initial response to participants' requests for a soccer program and its requirement that new participants initiate their own teams ensures that participants are invested in the program. In the places where Yuwa operates, there are no other organized activities that offer young girls a fun, supportive, and constructive way to spend time. Responding to this need has yielded a model that lends itself to a high level of commitment and self-motivation.

Peer Coaching

Although the effects of using peer coaches have not been formally measured, there are indications that peer coaches help draw reluctant newcomers to the program and give younger participants role models. Peer coaches also directly gain leadership and management experience themselves. By placing young women in positions of authority and respect, Yuwa is taking an important step in fighting gender stereotypes in rural Jharkhand. Evidence from other social programs suggests that exposing youth to female leaders can increase girls' educational attainment⁷⁸.

Role of Volunteers

The use of unpaid volunteers controls Yuwa's costs and allows the local community to help shape the program. By eliminating staff expenses, the organization's core expenditure is simply the infrastructure, materials, and supplies for its education and soccer programs. This is particularly valuable for the soccer program as it allows youth to take on peer coaching activities, thereby filling leadership roles with members of the local community.

⁷⁸Beaman, Lori, and Esther Dufo, Rohini Pande, and Petia Topalova . 2012. "Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India." *Science* 335 (6068): 582-586.

Dedicated Founder

Yuwa would not have succeeded without Gastler's dedication to the girls of rural Jharkhand. Living in Jharkhand, engaging with the community, investing personal funds, and relentlessly collecting information and best practices about soccer, were critical steps in getting Yuwa's soccer program off the ground. His drive to bring the program to fruition is its ultimate success factor.

Challenges

Yuwa has encountered a few challenges in both its soccer and educational programs. Some of these challenges, such as resistance from families and lack of access to internet, may be particularly significant in rural Jharkhand, but nearly all of the challenges summarized below are relevant considerations for expanding the program to other parts of India.

Resistance from Families

As noted earlier, poor families in Jharkhand hesitate to allow their daughters to spend time away from home, especially to pursue a traditionally male activity. Yuwa has patiently worked with girls and their families to overcome this resistance, but the organization will likely continue to face this problem among prospective entrants to the program for the foreseeable future.

Educational Practices in Traditional Schools

Although Yuwa tries to foster academic inquisitiveness and active learning in its Kicking it New School participants, youth struggle to balance these traits with the rigid expectations of their regular schools. While they may be encouraged to ask questions at Yuwa, students may be punished for doing the same in school.

Securing Space

Playing soccer requires space, and currently, Yuwa divides all of its teams among three sites in Jharkhand and one site in Mumbai. As the program grows, it will need to find more dedicated space for soccer practices. Finding space has thus far been most difficult in Mumbai, but as the city of Ranchi (capital of Jharkhand) grows, property developers are buying plots of nearby rural land. Yuwa runs its Jharkhand practices on abandoned fields at no cost, but if the situation changes and Yuwa has to rent land, then the organization's lean cost structure will be compromised.

Designing Practices

With no background in soccer, Gastler had to invest significant time learning about the sport, finding model practice sessions, adapting them to suit Yuwa's program, and developing coaching methodology. Although this was a challenge in the beginning, the base of knowledge that Yuwa has developed can be used to more easily start programs in the future.

Technology and Access to Reliable Internet

Technology and the internet are the centerpieces of Yuwa's Kicking it New School initiative, but both pose difficulties to the organization. The Nooks that Yuwa relies on to run Khan Academy videos are ill-suited for playing video files and cannot run the complementary lessons available on the Khan Academy website. Alternative technologies, such as tablet computers (rather than e-readers) would be more suitable – but also more expensive – for this purpose. The organization's internet access also limits how efficiently it can update each reader with new materials. Yuwa has been unable to set up reliable high-speed wireless internet and can only connect one device to the internet at a time. If this problem persists, then as the program adds more tablets or e-readers, the process of updating content will become progressively more cumbersome.

Capacity for Measuring Impact

Measuring the impact of its programs is important for Yuwa as it plans to grow and seek further support, but its current capacity to do so is weak. Although Yuwa's volunteer-run model enables its low cost structure, the lack of specialized staff limits the organization's ability to assess its impact. Since Yuwa has initiated an innovative program, it likely needs newly designed tools and strategies to measure the impact of both its soccer and education programs, especially if its ultimate goal is to empower young girls. To measure progress towards this goal Yuwa must either bring new talent on board or seek help from third-party groups.

Reaching Scale through Replication

Yuwa has immense potential for scale through program replication by other groups, especially for its soccer program. Since the soccer program only runs for part of the day (before or after school), and can be managed in-part through older participants, any youth organization willing to learn the ins and outs of soccer can work with Yuwa to replicate its model. If Yuwa were to directly expand into new areas, then it would again encounter some of its start-up challenges, such as capital costs and resistance from the local community. Instead Yuwa can build partnerships with local organizations that have been running successful youth programs and maintain strong ties with the local community and equip them with the knowledge and tools needed to start a girl-centric soccer program. And indeed, the organization is keen to reach more girls by supporting replication rather than pursuing aggressive growth from headquarters.

If Yuwa systematically documents its practice and training schedule, coaching methods, approaches to encourage saving, etc., then it can share these resources with other organizations dedicated to empowering girls. The organization is just beginning this process. Yuwa is planning to share online videos of their on- and off-field activities through “Yuwa Virtual Academy.” The videos will feature strategies that have worked for Yuwa such as soccer practices that can be conducted on small fields with minimal equipment and few coaches. These videos can help other organizations get soccer programs off the ground. With the right tools, even a young volunteer or fellow in a government or low-cost school, such as a Teach for India fellow, could start a soccer team in a poor neighborhood. The difficulty in reaching scale through this approach is maintaining a system to measure and track progress in each of the sites, but with careful planning, a monitoring and evaluation strategy could be developed with this in mind.

Expanding the supplementary education program may also be valuable. However, until the program is fully operational and demonstrates that it can improve the academic performance of poor students, considerations of scale are premature. If it does in fact achieve this objective and the training of peer educators can be standardized, then the Kicking it New School program could increase its reach within Jharkhand and be layered onto the activities of other youth organizations in India at a very low cost.

Conclusion

Yuwa’s soccer and education programs are a promising way to build the confidence of young girls and equip them with the soft skills necessary to perform well in school, secure and retain meaningful employment, and direct their own lives. If the organization can develop and implement an evaluation plan to regularly assess its impact and adapt as necessary, then it can improve its reach in Jharkhand and beyond. The program’s low cost structure and limited barriers to start-up create the potential to test the model in other organizations and scale-up through replication. Although Yuwa has encountered some challenges in launching its initiatives, the knowledge that the organization has gained in working through these obstacles can be synthesized and strategically disseminated to reduce the time needed to launch subsequent programs.

Developing Skills for Employment and Bridging the Digital Divide: A Case Study of *Passerelles Numériques*⁷⁹

Introduction

Context

Cambodia is still feeling the lingering effects of its traumatic recent history and, despite improvements on many development indicators, 20% of its population still lives below the poverty line.⁸⁰ Thirty years of civil war, and particularly the brutal Khmer Rouge period (1975–1979) which effectively wiped out the education system, have left Cambodia with a lack of opportunities, low capacities, and social exclusion.⁸¹ Since the elections in 1993, Cambodia has experienced steady macro-economic growth and noteworthy reductions in poverty levels.⁸² However, rural poverty, where 80% of the population lives, remains stubbornly high.⁸³ Economic growth is concentrated in urban areas with the skills required by young people rapidly evolving to fuel this growth.⁸⁴

With 66% of the population under 25 years of age and unemployment among 15–24 year olds as high as 20% in Phnom Penh, the capital, finding ways to create safe and prosperous pathways from education to urban employment is essential. Twenty-first century skills, such as critical thinking, use of ICT, and fluency in foreign languages, particularly English, are all fundamental to ensuring young people can make a contribution to the growing economy and being competitive in employment markets. The Cambodian government has launched a number of policies in recent years designed to close this skills gap, but even among secondary school graduates, these skills do not match those demanded by the fast changing jobs market.

Lall and Sakellariou (2010) noted that in 1997, the earnings of workers in Cambodia: "...exhibited limited association with education and skills."⁸⁵ However, their research into the education premiums over the decade from 1997–2007

showed that there has been a dramatic increase in the profitability of education over that period. This growing demand for a skilled and educated workforce is central to the need identified by *Passerelles Numériques* (PN), a French NGO operating in Cambodia since 2005.

Innovative Model

It is within this context that PN works, aiming to equip young people with the skills that local employers demand. Literally translating as "digital getaway", the aim of this program is to provide training to young people from disadvantaged backgrounds in order to help them find jobs that will enable them to earn a good salary. They work with young people who have completed secondary level education, but still lack the skills they need to enter the competitive workforce. PN focuses particularly on students from rural areas and provides a safe and effective way for these students to find formal employment in the city. PN provides help with the transition into urban life, providing accommodation in the first year of study and an allowance for housing in the second year. They also give students an allowance for food, provide health insurance, and give the students a bicycle and helmet to ensure they can access their work placements. There are even road safety sessions and map reading classes provided.

By undertaking in-depth market research with Cambodian employers, PN found that high school graduates rarely had the levels of competence required by employers in a number of key areas: particularly ICT skills and English. They also identified a need for enhanced critical thinking and problem solving skills among high school graduates, which would enable them to better excel in the workplace. They first opened their doors to students in Phnom Penh in 2005 with an intake of 25. Expanding, they launched their Systems and Network Administration (SNA) and Web Developing (WEP) training programs in 2007, and the Data

⁷⁹This case study draws heavily on a series of interviews and correspondence with key PN staff, conducted in April 2013. For a more extensive case study, including further contextual background and information on the program's partners and funders, please email mengmann@r4d.org.

⁸⁰UNESCO. 2010. "Cambodia – UNESCO Country Programming Document 2009–2010." Phnom Penh: UNESCO. p. 15

⁸¹*Ibid.* p. 13

⁸²*Ibid.* p. 13

⁸³*Ibid.* p. 15

⁸⁴*Ibid.* p. 20

⁸⁵Lall, Ashish and Sakellariou, Chris . 2010. Evolution of Education Premiums in Cambodia: 1997–2007. *Asian Economic Journal*. 24 (4) 333–354. p.333

Table 9: PN Case Study Highlights

Approach	Passerelles Numériques provides training for digital jobs to young people from disadvantaged backgrounds, particularly those from rural areas, who have completed secondary education but still lack the skills to gain employment. PN also provides support to successfully employed students who are transitioning to urban life for the first time.
Governance and structure	Passerelles Numériques is a French NGO with a board of trustees in the head office in France and 53 staff employed in the school in Cambodia. They have links with a number of international business partners and run 6 month and 2 year courses for high school graduates to improve their ICT, Business Knowledge, and English skills, in order to better meet employer demand.
Cost and finance	In 2011, the operational costs were 1.2 million Euros (about \$1.7m), 45% of which was spent in Cambodia. Overall staffing costs amounted to almost €430k (\$590k). Cambodian students receive an allowance of \$55 per month to cover accommodation, bicycles, and health insurance and living costs. The total cost of a student completing the full two-year course is \$5,774. Funds come from a wide range of business partners and individual donors, notably including Accenture, which has supported PN since the outset.
Impact to date	Since 2005, 779 students have graduated from PN's Cambodia center: 455 students completed a 2-year training program, and of these, 97% found skilled employment within 2 months. Their average starting salary is \$150 per month, above the Gross National Income (GNI) per capita of \$57 per month, and also above the Phnom Penh average salary of \$100 per month. Students also experience a rapid rate of salary increase once hired, attributed to the non-cognitive and higher-level soft skills developed through all the courses. Within 2 years, PN graduates earn an average salary of \$300 per month. PN alumni are thus able to broaden the reach of the program's impact: they give a part of their salary to their family, enabling younger brothers and sisters to go to school and study.
Underlying factors of success	The main factor underpinning success is the focus on local demand through undertaking market research on the specific demands of employers, and fostering strong relationships with local businesses. Moreover, they provide quality continuous professional development for trainers, ensuring high standards of delivery and up-to-date skills. The strong partnership with Accenture, and subsequently other international business partners, has been fundamental to the success of the program.
Challenges	The key challenge for PN has been high staff turnover, which comes as a result of low pay for local employees, given the organization's status as an NGO. This, coupled with a shortage of talent with IT skills, has led to staffing shortages. High quality training for employees has partially overcome this. There is also an ongoing challenge to identify local sources of funding from Cambodian businesses, which would also further strengthen links with local employers.
Future priorities	PN aims to further expand its impact by working more with families of the students; students are already encouraged to use their higher salaries obtained as a result of the course to help younger siblings complete their education. PN intends to continue to work with employers to close the skills gap they have identified in ICT and English, continually revising the curriculum to meet the changing demands of employers. PN is also developing a sponsorship scheme with local businesses. Finally, PN hopes to expand the program in Vietnam and Philippines by providing training from the Cambodian model to replicate the program and maintain the same standards of success (at least 95% of the students going on to secure a high paying job).

Management Operator (DMO) course in 2008. In 2009 and 2010 they launched programs in the Philippines and Vietnam.⁸⁶ Today, they train 250 students a year in the Cambodian center with three pathways, all leading to improved employment prospects and higher salaries in both the short and long term.

In this case study, we provide information regarding the structure and activities of Passerelles Numériques based on research from organizational documents, such as the annual and financial reports, as well as observations, interviews, and correspondence with key staff. The case study provides an innovative model of skills provision that could be adapted and replicated in other contexts.

⁸⁶Passerelles numériques. 2011. Annual Report 2011. p. 5

Governance and Structure

Staffing and Organizational Structure

PN was founded in France, and set up as an NGO growing out of a perceived need for enhanced ICT skills in Cambodia. The board of directors is based in France, and the majority of the fund-raising takes place there. In the French head office, there are five members of paid staff and a management committee of trustees.

The first training site opened in Cambodia in 2005, and there are now also sites in Vietnam and the Philippines. In Cambodia, there is a large training center, employing

53 people, the majority of whom are Cambodian. The director and some other staff are European, eight of whom are employed via the VSI (International Solidarity Volunteer) program. In France there are also a small number of unpaid volunteers who help out in fields such as Human Resources, Communications, Finance and Funding. In the Philippines there are 19 members of staff with three VSI staff, and in Vietnam there are 11, one of whom is VSI.⁸⁷

PN provides high quality and up-to-date training for trainers. This training is ongoing, providing regular staff development, often supported by companies who donate their time to ensure students gain the most relevant skills for the businesses with which they will work upon finishing their diploma or through their placements.

Course Structure and Skills Focus

PN provides courses for High School graduates from deprived backgrounds to enable them to gain the skills required to obtain and retain a well-earning skilled job. They provide two 2-year courses, each leading to a diploma recognized by the Cambodian Government: Systems and Network Administrator (SNA) and Web Programmer (WEP). Students join the organization and complete three months of study before deciding which route they prefer to take. For each intake class, about 100 student follow each of the two course streams, which are further divided into four classes of 25.⁸⁸ All courses aim to provide targeted technical and practical training, focusing on employability and constantly adapting to match business needs.⁸⁹

In addition, there are 100 students a year who complete the Data Management Operator (DMO) course. This is a 6 month program run in conjunction with another organization: Digital Divide Data (DDD), which provides work placements for the students with the opportunity to continue working there after completing the course, and/or continue their studies at a university. Once they finish their studies, they have the qualification and experience to obtain a well paying job. By training students in basic IT skills such as typing, as well as English skills and business knowledge, DMO enables students to access this initial employment at DDD, and puts them on a path that will open doors in the future.

The courses are intensive, with 40 hours class time per week plus independent study using the web resources and PN computers. Materials are in English and some courses are taught in English, in addition to the actual English classes. They learn to type in both English (using Latin alphabet) and Khmer. Students are evaluated through formal examinations twice a year as well as quizzes and tests throughout the year and through participation in class.⁹⁰

In addition to English and IT skills, which are core to the organization's work, students are taught skills relating to business life. This involves learning about the values of business, how to act in formal workplace environments, business structure, the lifecycle of companies, business culture, and behavior skills.⁹¹ Underlying this knowledge, the PN courses aim to foster a critical spirit, encouraging students to ask questions and participate in class. They use pedagogies which encourage problem solving, allowing students to develop skills such as teamwork and leadership. The general training also includes higher-level soft skills such as open-mindedness, autonomy, adaptation, and initiative.⁹² These non-cognitive skills are attributed to the rapid increase in earning potential of PN graduates.

Soft skills are also developed through a range of extra-curricular activities, including in cooperation with other NGOs. Once a quarter, PN Cambodia organizes a conference on topics of interest for young, such as child safety, drug issues, birth control or sanitation⁹³

Mission, Values and Goals

The organization's vision is to: "... aspire to a world where the most underprivileged can, thanks to their talents and through access to education and employment, access a better future."⁹⁴ The mission is to enable more young people to access training that will lead to skilled employment in ICT, particularly those who do not have the means to access this training otherwise.⁹⁵ Of the young people enrolled in their courses, PN aims to ensure that 90% find a qualified job and end the cycle of poverty for themselves and their families; their success rate is currently more than 95%.

The work of the organization is based on four principles of action measured through social impact indicators:

⁸⁷Passerelles numériques. 2011. "Annual Report 2011". p. 13. Updated figures from correspondence with key staff.

⁸⁸*Ibid.*

⁸⁹Passerelles numériques. 2010. "Annual Report 2011." p. 8

⁹⁰*Ibid.*

⁹¹Passerelles numériques. 2010. "Annual Report 2011." p. 8

⁹²Passerelles numériques. 2010. "Annual Report 2011." p. 8

⁹³Passerelles numériques. 2010. "Annual Report 2011." p. 25-26

⁹⁴PN Website. Retrieved from: <http://www.passerellesNumeriques.org/notre-mission/> Accessed 09 April 2013.

⁹⁵*Ibid.*

professionalism; a spirit of partnership; integrity and equity; and pragmatism and effectiveness.⁹⁶ They work through the core values of trust, responsibility and solidarity, respect and demand for quality professionalism and achievements.⁹⁷

Beneficiaries

The courses are aimed at underprivileged young people, especially from rural areas. They aim for at least 50% female representation in each cohort and give priority to those with the most disadvantaged backgrounds. For this they have a complex recruitment process. The rigorous process is composed of four phases. The first consists of information sessions on the program, delivered by a team of qualified trainers to high schools in 18 of the 24 Cambodian provinces.

The second phase is a written examination to test candidates' skills in English, Mathematics and Logic.⁹⁸ There are 1-3 exam centers in each province where students can take the aptitude tests to determine if they have the capacity to cope with the course. Members of PN staff personally invigilate these examinations to ensure consistency and fairness.

Following the examinations, potential candidates are interviewed; these interviews are seen as crucial to verify the motivation, maturity and mindset of the young people and test their willingness to live far from home.⁹⁹ For many, moving to Phnom Penh to study will be the first time these young people have been away from their families.

The final phase consists of socio-economic investigations, which ensure that priority is given to those with the greatest need: "Selection teams visits the candidates' families to verify that their situation matches PN's financial criteria."¹⁰⁰ This information is gathered from family members, parents' jobs, debts, assets, etc. PN is clear that its mission is to provide opportunities only to the young people with the greatest need of support.

Partnerships and Networks

PN has links with numerous organizations and other NGOs to enable them to reach the students most in need of their support. For instance, some students in rural areas already access support from other NGOs to enable them to

complete high school; these organizations then continue to support these students if they are selected to the PN program. Links with business are also essential to the PN program, not only in terms of sponsorship and finance, but also for work placements and feedback regarding the skills they demand.

Links with local businesses are essential and through these partnerships PN is able to offer students the opportunity to visit around 50¹⁰¹ local companies to better understand the job environment and gain exposure to different sectors. They also coordinate paid internships for 2nd year students through special agreements with some companies. Local employers also provide feedback which is used to evaluate the courses themselves, ensuring the courses are continually updated to teach in-demand skills, and to reflect on the performance of the students in placements. Deep-market research is conducted every three years to look at the needs of over 150 local employers and match these with the skills fostered on the course.

Partnerships with international businesses are also fundamental to the organization's success. Accenture, in particular, has supported PN since the outset and provides extensive support, both financially and in-kind. There are two schemes by which partner organizations can strengthen PN's human capacity: shared skills sponsorship scheme whereby the employee is on-loan to PN but still paid by the external partner; and solidarity leave which allows employees working for PN's partners to spend their leave within PN, usually around two weeks, with travel expenses covered by their company.¹⁰²

The Solidarity Act

PN has a strong philosophy based on the values of trust, responsibility and solidarity and they aim to develop this throughout the course and also after the students graduate, encouraging alumni to help support new students as well as their families, encouraging younger siblings to continue their education. PN maintains a relationship with alumni and has an alumni organization that runs activities encouraging solidarity.¹⁰³

PN runs a scheme, known as the Solidarity Act, where alumni donate a small percentage of their salary to PN, once they secure a good salary. Although this used to be optional for students, since 2012 it has been mandatory

⁹⁶Passerelles numériques. 2010. "Annual Report 2011." p. 7

⁹⁷*Ibid.*

⁹⁸*Ibid.* p. 8

⁹⁹*Ibid.*

¹⁰⁰*Ibid.* p. 22

¹⁰¹This figure varies annually: There were 52 in 2011 and 48 in 2012.

¹⁰²Passerelles numériques. 2010. "Annual Report 2011." p. 14

¹⁰³*Ibid.* p. 27.

for all alumni. The minimum contribution per month is now \$5 in the 1st year, \$10 in the 2nd year, and \$15 in the 3rd year, making a total contribution per student of \$360 within 3 years. Students start paying only after graduation and only if they have a job. The target revenue for 2013 is \$5000. This money goes back into the project and is used for general expenses. This Solidarity Act aims to create a broader sense of belonging and involvement for alumni.

Cost and Finance

Funding

Funding comes from private donations and sponsorship from both individuals and companies. Many of the partner organizations have a strong relationship with PN. The majority of the funds are raised in France, with 10% raised in Cambodia, coming mainly from local businesses, and 3% from the Philippines.¹⁰⁴ A small amount of funding comes from the Solidarity Act.¹⁰⁵

Costs

In 2011, operational costs were 1.2 million Euros, 45% of which was spent in Cambodia.¹⁰⁶ Overall staffing costs amounted to almost 430,000 Euros.¹⁰⁷ Employees' salaries vary depending on where they are employed and their experience. The net pay for the five members of the French team was €11,000 per month. In Cambodia a Khmer teacher is paid between \$250 and \$580 per month and other staff between \$200 and \$630. The VSI workers are expats who work for PN in a management role; their basic salary starts from \$800 per month.¹⁰⁸

In addition to the staffing, the costs incurred in the provision of the education include student allowances, the student selection process, and operational expenses, with total in 2011 of about 440,000 Euros, with a cost per student of about €1,750.¹⁰⁹ Total PN costs per student over the two year period of their participation is approximately € 4620. This cost includes a \$55 per month allowance.

Results and Impact

All students that pass through the doors of PN are provided with material support in terms of accommodation, equipment, financial support, medical care and health insurance. Moreover, students can benefit from the moral and educational support of follow-up counseling and high quality teaching. Importantly, students are also given guidance to employment both through internships and job searches by the Company Office department.¹¹⁰

During the course at PN, students benefit from a pedagogy that moves away from a traditional approach of learning 'knowledge', to a competency-based approach focused on the development of practical skills. Objectives, methods of teaching, and evaluation processes are continually reviewed by a pedagogy expert to ensure students receive high quality training. PN's teaching methodologies stimulate the development of: "... fundamental and complex skills that will be instrumental for their future career and personal development such as self-learning and problem-solving."¹¹¹

By taking a course at PN, students have a high chance of going straight into well-paid employment. All graduates found jobs last year, exceeding the objective of 90%. Since 2005, 779 students have graduated from PN's Cambodia center with 455 students completing a 2-year training program and, of these, 97% found skilled employment within 2 months. Their average starting salary is \$150 per month.¹¹² This is above the average salary in Phnom Penh of \$100 per month, and above the average monthly GNI per capita of \$57.¹¹⁴

One of the most striking impacts of the PN courses, however, is the rapid rate of salary increase experienced by PN graduates, attributed to the non-cognitive and higher level soft skills the program develops, such as critical thinking, leadership, open-mindedness, autonomy, adaptation, and initiative.¹¹⁵ Indeed, within 2 years PN graduates earn an average salary of \$300 per month. Given these earnings, well above the national average, PN alumni are able to broaden the reach of the impact. The

¹⁰⁴Passerelles numériques. 2010. "Financial Report 2011." p. 48

¹⁰⁵Passerelles numériques. 2010. "Annual Report 2011." p. 28

¹⁰⁶*Ibid.* p. 5

¹⁰⁷Passerelles numériques. 2010. "Financial Report 2011." 2011 p. 49

¹⁰⁸Figures are provided in Euros or US Dollars, depending on how they are cited in the reports.

¹⁰⁹Passerelles numériques. 2010. "Financial Report 2011." p. 51

¹¹⁰Passerelles numériques. 2010. "Annual Report 2011." p. 8

¹¹¹*Ibid.* p. 23

¹¹²Passerelles numériques. 2010. "Annual Report 2011." p. 20

¹¹³Masis, Julie . 2011. Cambodia a Capital Success. Asia Times online. June 22, 2011. Retrieved from: http://www.atimes.com/atimes/Southeast_Asia/MF22Ae01.html Accessed 21 April 2013

¹¹⁴United Nations data. Retrieved from: <http://data.un.org/CountryProfile.aspx?crName=Cambodia> Accessed 21 April 2013

¹¹⁵Passerelles numériques. 2010. "Annual Report 2011." p. 8

return on the investment in PN courses is clear since, on average, within two years of graduating, students earn a sum equivalent to the entire costs of their two-year program.

At the operational level there, have also been significant results, with a new common Education Plan and sharing of best practice across the three country centers. In conjunction with a new partner, Devoteam, PN has developed and implemented an ambitious action plan with initial measurable results in terms of higher quality training through better use of data and improved communication between the four countries.¹¹⁶

Underlying Factors of Success

According to staff at PN, there are a number of key factors that underpin the success that the program has enjoyed. The first is the focus on local demand. The first step the organization took in its infancy was an in-depth market study of local employers, this enabled an accurate identification of the skills required in the local context and also enabled PN to foster good relationships with potential employers. They felt it was essential to be able to adapt to changing circumstances and nuances in the local market; they keep a database of market research and repeat this process every three years.

The second key factor, related to this research, was the focus on one specific market need. They have a very clear mission of providing IT and English skills for high school graduates from deprived backgrounds. This allows them to focus all their energy and resources and it gives them a clear direction. The specific focus on high school graduates enables PN to bridge the gap between secondary education and the work place, and also provides students from deprived rural backgrounds access to higher education should they choose to continue studying after they complete their PN diploma.¹¹⁷

The third factor identified was the training provided for the trainers. Given the constantly changing market of information technology, frequent updating of skills is required to ensure the trainers are able to provide the students with the most relevant knowledge. They receive high quality and regular continual professional development sessions. They often get these teacher trainers in from companies, through solidarity leave, to

ensure the trainers are familiar with up-to-date ideas and techniques.¹¹⁸

These first three factors of success relate closely to the fourth, which is locating resources locally and fostering strong partnerships with local businesses and NGOs. Most of the teaching staff are Cambodian, and therefore training can take place in English or Khmer and stakeholders from local employers are often brought in to deliver training sessions. There is also a department within PN that works with local employers to fundraise and bring in resources, both financial and non-financial, from the local environment. Resources accessed through international companies and organizations complement this. Indeed, perhaps most importantly, success has been ensured by the close relationship and support that PN has had from international business partners, notably Accenture. Accenture is one of the fundamental pillars of PN, contributing \$1,261,000 distributed over four years and donating senior personnel every year to participate in short missions and provide training.¹¹⁹ Having such a high profile partner has no doubt helped PN attract further funding from other international businesses such as Microsoft and Steria.¹²⁰

Ultimately, strong links, networks and relationships make the PN program so successful. Relationships are essential to every aspect of the program, and association with partners such as Accenture has defined the development of PN's work. It is the strength of these networks and relationships with other NGOs, local and international business partners, and PN alumni that facilitate success in the identification of need and beneficiaries, market demands, funding opportunities, up-to-date training, and internship opportunities, as well as the development of solidarity at all levels.

Challenges

The main challenge identified by interviewees was the difficulty of recruiting Cambodian trainers capable of providing the training they required. Over time, they have worked closely with staff and, through continual professional development, have ensured a high standard from their trainers. However, as an NGO, PN does not pay the most competitive salaries to locally employed staff, rather they provide them with excellent training. The result of this a high staff turnover; staff improve their skills with PN and go on to find higher paying jobs elsewhere.

¹¹⁶*Ibid.* p. 3

¹¹⁷*Ibid.*

¹¹⁸*Ibid.*

¹¹⁹Passerelles numériques. 2010. "Annual Report 2011." p. 17

¹²⁰*Ibid.*

Another key challenge is to maintain the levels of funding coming from international business partners, both financial and non-financial, to keep the organization running with the current high standards, and also to increase the level of funding coming from local businesses to strengthen these links further.

The limitation of the program is that it only works with high school graduates. Since many young people from poor backgrounds do not reach this level of schooling, they are unable to benefit from the PN program. This problem is particularly acute since Cambodia has some of the region's highest rates of young people leaving school before completing lower secondary.¹²¹ In Cambodia, this means that many young people drop out of school before the age of 14.

However, this decision was also seen as a factor of success: by focusing on one specific skill area they are able to raise standards at this level of education. PN founders knew of Other NGOs work with poor communities to help young people finish high school, but the PN founders identified a gap: even after finishing schooling, young people were not equipped with adequate skills to obtain and retain high-earning employment that would enable them and their families to break the cycle of poverty. So while their target group is smaller as a result of this limitation, the implications are potentially wider, since by earning significantly higher salaries they are able to support younger siblings through school.

Future Priorities

The connection to students' families is also reflected in PN's future priorities, as they hope to extend the work they do to help their students and graduates work with their families. They are also in the process of replicating and extending the model in Vietnam and the Philippines. Indeed, they already have programs running in these countries and Cambodian trainers have been brought in

to train staff to implement the model. In these countries, they currently work in conjunction with universities.¹²² PN continues to work to optimize the transfer of resources between different project centers, improving communications and creating more synergies, thus accelerating the scaling up of new centers.

Within the Cambodian context, they are always working to refine the program they offer, and their key priority for the future is to focus on the curriculum they offer and ensure that the skills and pedagogies are appropriate for the changing demands of the market. They continue to work with employers to close the skills gap they identified in ICT and English in high school graduates. Furthermore, PN is working to improve the implementation of local fundraising tools. The Solidarity Act is now required from every student, beginning with the 2012 cohort. Finally, PN is starting a Cambodian scholarship scheme, which engages companies to sponsor PN students, who will subsequently take on internships and employment with that company after completion.¹²³

This model has great potential to be replicated in other contexts, although perhaps the strong partnerships, networks, and sources of funding enjoyed by PN may be difficult to achieve elsewhere. One possible option of adaptation may be to admit some less-disadvantaged students on a fee-paying basis to generate funds and to extend the profile of the beneficiaries. However, while this model could in theory be expanded in such a way, PN is clear that its mission is to provide opportunities only for the most underprivileged students. Capacity is inevitably limited and for PN, resources must remain focused on this target group. Furthermore, it is the specific nature of this mission that enables PN to access funding from such a wide range of business partners, who are keen to be involved to extend their own social responsibility programs. Changing this dynamic to allow fee-paying students would not be consistent to PN's core goals and the future of PN lies in expanding its reach within the target group identified.

¹²¹UNESCO (2012) *Education for All Global Monitoring Report*. Retrieved from: <http://unesdoc.unesco.org/images/0021/002175/217509E.pdf> Accessed 20 April 2013.

¹²²University of Da Nang in Vietnam and University of San Carlos in the Philippines: Correspondence with key staff.

¹²³Passerelles numériques. 2010. "Annual Report 2011." p. 45

Empowering Youth through Entrepreneurship: A Case Study of Educate!¹²⁴

Entrepreneurship is a way of life in many parts of sub-Saharan Africa, with youth and adults choosing self-employment either out of choice or necessity. Given that sub-Saharan African countries tend to have the largest informal economies, many workers secure employment in this sector.¹²⁵ Indeed, the 2012 African Economic Outlook notes that between 2008 and 2010, jobs in informal activities increased, and anticipates that this sector will continue to play an important role going forward.¹²⁶ However, entrepreneurship – and particularly ‘informal entrepreneurship’ – faces challenges in financing and attracting capital, navigating public infrastructure, and recruiting skilled workers.¹²⁷ Specifically on the last point, studies have found that students often do not learn

entrepreneurial skills at the secondary or tertiary level, lack mentorship and career counseling opportunities, and do not have access to a supportive entrepreneurship culture.¹²⁸

Given these challenges, it is important to foster entrepreneurial skills and ensure that youth receive the training and support they need at an early stage. One program attempting to achieve this is Educate!, an organization located in Uganda. This country has the youngest population in the world, with 78% of the population less than 30 years of age, and the highest youth employment rate, 83%.¹²⁹ More than 70% of young workers are also self-employed, with women more likely than men.¹³⁰ Within this context, Educate! seeks to

Table 10: Educate! Case Study Highlights

Approach	Educate! seeks to empower youth at the secondary school level through a comprehensive entrepreneurship program that aims to develop their leadership and business skills.
Governance and structure	Educate is a not-for-profit organization. The team is located in both the United States and Uganda, and is led by co-Founder Boris Bulayev, who serves as the Executive Director. The Board of Directors provides strategic guidance, and there is both a U.S. and Uganda-based Board of Advisors.
Cost and finance	The Educate! Experience program currently costs \$150/student/year. The Teacher as Mentor Program costs roughly \$50/student/year. Nearly all of Educate!'s revenue comes from donor funding.
Impact to date	To-date, Educate!-supported youth have started 284 enterprises, earning them thousands of dollars in revenue. The flagship Educate! Experience program is currently undergoing a Randomized Controlled Trial, which will provide rigorous quantitative data on impact. Educate! is also developing locally validated metrics to measure the psychosocial development of its Scholars.
Underlying factors of success	Educate!'s general success factors include its use of local mentors and dedicated staff on the ground. Its experiential learning model has also proven to be popular. Lastly, the organization has also been fortunate to receive buy-in from local stakeholders: Educate! implements its Educate! Experience program within the existing school system, and its entrepreneurship curriculum and student business club structure have also been integrated into the national curriculum with the support of the Ugandan Government.
Challenges	Educate!'s key challenge is recruiting and retaining staff at the country level, and ensuring that the program can be cost-effective and financially sustainable over the long run. There is also broader resistance from communities over developing a culture supportive towards entrepreneurship training rather than exam-driven learning.
Future priorities	The Educate! team is working towards scaling up the program to reach 100,000 students across 1,000 schools over the next 10 years. The Educate! model has already been adapted and replicated by AfricAid's Kisa Project in Tanzania, and the goal is to eventually replicate across three other countries.

¹²⁴This case study draws heavily on an interview conducted with Educate! co-founder and Executive Director Boris Bulayev, and on internal research and data shared by the organization through correspondence. In addition, background material was used from the Danida Research Portal (Youth and Employment) and Kron, J (2012, 'Women Entrepreneurs Drive Growth in Africa', *New York Times*).

¹²⁵Results for Development Institute. 2012. Innovative Secondary Education for Skills Enhancement, Phase I Synthesis Reports.

¹²⁶African Economic Outlook. 2012.

¹²⁷Omidyar Network. 2013. Accelerating Entrepreneurship in Africa.

¹²⁸*Ibid.*

¹²⁹<http://www.newvision.co.ug/news/638120-uganda-has-the-youngest-population-in-the-world.html> and World Bank, African Development Indicators (from <http://www.experienceeducate.org/about/>)

¹³⁰African Economy Outlook. 2012. Uganda Country Note.

empower youth at the secondary school level through a comprehensive entrepreneurship program that aims to develop their leadership and business skills so that they are effective entrepreneurs in their own communities.

Program Overview

Eric Glustrom first conceived Educate! in 2002, following a visit to refugee camps in Uganda where he gained a first-hand perspective of the role of education in lifting youth out of poverty. Together, Glustrom, Boris Bulayev and Angelica Towne officially launched Educate! in 2004. The goal of the organization is to develop young leaders and entrepreneurs, and to empower youth via an experiential learning program and rigorous mentorship.

The organization's flagship program is the Educate! Experience, which is based on a model of in-depth mentorship and an experiential learning course. In addition, the Teacher as Mentor (TAM) Program also works with teachers around the country to foster and support entrepreneurship skills within the classroom. Together, both programs currently reach roughly 8,000 students, and expect to expand to reach more than 20,000 by 2014. Educate!'s programs operate in schools across the country, and current partner schools include public, private and religious schools in rural, peri-urban, and urban areas.¹³¹ Programs do not have a gender-specific focus and target students from all income levels.

Educate! Experience

The flagship program was launched in 2009 at 24 partner schools in Uganda, and key components include mentorship, experiential learning, and continued support following graduation from secondary school. Today, the program reaches 36 schools across the country, and has touched 1,600 students.

In the program, mentors start working with students ("Educate Scholars") in their second to last year of secondary school, with the program continuing for two years. Students are selected based on their commitment and motivation, with about 30 students at each school selected for mentorship. This application process means that students are more likely to be fully engaged in the program. Meanwhile, mentors are strong recent graduates from local universities in Uganda, and receive thorough training before being placed at partner schools. Each mentor at the partner school works directly with students to help build essential non-cognitive skills such as self-confidence, communication, and leadership.



Educate! Scholars working on their goat farming project that they created as part of the Educate! Club.

Students often do not receive opportunities to build such relationships or receive both professional and personal counseling, and the goal is to empower students to have the confidence to create a positive impact in their communities.

A second key component of the program is experiential learning. The mentors teach a more formal, two-year entrepreneurship and leadership course to students, where practical business skills are developed. Each mentor works with four schools with 30-40 students, spending 4-6 hours/week on-site. Scholars are also required to start their own business that tackles an issue faced by their community. Support for this is also provided via student-run after-school 'Business Clubs', where mentors play a key role in advising students on the day-to-day mechanics of effectively running a business. Each mentor is also responsible for bringing in experts in different industries to provide students with more hands-on, specialized training. Students have started a variety of businesses over the years, including a piggery, a savings scheme, and a soap making business.

Lastly, Scholars continue to receive mentorship and guidance after they graduate. Educate! has developed a strong alumni program that sustains ties between the mentors and Scholars. Additional mentors are on call to provide targeted advice to graduates, and peer-to-peer learning and networking is encouraged via regional meetings.

The key emphasis of Educate! Experience is to provide youth with a relevant skill-set to become leaders, and to empower them to reach out and impact others. Although not all students may go on to become entrepreneurs after they graduate, the mentorship and business knowledge they receive are assets as they seek employment. Most

¹³¹Peri-urban schools are defined as those that are on the outskirts of urban areas.

importantly, the self-confidence and other non-cognitive skills fostered via mentorship will likely have a lifelong impact.

Teacher as Mentor (TAM) Program

Through this program, Educate! helps teachers and administrators further support youth and entrepreneurship within the school setting. For instance, this includes guidance on teaching the entrepreneurship curriculum and training on providing mentorship to students. Unlike Educate! Experience, no Mentors are sent into schools and Educate! does not deliver any element of the entrepreneurship program. Instead, 'Teacher Support Coordinators' work to help schools implement the key components of the program.

The TAM program today reaches 18 schools in Uganda. Educate! views TAM as a way to develop a long-term culture supportive of entrepreneurship within the school setting. TAM will eventually be crucial in scaling up the key pieces of the Educate! model, and ensuring scale-up and reach across the country.

National curriculum

With the support of the Ugandan government and the International Labour Organization (ILO), Educate!'s entrepreneurship curriculum has also been integrated into the national entrepreneurship curriculum in Uganda. Roughly 25,000 students are currently studying this curriculum at the secondary level.

Costs

Educate! costs vary by program; in both programs however, capital and infrastructure costs are minimized as Educate! partners with existing schools. The Educate! Experience costs roughly \$150/student/year, and includes the cost of the mentors and materials used within the program. At present, the program is offered at no cost to both students and schools, as Educate! has wanted to build up its credibility and demonstrate the impact of the program. However, beginning next year, each school will be required to pay up to \$200/year for the program, with the goal of growing the cost annually, although it will still be offered free to participating students.

Meanwhile, the cost of running the TAM program is significantly lower, given that Educate! does not incur the cost of mentors. The program costs roughly \$50/student/year, with each school contributing \$40 per year. Bulayev recognizes that this is a token sum, and concedes that in both programs, cost structures are not optimized to permit scale-up.

Nearly all of Educate!'s revenue comes from donor funding, and key donors include the Segal Family Foundation, the Barr Foundation and Halloran Philanthropies. The annual operating budget stands at roughly \$1 million.

Going forward, the organization's priority is to increase the cost-effectiveness of both programs without compromising their quality and impact. One mechanism for this in the TAM program is to increase the number of schools served by each mentor; currently, one mentor serves four schools, and Bulayev believes that in time, each mentor can serve as many as 8-16 schools instead.

Impact to Date

Educate!'s vision is to develop young leaders in the country who are empowered to create a positive impact in their communities. With this goal in mind, the organization strives towards improving four outcomes: (i) self-efficacy, (ii) leadership initiative and community participation, (iii) small business creation, and (iv) livelihoods. Progress towards these outcomes is then tracked on a regular basis using appropriate indicators, as seen in the figure below.

The Educate! Experience has prioritized monitoring its results in a rigorous manner: mentors are required to share data on student attendance and information on the mentorship session on a biweekly basis, and provide an assessment of each student each term. Meanwhile, Educate! staff assess each mentor three times a term, and audit the mentors' self-reported data. Principals are also required to fill out a survey on the program every term. Meanwhile, students are also tested to measure the impact of the program; tests are conducted at the beginning of the program, the end of the program, and on a yearly basis (for two years) after the program's completion. Results show that to-date, Educate!-supported youth have started 284 enterprises that have earned thousands of dollars in revenue and have created over 50 jobs.

Meanwhile, the TAM program is assessed by measuring a mix of outputs and short-term outcomes to ensure that the outputs delivered via Educate! Experience are also being delivered via the TAM program. For instance, this may include recording whether Business Clubs were formed, revenue from the enterprises established, or whether mentors asked the appropriate questions in their lessons.

Educate! is now also developing a tool to measure the psychosocial development of the students that participate in its flagship program. When ready, the tool will be a survey that will measure personality traits and motivations (particularly related to leadership and entrepreneurship) and also incorporates an economic status index with

Table 11: Measuring Educate!’s impact

Research	Program Component	Outcome	Indicators
"94% of Ugandan youth live below US\$2 a day, giving it the highest poverty incidence among youth in Sub-Saharan Africa."**	Out-of-school networks →	↑ Livelihoods	Total value created (income + wages paid)
			Employment rates (formal and informal)
			Youth poverty index
"Youth completing higher secondary education (\$5–\$6) earn the same amount of income as those with no education."**	Entrepreneurship curriculum & experiential teaching methods →	↑ Small Business Creation	# of small businesses started & income earned
"Youth participation is limited in part as a result of widespread negative stereotypes of youth in the community."**	Enterprise/service experience →	↑ Community Participation	# of community initiatives started
			# of community members participating in initiatives
"[Youth] who reported having had a mentoring relationship during adolescence exhibited significantly better outcomes within the domain of education and work, mental health...and health."***	Mentorship →	↑ Self-Efficacy	General Self-Efficacy Scale score
			(Other psychosocial indicators in development)
"The large majority of stakeholders interviewed, ranging from government officials to private sector representatives, observed that young people leaving secondary school were not well-prepared for the workplace."****	Education Reform (Advocacy & In-School) →	↑ In students receiving practical and relevant education	# of schools with an Educate!-trained teacher
			# of schools with formalized mentorship structures
			# of schools with business clubs for enterprise experience
			# of schools adopting Educate! or national entrepreneurship curricula

*Africa Development Indicators 08/09, World Bank.
 **Problem or Promise? Harnessing Youth Potential in Uganda. Banks (BRAC Uganda). 2012
 ***Mentoring Relations & Programs for Youth, Rhodes & DuBois, 2008
 ****YouthMap Uganda: A Cross-Sector Situational Analysis on Youth in Uganda, International Youth Foundation, 2011.

indicators that reflect changes in the economic status of both youth and households.¹³² These metrics will provide a quantitative method to measure the increased levels of empowerment and entrepreneurship as a result of students participating in the Educate! Experience.

Lastly, the Educate! Experience program is currently undergoing a randomized controlled trial (RCT) led by Innovations for Poverty Action. This will provide a more rigorous understanding of the program’s impact, which will greatly support the potential for future funding and scale-up.

Success Factors and Lessons Learned

Given the crucial need to support entrepreneurship training within sub-Saharan Africa, Educate! offers some valuable lessons. These lessons and success factors are discussed below, with an effort made to distinguish the context-specific factors and general factors for success.

Although the organization is relatively young, it is placing a priority on results measurement and capturing the impact of its mentorship on students. The development of the innovative psychometric tool also has the potential to try to quantify the non-cognitive impact of various skills

¹³²Measuring Educate! Scholars’ Psychosocial Development. Educate! materials.

development programs, and allow an understanding of the most effective mechanisms to support characteristics, such as leadership and communication, that are highly sought after by employers. These metrics, together with the results from the RCT, will offer additional lessons in the coming years.

Contextual Factors for Success

Buy-in and support from local stakeholders

Educate! has been fortunate to receive support from local education administrators and policymakers in Uganda. Unlike many programs that set-up their standalone centers and face high capital costs, Educate! has instead partnered directly with local schools, using existing infrastructure and minimizing these costs. The organization has also deliberately worked to cultivate the support of local stakeholders and showcase its results to build its brand and credibility. Bulayev and his team managed to incorporate their entrepreneurship curricula into the national curriculum, and the TAM program now directly supports teachers and administrators in effectively teaching the subject.

The worryingly high youth unemployment rate has also solidified the stakeholder support, and Educate! has been able to develop partnerships with relatively minimal bureaucracy and friction.

General Factors for Success

Demand-driven experiential learning model

The experiential learning model – where students learn entrepreneurial skills in a hands-on manner and are actively supported to start their own businesses – has led to greater engagement and commitment from its ‘Scholars’. Unlike the traditional classroom model in Uganda, Educate! allows its Scholars to apply what they learn in a meaningful manner. The program allows students to take ownership over their work, with youth given the freedom to choose the enterprise they want to start, and mentors providing support throughout the business development process.

Recruitment of strong mentors and program staff

Bulayev credits the mentors and staff on the ground for a large portion of the model’s success. The experiential learning model is not commonplace in Uganda, and Educate!’s co-founders recognized that selecting strong mentors would be key to the program’s success. It was not

only crucial for the mentors to be local Ugandans so that students could relate to and look up to them, but they had to understand the Educate! vision and model. This latter point is crucial, as mentors interact with the other teachers at the schools, and need to be able to share the Educate! story and experiential learning model. In effect, Educate! mentors play a role in transforming pedagogy, and help increase the buy-in from teachers and administrators.

Given the importance of its staff, Educate! is now working to ensure that it can retain its talent. Staff attrition is around 10% in 2012-2013, and the organization has been working to create clear career pathways and ensure top staff are being trained to step into roles of greater responsibility. Staff salaries are also competitive by industry standards.

Educate! also plans to tap into the growing Educate! alumni base. This pool of youth could serve as mentors or as ‘foot soldiers’ to spread knowledge and awareness about the program. Indeed, having gone through the program themselves, these youth could serve as strong resource points for current students and offer guidance and counseling about developing the skills needed for post-secondary school opportunities. Some alumni are also already using their own funds to teach a condensed version of the program to others, so ‘paying it forward’.

Challenges

Educate! has managed to successfully demonstrate its basic model and concept, but now faces some key issues as it starts to try to achieve scale. The majority of these concerns are specific to the life-stage the organization has now reached (for instance, retaining talented staff, as discussed in the section above), and are pertinent issues if the model were to ultimately expand to other countries. However, one consideration – changing the perceived negative attitude towards entrepreneurship – is a broader issue that needs to be tackled.

Negative perception towards entrepreneurship

A recent study remarks that there is often a pervasive negative attitude towards entrepreneurship in many African countries, with society often valuing other ‘professional’ courses or career paths.¹³³ Indeed, Bulayev has reported the same experience in Uganda: there is often resistance from families if their children want to pursue entrepreneurship. Educate! hopes to counter this attitude by quantifying the impact created and developing a brand synonymous with job creation and improved livelihoods.

¹³³Omidyar Network. 2013.

Financial sustainability

As discussed in the 'Costs' section above, the organization realizes that its current cost structure doesn't permit scale-up across the country. Given that the concept of the model has now been tested, with efforts underway to quantify its impact, Bulayev and his team have now prioritized trying to reduce the operation costs without compromising quality. For instance, this could involve schools contributing a greater portion of the costs or mentors working in a greater number of schools.

Conclusion: Scaling the model in coming years

Educate!'s 10-year vision is to reach 100,000 students across 1,000 schools, and to be able to replicate the model in at least three other countries. The Educate model has already been adapted and replicated by AfricAid's Kisa Project in Tanzania, and there is significant potential to replicate key components of the model in other countries in Africa or elsewhere.

It is clear that achieving this level of scale-up will involve increasing the cost-effectiveness of its programs. As mentioned earlier in this analysis, schools will need to be required to pay a growing portion of the costs in the coming year. The results from the RCT could help Educate! garner this financial support, but it will be interesting to see whether this change will have an impact on the take-up and popularity of the program.

However, the revenue from schools will not be sufficient to cover the bulk of the operating costs incurred and ensure financial self-sufficiency. The flagship Educate! Experience program is currently offered free to all students, but in time, one option may be to start charging a small fee; a potential option could even be to structure this as a 'loan' which the student repays upon graduating and earning an income. Price differentiating between different income quintiles could be also another option. Indeed, Educate! is already in the process of testing different price points and exploring the optimum cost to charge for both TAM and the Educate! Experience.

It may also be helpful to explore whether the different components of the model could be implemented in a modular fashion. For instance, the student-run business clubs and the Teacher as Mentor (TAM) program could be tailored as stand-alone programs, and may be more suited to scale-up and replication. Meanwhile, the Educate! Experience could be possibly offered as a complementary program at certain schools.

Ultimately, empowering youth and fostering the skills required for effective entrepreneurship is particularly crucial in today's climate, given the skills shortages and elevated rates of youth unemployment. While further adjustments may be needed to increase the cost-effectiveness of the model – which in turn may involve making pieces of the program more modular – the vision and core principles of the Educate! model has the potential to be replicated in not only other parts of sub-Saharan Africa but also in other developing countries.

Improving the Quality and Relevance of Middle School in Senegal: A Case Study of FHI 360's 'Education de Base' ('Basic Education') Program!¹³⁴

In 2000, the Government of Senegal (GOS) launched a 10-year plan of action to support the realization of the Millennium Development and Education for All Goals by 2015. This *Programme Décennal de l'Éducation et de la Formation* ('Education and Training Development Plan' or PDEF) established a framework to guide the continued expansion of the education sector. However, while the expansion was successful and enrollment levels continued to rise, it became increasingly apparent that education quality was actually deteriorating and that efforts to improve the quality would be needed simultaneously to ensure that education resources were not being wasted.¹³⁵ Analyses cited reforming curriculum, increasing and improving teacher training, reducing repeat and dropout rates, and equipping schools with better teaching and learning materials as priority areas for improving quality in education at the secondary level.¹³⁶

Meanwhile, with the expansion of access, in particular at the primary level, the growing influx of students into secondary level schools became a pressing concern. Like much of the rest of Africa, the secondary level was now the level from which most Senegalese youth would be entering the workforce, highlighting the importance of ensuring that these youth are equipped not only with basic literacy and numeracy skills, but also transferrable skills such as critical thinking, communication, flexibility, and other skills relevant to the 21st century.¹³⁷ However, by the middle of the PDEF's implementation period, middle school pass rates remained low and dropout rates stubbornly high,¹³⁸ and an outdated curriculum meant that many students were leaving school without the skills necessary to obtain productive and lasting employment.

The Education de Base ('Basic Education' or EDB) project seeks to address these challenges at the national level by reforming the secondary-level curriculum, introducing

alternative teaching methods and tools, and encouraging a transparent and well-governed educational community to ensure that resources are effectively managed. While many innovative models identified in the ISESE Phase I research approach the skills gap through a particular approach or targeting a specific geographic or demographic population, EDB is unique in its national-scale implementation, the comprehensive nature of its curricular and instructional reform, and its systemic approach to improving skill development at the secondary level. It is for these reasons that it was selected as the Africa Winner of the ISESE competition in 2012.

This case study describes the key components of the EDB program, its costs, impact to date, factors for success and key challenges it has faced. It draws upon EDB's ISESE competition entry materials, the program's website, internal documents, and conversations with the project's Chief of Party.

Program Overview

Education de Base (EDB) is a 5-year, \$33.5 million project funded by USAID and implemented in full partnership with the Ministry of Education (MOE) and other local partners. The program's self-described goal is to create an "engaged and efficient education community" and it champions the values of equity, relevance and transparency through five key components:

1. **Curriculum and Pedagogy Reform:** improving the quality and relevance of middle school curriculum content and delivery;
2. **Information and Communication Technologies:** enabling schools and students to enhance teaching

¹³⁴This case study draws heavily on an interview with EDB Chief of Party Guitele Nicoleau, conducted on March 27, 2013, and on internal program documents shared by Nicoleau through correspondence.

¹³⁵DeStefano, Joseph et al. 2009. *The Quality of Basic Education in Senegal: A Review*. Prepared for USAID/Senegal report on education quality in Senegal.

¹³⁶Niane, Boubacar. 2004. Innovation and reform to improve basic education quality in Senegal. Background paper prepared for the Education for All Global Monitoring Report 2005: The Quality Imperative.

¹³⁷Results for Development Institute. 2012. *Innovative Secondary Education for Skills Enhancement, Phase I Synthesis Reports*.

¹³⁸DeStefano et al 2009.

Table 12: EDB Case Study Highlights

Approach	The Education de Base (EDB) program seeks to reform secondary level (or 'middle school') curriculum, introduce alternative teaching methods and tools, and encourage a transparent and well-governed educational community to ensure that resources are effectively managed. It implements these efforts through a system-wide approach at the national level and in full partnership with the government of Senegal.
Governance and Structure	The Education de Base (EDB) program is implemented by the non-profit organization FHI 360, primarily through its office in Dakar with operational and some programmatic support from its headquarters in Washington, DC. The program is implemented in full partnership with the Government of Senegal and USAID's Senegal mission.
Key program elements	The EDB project is composed of 5 main components: (1) national-scale curriculum and pedagogy reform for middle schools; (2) integration of information and communication technologies in middle schools; (3) improving governance and management of middle schools; (4) engendering public private partnerships to improve middle school education; and (5) working to ensure vulnerable children have improved access to quality education.
Cost and finance	EDB's overall budget is \$33.5 million over 5 years, funded by USAID. EDB's curriculum reform efforts, including the ICT component, cost \$9 million to implement. Over \$2 million was raised from the private sector to support the curricular reform efforts.
Impact to date	Between its first and fourth year, EDB curricular reform activities have been implemented in 295 schools. In the fifth year, the program was extended to all schools in the 10 target regions of the country through a generalized teacher training program. Data suggests that over 500 middle schools in these 10 regions have benefitted from the program. The project has reached over 200,000 students, 9,000 teachers, and 2,500 school administrators through its curriculum, ICT, good governance, and vulnerable children components.
Underlying factors of success	The success of the EDB project rests largely on its determination to build the sustainability of its innovations through strong partnerships and the creation of ownership among national and local stakeholders. FHI 360 played the role of facilitator by encouraging collaboration among these actors, helping to develop a well-defined structure and strategy for reform, and providing technical assistance.
Challenges	One of EDB's key challenges arises from one of its key strengths, namely, trying to coordinate and align the interests and demands of multiple stakeholders, particularly within the government itself. Other challenges result from its project-based funding and the effects of funding-driven interests inherent in the international aid culture.
Future sustainability	EDB is currently working to ensure that its activities and impact are financially and operationally sustainable in the long term after the project's end in September 2013. This involves shoring up private sector commitments through the creation of a Private Sector Education Foundation, institutionalizing reforms on a national scale through policy change, and putting mechanisms in place for continuing activities such as teacher training and vulnerable children outreach.

and learning through access to ICT resources, including infrastructure and training;

3. **Good Governance and Management:** building the capacity of actors involved in education governance (local ministries, school boards, parent associations, and others) to collaborate and effectively oversee administration of middle school resources;
4. **Public-Private Partnerships:** facilitating partnerships between public and private sectors to improve middle school and Koranic school education;
5. **Vulnerable Children:** ensuring that vulnerable and marginalized populations in Senegal (including girls) have access to high quality, relevant education and training.

The project works with public schools, including community daaras (Koranic schools) in 10 of the 14 regions in Senegal. To date, it has reached almost 9,000 teachers and 200,000 students in over 500 middle schools and 25,000 vulnerable children in daaras and other informal education centers in Senegal. In the final year of the project, a Compendium of Resources containing all of the project tools has been distributed to all 1300 middle

and high schools, 355 daaras, school officials, parent's associations, representatives of elected officials, and other partners of the project, to equip them with EDB's innovations and best practices for use moving forward as the project comes to a close.

Curriculum and Pedagogy Reform

EDB's curriculum and instruction reform component is one of the project's flagship programs. It is unique in its comprehensive nature, national scale, and support and cooperation from the government of Senegal. The curriculum reform process began with a participatory mapping exercise to assess the current state of curriculum and pedagogy in Senegal, and then to define what the objectives of the curriculum should be, including a set of core competencies that every student should possess by the time they complete middle school.

A revised curriculum was then developed, grounded in a student-centered approach and focused on 21st century skill development. The curriculum was developed to be competency-based, with updated content relevant

to today's knowledge and employment demands. This process engaged a multitude of stakeholders, including the MOE, curriculum development authorities, the inspectorate, the teacher training school, and other government bodies, businesses, teacher associations, school administrators, parent associations, and other non-state actors.

It was also recognized that any reformed curriculum would need to be imparted through an alternative, student-centered pedagogy focused on learning rather than teaching. To this end, EDB developed supporting materials for each subject, including curriculum guides by subject, pedagogical guides, student handbooks, multimedia tools, and ICT support. To ensure that materials are used effectively, EDB implemented a teacher training program to assist schools in delivering the new curriculum, and also trained principals and other school administrators on instructional leadership, good governance, and ICT usage. Continuous assessment methods were also introduced through the updated instruction, accompanied by an assessment toolkit. For the schools not reached by the project, the teaching and learning materials used in these teacher trainings are publicly available via a professional development website developed by the project (discussed below).

Recognizing that a one-off training of teachers would be insufficient to produce lasting change in teaching and learning, the EDB piloted an intensive teacher training program, Formation Rapprochée Intensive ('Close Intensive Training' or FRI). The program was implemented in 40 schools during the 2011-2012 school year and consisted of an intensive 4-hour training every two weeks by pedagogical experts to train teachers in the usage of the EDB pedagogical guides and the continuous assessment toolkit. The training was collaborative and involved expert guidance as well as peer feedback mechanisms. The FRI also had a built-in monitoring and evaluation scheme, designed to provide feedback on the success of the training and pedagogical guides by comparing student assessments in math and science as compared to control schools without the FRI.

Finally, EDB has promoted the institution of school-based activities, including student governments and World of Work (WOW) clubs, to encourage the development of civic awareness and participation, and a career awareness element for students. These programs orient students to their socio-economic environment and to life skills, which have been identified as a key component of the reform process.

Information and Communication Technologies

The ICT component of EDB enables schools, administrators, and teachers to access innovative teaching and learning tools by introducing computer labs in middle schools across the country, and provides students with critical 21st century skills. This includes the provision of infrastructure (hardware and software), Internet connectivity, IT support, and training of two teachers as school-based ICT coaches, who in turn train teachers and students in each participating school to use the computer and Internet. In each school, an ICT Steering committee is set up to oversee governance of the equipment and an ICT Student Club is set up to facilitate usage. These clubs provide leadership opportunities for students, and a forum for the development of communication, teamwork, and entrepreneurial skills.

Each of these schools is also supported to create a school website, which is managed by the ICT clubs and supervised by trained teachers. The websites provide a forum for greater communication and transparency in school affairs, including postings from student newspapers, student government reports, and school management committee and budgets reports. In addition to school websites, EDB has also developed a portal for professional development in education, which provides a collaborative space for teachers and administrators to share and access digital content and other resources. Through a training of trainers structure, teachers are taught how to integrate these technology-driven tools into current pedagogical approaches.

To further spur the integration of ICT into teaching, learning and governance practices, EDB initiated the 'ICT Oscars', a national competition in which schools that have produced the best websites and have demonstrated use of their equipment in school educational and extra-curricular activities are offered prizes in a national ceremony. Largely supported by private sector funds, the 2012 ICT Oscars mobilized the participation of over 200 schools, and in 2013, coinciding with the end of the EDB project, over 295 schools are participating, some of which are not EDB schools. The MOE, the Ministry of ICT, and the private sector have expressed support and a desire to continue this innovation beyond the project's tenure.

Good Governance and Management

EDB works with school governance systems to engage the full spectrum of school stakeholders – including elected officials, local school boards, school administrators, parent associations, and other community associations – to increase effectiveness and efficiency, transparency and accountability of middle school management, and ensure

that they are responsive to the community's needs. After a thorough and participatory audit of the governance and management needs of middle schools, EDB developed an action plan for good governance in education in partnership with the MOE.

Central to the action plan is building the capacity of key education management actors, including training on communication and leadership; educational policy and governance; project planning and management; administrative and financial management; and public dialogue. Strategic advisory sessions are also organized to provide targeted and context-specific support to local education boards, community organizations, parent-teacher associations, and school administrators. Finally, public dialogue efforts at the national and regional levels are supported to promote and reinforce the importance of good governance and management of educational resources.

Public Private Partnerships

EDB aims to foster an engaged and efficient education ecosystem by involving the private sector in three important ways. Firstly, the private sector has been engaged to provide financial or in-kind contributions to schools in the form of infrastructure improvement, ICT materials and maintenance, and training programs. The private sector was also engaged in a consultative process when evaluating and reforming middle school curriculum to ensure that the skills developed would be relevant to the demands of the job market. Finally, business are engaged to support school WOW clubs and other career development activities, including hosting students at company visits to introduce them to the world of work. Underlying all private sector engagement efforts is the goal of creating improved education programs that are self-sustainable after the end of the EDB program in 2013.

Vulnerable Children

Responding to Senegal's high out-of-school youth problem, EDB targets poor and marginalized populations to ensure that quality education is provided to those who are particularly at risk. EDB has worked to rally national and state governments, local elected officials, and national opinion leaders to champion the cause, publicly committing to improving the situation of these children through targeted interventions.

Central to efforts to support vulnerable populations is the project's support to over 350 daaras, or Koranic schools. EDB introduced a three-year program that provides daaras with a volunteer teacher who teaches French, math, history, and life skills to children 6-12 years old, with the goal of equipping them to transfer to formal schools at the

end of the program. In addition to strengthening teaching capacity, EDB has rehabilitated the teaching and learning spaces of these schools, built latrines, and put in place daara management committees to support the long-term management needs of these schools. The project also supports the development of vocational education and training interventions for 13-18 year-old children in daaras and for school dropouts, and works to return street children to their homes through the development of life skills projects implemented by local community organizations. Finally, more broadly in middle schools throughout the country, school dropout prevention councils have been created, to offer a structured approach to recognizing and supporting at-risk children.

Costs

EDB's activities are funded primarily through the USAID cooperative agreement. Given the wide range of inputs to the various components and activities, it is difficult to estimate a per-student cost of this program overall. Establishing the ICT centers costs approximately \$10,000 per school, or approximately a \$25 per student one-time cost. The MOE has brokered an agreement with utility companies to provide power and connectivity to these centers at a 50% reduced rate, and cost-share agreements with ICT vendors, which contribute to reduced costs for materials, training, and other support.

The curriculum reform innovations cost approximately \$4.2 million and have reached 400 schools and 160,000 students. This represents a US \$26 per student cost expended over the course of the 5 years of the project.

Impact to Date

Given EDB's strong partnerships with the government and the resulting opportunity to implement on a national scale, the project has had widespread impact on Senegal's middle school system over the past five years. The project's Monitoring & Evaluation plan tracks impact in all five project components; monitoring indicators ranging from the number of schools instituting new curriculum and materials, number of teachers, administrators, parent associations, and other bodies trained, and the number of schools with functional school websites, among others.

By the numbers

Through its improved curriculum and instruction component, over 400 schools have been reached by the project, but anecdotal data suggests that all 1200 schools in Senegal are using the curriculum materials. Through the

project's fourth year (ending September 2012), the project had trained 7,835 teachers to use the revised curriculum and relevant educational materials, with 1,022 other school principals, administrators, and pedagogic advisors trained on how to support teachers in implementing the new curriculum.

More broadly, through the good governance component, 2,500 school administrators and elected officials and over 5,000 parents have been trained on the better management and implementation of educational resources. Also through 2013, 295 schools have been equipped with computer labs, Internet connection and ICT support, including the institution of 295 ICT clubs and over 3,000 teachers and administrators trained on how to integrate ICT in teaching, learning, and school management. To support the ICT programs, businesses have contributed over \$2.5 million in in-kind or cash donations since the project's inception.

At the student level, EDB estimates that 50,000 students have been exposed to the world of work through WOW clubs, career days, and other activities designed to encourage visioning of future goals for students and focusing on development of transferrable skills. The project also estimates that 38,000 vulnerable children now have access to better quality education through the project's work with daaras and efforts to engage street children and other at-risk populations.

Teacher Training Impact

Through the FRI program, teachers in 40 schools participated in the intensive training program, and were evaluated in comparison with 40 schools participating in the EDB program more broadly, as well as 40 schools not involved in EDB. While no statistically significant impact on student test scores could be found between FRI and non-FRI schools, the project found positive correlation between FRI schools and usage of learner-centered teaching methods, parent knowledge and understanding of critical thinking and good governance in schools, and of teachers helping struggling students to improve.

Additionally, and perhaps even more importantly, the FRI generated great enthusiasm among teachers in FRI and non-FRI schools alike, driving teachers to the project's online professional development portal and instituting independent teacher support systems within schools. Because of the high demand, the EDB project has supported the generalization of the FRI model through the use of a zonal approach, enabling all schools in a region to participate in these half-day trainings. While the project supports the trainers' travel to the training site, teachers pay their way to attend, and the host schools ensure the availability of snacks and refreshments.

At the Policy Level

Perhaps EDB's greatest successes have been the adoption, and in many cases championing, of reforms by the Senegalese government. This speaks to the program's overall sustainability as well. For example, despite the inconclusive effects of the FRI on student test scores, the MOE has adopted this training model and plans to institute it as a structure for education professional development at the national level. The MOE has also championed, and in 2012 issued national ministerial decrees for, two EDB initiatives, the student government programs and the student dropout prevention councils, both of which have had high rates of adoption in middle schools throughout the country since the decrees were adopted.

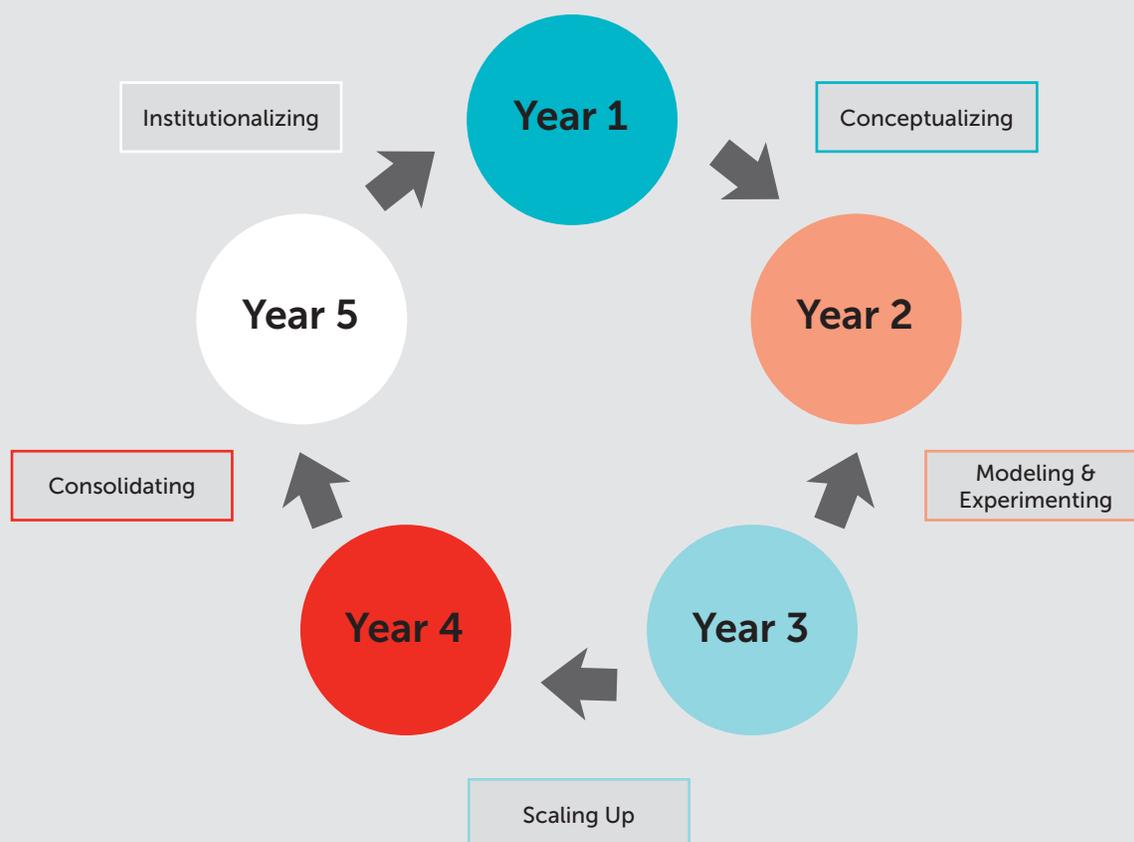
Success Factors and Lessons Learned

The success of the EDB project rests largely on its determination to build strong partnerships and create ownership among local stakeholders. While projects funded by bilaterals like USAID and implemented by large international development contractors like FHI 360 have a specific set of inherent challenges (to be discussed below), the EDB project sought to counter these challenges by ensuring that actors at every level in Senegal's education ecosystem, from national to regional to local, were invested in the project from the beginning. Instead of driving the process from the outside, FHI 360 played the role of facilitator by encouraging collaboration among these actors, helping to develop a well-defined structure and strategy for reform, and providing technical assistance along the way.

Key Partnerships

The most important partnership is that of the Government of Senegal, and in particular the Ministry of Education. The project responded to an existing and expressed need of the MOE to reform, or as some might argue, build its middle school education system, and decided to engage external support to design and implement this reform. In its role of facilitator, FHI 360 has provided the ministry with a "scaffold" for innovation: drawing upon national priorities and innovations and assisting the ministry in creating a framework for implementation. This can be seen most prominently in the development of the reformed curriculum and instruction guides, where many different actors within and outside the ministry played a role in defining the content for the curriculum, and FHI 360 played the critical role of moderating between sometimes competing minds to steer the process towards a clear and comprehensive outcome.

Figure 2: Phased approach to EDB implementation



Source: Guitele Nicoleau. 2013. Accessing quality middle school education through curricular reform: the case of USAID/Basic Education Project—Senegal. Presented at the 57th Annual Conference of the Comparative & International Education Society, New Orleans, March 2013.

Another key partnership was with actors at the local level such as rural and municipal councils, school boards and administrators, and civil society organizations such as parent-teacher associations (PTAs) and community based organizations (CBOs). The role of these organizations was crucial not only in the consultative process for a curriculum reform that was responsive to local needs, but also importantly in getting this curriculum and teacher training, and other elements of the reform such as student government, instituted in schools with the full buy-in of the schools and communities.

Finally, the third major partnership was with Senegal's private sector. As described previously in 'Program Overview', engagement of the private sector was itself defined as one of the major components of the project, but the outcomes from this engagement led to greater

success in all five components as well as increased chances for sustainability in the longer term. For example, a \$1.3 million donation from Sonatel Foundation enabled an additional 104 schools to be equipped with ICT infrastructure and training and Intel donated equipment to furnish computer labs. In addition to supporting the ICT programs, the project has worked to create a Private Sector Education Foundation, which will carry forward a number of EDB-initiated activities, including continued support for the community-based daaras program and equipping more middle and high schools with ICT materials through a "digital schools program." The Foundation will also support World of Work activities such as the two week campaign A la découverte de mon métier ('career discovery'), where professionals visit schools to talk about their work and career trajectory.

Clear-cut Strategy from the Beginning

Another key factor to EDB's success was its clear vision from the very beginning for a successful implementation strategy. The strategy involved a phased approach (see Figure 1), to ensure that reforms were carefully thought through, tested, and scaled up after appropriate adjustments were made.

In the first, "conceptualization" phase, the consultative process with a variety of stakeholders led to creating a plan for reform that was responsive and well defined. The second phase, "modeling and experimenting", involved testing this plan with a small group of schools to gauge receptiveness, capability of schools and communities to respond to and embrace the reforms, providing support and making adjustments along the way. The third phase, "scaling up", involved taking these tested models to a larger scale, again monitoring closely for issues cropping up related to scale, new communities and geographies being reached, and providing assistance to adjust implementation strategies. The fourth phase, "consolidation", involved taking lessons learned from these testing and scale-up phases and streamlining the model at the national scale, and the fifth and final, "institutionalization", phase involves ensuring that the model is sustainable both at the administrative and financial levels once EDB support has been phased out.

Critical to the success of this phased approach has been an eye to the final "institutionalization" phase from the very beginning. This involves building partnerships at the outset to create the ownership necessary to carry the reforms forward after the project ends, and the engagement of the private sector to create financial sustainability for components of the project that are unable to be fully self-sustaining, such as the ICT component. Indeed, the MOE's new education program *Programme d'Amélioration de la Qualité, de l'Équité et de la Transparence* ('Quality, Equity, and Transparency Improvement Program' or PAQUET), the follow-on project to PDEF, builds upon and extends many of the innovations of the EDB project.

Continuing Support throughout Implementation

Finally, alongside this well-designed implementation structure, EDB has found success through its commitment to providing continuing technical support and dialogue throughout the conceptualization and implementation process. In addition to formal teacher trainings and governance/management workshops, the project played a continual advisory role to the MOE, regional and local elected officials and education councils, and to individual schools implementing reforms. This continued support

during every phase of the reform roll-out ensured not only that actors were receiving the assistance they needed to effectively implement, but also ensured that the project was able to monitor results and intervene with any mid-course adjustments as needed.

Challenges

One of the primary challenges faced by the program has stemmed from one of its strengths: ensuring that the input and interests of all involved parties are respected. This particularly came to the fore during the consultative curriculum reform process, where elements even within the Senegalese government had difficulty agreeing on inputs to the new curriculum. Agreement had to be brokered between the MOE, the national teacher's faculty, the directorate for educational reform, and the national education curriculum department, with inputs from external interests, such as businesses and civil society, as well. Because the curriculum department officially holds the singular capacity to approve changes to the national programs, it was necessary for EDB to carefully mediate between this body and the other interested parties to ensure that the final product was responsive to as many needs and demands as possible.

In addition to coordination challenges, EDB encountered a challenge faced by most USAID-funded projects: the pecuniary environment engendered by "aid culture" in countries such as Senegal, which receive a large volume of international aid money. Projects such as these often encounter challenges such as individuals participating in trainings or other activities based on level of per diem offered, or organizations wanting to partner with the project for their own financial gain rather than to further the objectives of the program. However, the project's strong partnership with the MOE helped to mitigate some of these effects, and the activities and assistance offered have been shown to be highly valued despite the aid culture (for example, teachers paying their own way to attend professional development sessions and school principals using their own funds to support the activities).

Finally, the project encountered budget and timeline constraints experienced in many USAID funded projects. For a project such as EDB that sought to deliver major changes in educational quality on a large scale, certain activities required further investment or time to develop than was originally envisaged. While USAID-funded projects are generally difficult to increase in both budget amount or duration of the project, the project now faces even greater difficulty doing so given recent realignment of USAID strategies with regards to education that no longer prioritize the middle school and vulnerable children focus of the EDB project.

Conclusion: Long-Term Sustainability and Potential for Replication

With the cessation of USAID funding in September 2013, EDB faces the challenge inherent to any project fully funded by international donors with a fixed budget and timeline: how to make the activities and impact of the project sustainable over the long run?

As discussed in the section on 'Impact', the government's adoption of the revised curriculum and several accompanying policies, such as the school government and dropout council decrees, means that these elements of the EDB project will have lasting effect on a national scale. The question now becomes how to sustain the various activities initiated by the project that will no longer be able to count on USAID funding to operate.

The partnerships built over the life of the project leave hope that many of these activities will be carried forward. The government has committed to continuing the teacher training work, adopting its approach into its national training scheme. The MOE and other state agencies in

charge of ICT, including *l'Agence d'Information de l'Etat* ('State Information Agency' or ADIE) and the Ministry of ICT, and some private sector companies have made commitments to maintaining the ICT program, at least in the short term. However, the sustainability of other activities such as the daara educational program and dropout skill-building programs, currently implemented by CBOs with few resources to carry-on independently, will be dependent largely on the establishment of the Private Sector Education Foundation, which in theory will help fund these activities.

Finally, the success this project has found in working in close partnership with the Ministry of Education to institute national-scale reform speaks to high potential for replication in other countries. This replication would depend on similar buy-in from local stakeholders, and in particular, the relevant ministries without which the Senegal project would not have been successful. However, if the opportunity arose where there was significant domestic support for comprehensive reform, recognition of the need for an external advisor and mediator among varying domestic interests, and a funder (even better, a local funder) willing to commit the necessary resources, this model could have significant potential for replication.



1100 15th Street, N.W., Suite #400
Washington, DC 20005
Tel: (202) 470.5737 | Fax: (202) 470.5712
info@r4d.org | www.r4d.org



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