Education for the 22nd Century:
How entrepreneurs can help bridge the education-to-employment divide
About ANDE

The Aspen Network of Development Entrepreneurs (ANDE) is a global membership network of organizations that propel entrepreneurship in emerging markets. ANDE members provide critical financial, educational, and business support services to small and growing businesses (SGBs) based on the conviction that SGBs will create jobs, stimulate long-term economic growth, and produce environmental and social benefits. Ultimately, we believe that SGBs can help lift countries out of poverty.

About SAP SE

As market leader in enterprise application software, SAP (NYSE: SAP) helps companies of all sizes and industries run better. From back office to boardroom, warehouse to storefront, desktop to mobile device—SAP empowers people and organizations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP applications and services enable more than 293,500 customers to operate profitably, adapt continuously, and grow sustainably. SAP’s Corporate Social Responsibility mission is to equip the world’s youth with skills they need to tackle society’s problems and thrive in the digital economy. This is achieved with focus on two programs: building the capacity of innovative social enterprises that put young people on the path to successful careers and building a skilled workforce for the IT sector with training and workforce development programs. For more information, visit www.sap.com.
SAP SE and ANDE partnered to promote a series of global roundtables on the role of entrepreneurship in helping close the gaps between education and employment; roundtables were held in Brazil, India, and Kenya. The roundtables focused on what education-focused entrepreneurs can do and are doing, and the challenges they face along the way as they seek to improve education-to-employment outcomes. These roundtables also sought to identify collaborative actions that corporations, governments, entrepreneurial-support organizations, and investors can take to close the gaps.

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EXECUTIVE SUMMARY

What are the gaps that keep young people from moving smoothly from education to employment? And can education-focused entrepreneurs ease the transition? Youth unemployment is a global problem, especially in developing and emerging markets. One of the reasons for this is the mismatch between employable skills and current approaches to education. Solutions are emerging to address the gap, but this is a complex problem that requires innovation in, and coordination between, the public and private sectors.

Identifying skills gaps that keep youth from securing jobs is an important part of the equation and has been researched extensively. But the role of how education-focused entrepreneurs in emerging markets can help bridge these gaps has gone under-explored. Recognizing this, the Aspen Network of Development Entrepreneurs, with the support of SAP SE, conducted roundtables, with approximately 35 experts attending each session, to tackle two questions:

1. What are education-focused entrepreneurs doing to address skills gaps and youth unemployment?

2. What challenges do they face in doing so?

The findings and recommendations that came out of these roundtables, as well as pre-roundtable research, are detailed in this report. This report explores the common gaps that prevent youth from meeting job requirements, where education-focused entrepreneurs are making (or can make) the biggest difference, and what unique obstacles these entrepreneurs face. The report concludes with recommendations for how government and public officials, corporations, capacity-development providers and NGOs, and entrepreneurs themselves can best work together to improve education and skill development for youth.

Common gaps found across countries studied:

- **Soft skills** like communication, critical and analytical thinking, and problem solving often top employers’ lists of lacking skill sets. Soft skills are also the most helpful in ensuring youth remain employable. Technical and cognitive skills are important, but soft-skill development should begin from an early age (as young as primary school) and be reinforced through training programs as youth get older and seek more specialized training.

- **Geography and gender** also matter in unemployment gaps. Youth in rural areas may not want to leave their homes for a training program in the city that comes with no guarantee of a job. And in some places, cultural expectations and gender stereotypes make it more difficult for women to enter the workforce. As a result, the global unemployment rate for young women is higher than for young men.
Bridging these gaps takes coordination from the public and private sector. It also requires innovators and disruptors, which is where education-focused entrepreneurs come in:

- The greatest opportunities for education-focused entrepreneurs currently lie in using technology to help companies reduce the cost of training programs, improve content, and improve delivery to reach more young people. Technology makes it easier to build upon existing models, adapt training programs to each company and user, and even mitigate the challenges of geography and distance. These digital platforms can be combined with in-person training efforts, incorporate soft-skill development, and even reach marginalized or at-risk youth.

- Entrepreneurs play a role as connectors, bridging the coordination gap. Many of the enterprises examined in this report build connections between educational institutions or training programs and employers to make the transition from education to employment go more smoothly.

- They act as innovators to bring in new ideas and solutions. New training and education methodologies targeting marginalized groups and using innovations in digital games to complement apprenticeship programs represent just some of the ways that education-focused entrepreneurs are making a difference.

While the opportunities for these entrepreneurs are great, they also face a distinct set of challenges:

- **Getting started**: access to finance, developing an in-depth understanding of the education and skill-development market (including the needs and realities of working in education), and finding the right price point for products or training programs were all identified as key obstacles to getting started.

- **Scaling up** programs while maintaining the quality and personalized aspect of training programs is a perpetual challenge.

- **Measuring impact**: many education-focused entrepreneurs struggle with knowing what to measure and how to do it. Yet it is important for understanding what works and what does not, as well as being able to scale models effectively.

- **Managing government relations**: because education is often seen as a public good, federal and local governments usually manage its design and delivery. It can be difficult for entrepreneurs to work with these institutions or break into the education space. Each country where the roundtables took place has a different set of constraints and opportunities with regards to its government.
The recommendations outlined in this report offer ideas for how corporations, governments, NGOs and investors, and entrepreneurs can all work together to reduce youth unemployment:

- **Corporations** should build partnerships with education providers (public and private) and entrepreneurs who are trying to fill these gaps. The most successful education-to-employment initiatives are the ones where employers are involved from day one.

- **Government agencies and public schools** should embrace private-sector voices when it comes to designing curricula that will serve youth in their future careers.

- **NGOs, investors, and capacity development providers** should consider supporting education-focused entrepreneurs and working with them to directly tackle the challenges they face.

- **Entrepreneurs** should pay attention to the challenges outlined in this report, do their research, and think of ways to mitigate these challenges before they even launch their businesses.

That said, education-focused enterprises are a part of the solution, but they alone are not THE solution. They play an important role in helping bridge the gaps in education to employment, but solving youth unemployment requires concerted efforts from corporations, government, civil society, and entrepreneurs.
1. INTRODUCTION

Nearly 75 million of the world’s 1.2 billion young people between the ages of 15 and 24 cannot find a job. They represent 40 percent of unemployed people globally.\(^1\) And 87 percent of young people live in developing countries\(^2\), which means the majority of unemployed youth are in low- and middle-income countries. In fact, in almost all developing and emerging economies, youth unemployment is higher than the global average of 13.1 percent.\(^3\)

Supply and demand do play a role. In some cases, the amount of youth searching for employment outstrips the supply of jobs.\(^4\) In Sub-Saharan Africa, for example, high population growth is one factor that contributes to this mismatch in supply and demand for jobs. Additionally, volatile economic growth in developing market economies also matters: during times of economic downturn, the least skilled or least experienced workers are the most likely to find themselves without work.\(^5\) This often includes young people.

But, economic cycles and population growth alone do not explain the high rates of youth unemployment in emerging markets. Evidence suggests that, especially in middle-income countries with thriving industries and service sectors, a major part of the equation is a gap in skill sets. Nearly 40 percent of employers cite lack of skills as a top reason for entry-level vacancies going unfilled for months.\(^6\)

The majority of youth enter the workforce after completing secondary education.\(^7\) While those with secondary degrees still are likely to have more earning power than their less educated peers, a secondary degree is not synonymous with gainful employment. According to the World Bank and the International Labour Organization, those who have at least some secondary education (but no tertiary) make up a greater proportion of unemployed youth than their counterparts who are either less or more educated.\(^8\) These trends indicate a failure in the education system to prepare students with the kinds of skills they need to find and maintain employment.

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\(^3\) This figure has hovered around 13 percent for the past few years. This figure comes from the International Labour Organization. “Global Employment Trends 2014.” [Accessed September 2015].


\(^7\) Results for Development explores the connection between secondary education and employment in-depth. Their report not only identifies skills gaps, but looks at innovative solutions at the secondary level. For more information, see “Innovative Secondary Education for Skills Enhancement.” Phase 1 Synthesis Reports. Results for Development Institute. October 2013. Accessed July 2015. The ILO’s Global Employment trends for Youth 2012 also explores this connection between secondary education and employment.

\(^8\) The World Bank. “World Development Indicators: Unemployment.” Accessed September 2015. It is unclear from the data why in some countries people with at least some secondary education have higher rates of unemployment, even though more education is typically linked with higher earning power.
What is clear from in-depth research spearheaded by organizations that are pioneering skill-development programs is that solving the challenge of moving young people successfully from education to employment cannot be accomplished with a single intervention. It requires ongoing efforts from education providers, employers, policymakers, and students. And often there needs to be innovation not only from within education systems, but also from without. This is where entrepreneurs and small and growing businesses have unique opportunities to help bridge the gaps.

The Collaborative Process

The Aspen Network of Development Entrepreneurs (ANDE), with the support of SAP SE, a global enterprise software firm, conducted a series of roundtables in India, Brazil, and Kenya to uncover how entrepreneurs can, and are, working to tackle the challenges of youth unemployment and education challenges, as well as the obstacles and roadblocks these entrepreneurs and organizations face in doing so.

By taking advantage of local staff and local knowledge, each roundtable was tailored to be relevant to the local context while seeking to address the following questions:

- How are education-focused entrepreneurs filling the gaps that keep young people from moving smoothly from education to employment?
- What challenges do these entrepreneurs face in doing so?

To prepare for the roundtables, ANDE staff carried out desk research and more than 25 interviews with subject matter experts, academics, entrepreneurs, and employers. About 35 participants took part in each roundtable (around 100 people in total), representing NGOs, entrepreneurs, investors, capacity-development providers, academia, corporations, education providers, and government representatives. Smaller groups helped produce thoughtful discussions, and the roundtable format allowed time for participants to work towards solutions throughout the day. This report provides analysis and suggested steps forward based on the roundtables, interviews, and desk research described above.

ANDE and SAP SE recognize that entrepreneurs are only a part of the equation to solve the complex problem of equipping youth with the right skills for stable employment. Other factors, like teacher absenteeism, under-qualified teachers, prohibitive education fees, nutrition and malnourishment, and more, also play a role. This report is meant to serve as an analysis of opportunities and challenges for entrepreneurs addressing education and workforce development issues.
The following sections detail the findings from the roundtables. These findings are consistent with existing research and key trends on bridging skills gaps through education and skills development. They also shed new light on the role that entrepreneurs can play, and how governments, corporations, and entrepreneurial support organizations can help these entrepreneurs conquer the challenges they face in order to achieve their full potential.

2. WHAT ARE THE GAPS?

Based on our expert interviews, research, and roundtables, ANDE has uncovered a few key gaps present across markets. In addition to critical skill and coordination gaps, social and cultural expectations also define some of the fissures that exist in helping youth move from education to employment.

Skill Gaps

Skill gaps are often broken down into three dimensions: cognitive skills, soft skills, and technical skills. Cognitive skills include basic skills like literacy and numeracy, and they are often foundational for building other skills. For example, the Kenya roundtable revealed that poor cognitive skills make it more difficult for farmers to adopt and improve basic business skills that are essential for efficiency and scaling farming as a business. Given that 75 percent of the Kenyan workforce is employed in the agricultural sector, not having basic skills like this can hold a huge portion of the population back.9

Soft skills, or non-cognitive skills, relate to traits and behaviors like leadership, communication, discipline, and reliability. Education systems that focus mainly on passing exams without encouraging inquiry and discovery can limit the kinds of soft skill development that may prove beneficial for finding employment. Along these lines, the common soft skill gaps identified in the roundtables were problem solving, critical thinking, communication skills, and entrepreneurial thinking. Entrepreneurial thinking relates to determination, creativity, and being able to work around challenges. This subset of soft skills is especially important for those who enter the informal sector, those who will have to generate their own employment, or those who have a portfolio of jobs rather than one stable source of income.10

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9 Through September 2015, the most recent Feed the Future fact sheet on Kenya indicated that 75 percent of the Kenyan workforce was employed in agriculture.

10 One common misconception about poverty is that either poor people do not work, or they only have one job, and it just does not pay well. However, contemporary research shows that this is not the case. Spending a day or a week in the life of a poor person reveals that one individual usually has multiple sources of income. In this sense, poor people tend to have a portfolio of jobs. For an in-depth study of poverty economics and interventions, please refer to Poor Economics by Abhijit Banerjee and Esther Duflo.
Yet soft skills training alone is not a panacea. Focusing mostly on soft skills might serve those headed into the service sector well, but it will not aid those seeking a job in manufacturing or any other sort of technical area. Soft skills might help an employee advance, but s/he still needs technical skills to get started.

The third skill gap identified is a lack of technical skills. This typically refers to industry-specific skills such as welding, mechanical engineering, or software development. Countries and companies spend millions of dollars on vocational training programs to target these sets of skills and train employees for specific roles. Yet it is not always clear that they are effective. Some experts warn against too much vocational training, as it does not allow for flexibility in the long-term, especially if a person needs to change jobs. While vocational training can fill short-term demand in the labor market, it is not linked to advancement to mid-level management and beyond. Studies suggest that it is just as important to invest in developing employees’ critical thinking skills and the ability to learn as it is to develop technical skills through vocational programs that may only yield short-term results. An innovative model that McKinsey Social Initiative is pioneering endeavors to incorporate teaching soft skills in a technical setting, as it can be difficult to learn behavioral and soft skills out of context. The initiative, called Generation, also aims to make the case to businesses that this will lead to a strong return on investment.

The bottom line is that it is important that skills programs put youth at the center, focusing on employability in the long-term at least as much as they focus on employment based on technical skills in the short-term.

Coordination Gaps

A second common theme that emerged across our research in India, Brazil, and Kenya is that education providers and employers often do not interact with each other regularly. Education providers remain unaware of the kinds of skills that employers look for, and employers rarely engage with educators. After university, a quarter of youth do not make a smooth transition to work, and many young people’s first jobs are often unrelated to their field of study. Regardless of their educational attainment, most young people are not aware of the great variety of kinds of careers that exist, or what it takes to secure a job in those fields. This became especially apparent in the Kenya roundtable, highlights from which can be found on page 26.

Another coordination gap involves the perceived lack of incentives for employers to invest in education or basic vocational training programs. In some regards, this is understandable, because training programs are expensive, and if a trained employee leaves within a couple of years, the company loses their investment. Yet it is potentially more costly for employers to leave

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11 Numerous studies have questioned the effectiveness of vocational training programs. Some of these include the reports mentioned previously by Barton, Farell, and Mourshed; UNESCO; and the Results for Development Institute.
12 “Innovative Secondary Education for Skills Enhancement.”
13 To find out more, please visit http://www.mckinsey.com/about_us/what_we_do/generation.
14 In “From Education to Employment: Designing a System that Works,” Barton, Farrell and Mourshed detail these communication gulfs in more detail, and disclose that the most effective education to employment systems are ones in which employers get involved and stay involved with education. Barton, Dominic, Diana Farell, and Mona Mourshed. The McKinsey report focuses mostly on graduates of university programs. However, the lessons uncovered remain relevant even for those without a tertiary education degree.
15 Barton, Dominic, Diana Farell, and Mona Mourshed. The McKinsey report focuses mostly on graduates of university programs. However, the lessons uncovered remain relevant even for those without a tertiary education degree.
Spotlight on Kenya: Models for unlocking talent

Andela finds and trains talented software developers in Africa. Through a four-year training program that combines training and practical skills application through remote work with companies, these software developers get high quality training and a more direct link to a job. Numerous employers, including SMEs, source talent from Andela when they need software developers.

Spire supports companies in building scalable systems for hands-on training in critical job-relevant hard and soft skills for employees. They combine online learning, technology-driven training systems, and in-classroom sessions to develop soft skills and other competencies to enhance entry-level talent.

positions vacant for months or years than it is to invest in education programs that can turn young people into capable and productive employees.

This is a prime spot where companies can create shared value by leveraging their resources and influence to improve educational outcomes and cultivate skills that will also bring economic benefits back to the company. For example, the Godrej Group in India has developed a portfolio of modular training programs targeted toward underemployed youth with skills relevant to the company’s diverse portfolio. In a short period of time, not only have two-thirds of graduates found placement in consumer goods and agriculture-related subsidiaries, but by training more young people, the company has been able to expand its distribution channels across India to reach more customers.

This notion of shared value in education comes from the Shared Value Initiative (SVI), which is guided by FSG and a global network of funders. SVI defines shared value in education as when companies generate economic benefits for their businesses while simultaneously addressing unmet educational needs. For more on creating shared value in education, please see the following report: The New Role of Business in Global Education.

### The Gaps

- **Soft skills** like analytical/critical thinking, communication, entrepreneurial thinking and training, and decision-making
- **Skill mismatches and technical skills** for manufacturing jobs that do not transfer easily to other jobs
- **Current skill development schemes** are focused on solving labor shortages, **not on improving youth employability.**
- **Vocational programs** face a negative stigma and do not always have direct links to jobs.

### The Opportunities & Inspiration

- **Develop programs to continue training for youth once a job is secured**
- **Serve as training incubator and connector to jobs** (real world example: **Medha**)
- **Help youth assess gaps in their skills and connect them to a market place of providers** (real world example: **Aspiring Minds**)
- **Opportunity for the private sector to connect training, financing and job placement seamlessly**
- **Use technology to connect unemployed youth to jobs through e-market places** (real world example: **Youth4Work**).
Challenges Education-Focused Entrepreneurs Face in India:

- **Social and cultural setbacks:** Many Indians still prefer government jobs over private sector jobs. Enterprises trying to expand vocational training also face a stigma against vocational work. In addition, many rural youth do not want to leave their homes for a distant city when the salary might not be very high. Jobs that pay higher wages are necessary to justify migration.

- There is also a **gender bias at play** here, in that some Indian families tend to be more supportive of educating boys than girls.

- **Lack of success stories:** The National Skill Development Corporation drew in a lot of organizations trying to solve youth unemployment. Despite the numbers, very few organizations have managed to scale, train, and employ large numbers of youth.

- **Finance and scale:** Finance is key to scaling up. Skill development programs take time to scale as they need more individualized attention, and the payback period can be longer than on other social investments.

- **Ecosystems:** India needs a stronger entrepreneurial ecosystem that incorporates access to capital, incubation, and mentoring and enables education-focused entrepreneurs to take risks in an environment where aversion to risk remains high.

- **Diversity:** Urban and rural youth face different challenges and solutions must be tailored to each context.

- **Impact and quality:** It is difficult to measure the long-term impact of education, employment, and employability schemes. Yet, measurement is important so that education-focused entrepreneurs can show that their programs are high quality in order to attract customers, scale up, and have the impact they intend.

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4. See pages 17 and 18 in the Education for the 22nd Century report for a deeper profile of Medha and the work they do.
Geographic Challenges, Rural Youth, and Gender

A key challenge identified in moving from education to employment is related to geography and the dire situation facing rural youth in emerging markets. In most places, there are more jobs and better economic opportunities in urban areas. This forces young people to leave their homes and families to take a chance on a potentially costly training program that might not actually lead to long-term, stable employment. This theme became prominent through the interviews and roundtable conducted in India, and follows the patterns and challenges that typically occur as economies mature and populations shift from rural to predominately urban locations.

Finally, in some communities, gender expectations and stereotypes hold women back more than their male peers. In fact, the global average for unemployment among young women is 16 percent, whereas only 13 percent of young men are unemployed.

In sum, multi-stakeholder partnerships are necessary to encourage education providers, employers, and youth to engage with each other in order to solve these challenges effectively. And we must remember it is not just unemployment, but a lack of stable employment that remains a persistent problem. This means that young people must be equipped with a spectrum of skills that can provide resilience in economic downturns.

Finally, several roundtable participants stated that we must seek to truly put youth at the center of all of these solutions, making sure they have the kinds of skills that maintain their employability. Focusing entirely on labor shortages can leave youth feeling disengaged if they believe that the programs are just about “filling slots.”

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18 The World Bank.

19 This was confirmed by multiple sources. Not only did the Kenya roundtable identify it as a major problem, but the MasterCard Foundation also highlighted this issue in their recent report, “Youth at Work: Building Economic Opportunities for Young People in Africa,” July 2015. (Accessed July 2015). The World Economic Forum also spotlighted this challenge in their Youth Unemployment Visualization 2013, available on www.weforum.org.
3. HOW CAN ENTREPRENEURS HELP?

Entrepreneurs often take on the role of the disruptor: seeing a problem and finding a creative way to solve it. They can bring new insights and targeted solutions to problems big and small. The results of ANDE’s Education Roundtables indicate that entrepreneurs have the most impact on education-to-employment outcomes in the following areas: delivery platforms and content, access and affordability, building connections, and fostering innovation.

**Delivery platforms and content for personalized skill development**

Entrepreneurs are providing complementary courses and activities to enrich what educators and employee training programs are already doing. *This can aid teachers, make learning and skill development fun, present new opportunities to incorporate soft skills into learning, and personalize training programs.*

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**Spotlight on Kenya: SMS delivery platforms for enhanced training**

*Arifu*, a for-profit social enterprise, provides an SMS-based training platform and educational content marketplace. Through mobile phone technology, they provide a scalable channel for companies and NGOs to engage, train, and learn from vast networks of underserved people across the companies’ value chains. As a result, people can build their skills, productivity, and income even where there’s no internet. The Arifu team works with organizations to co-design the programs, and they also offer a growing library of content under open and royalty-based licenses from other providers.
Technology allows education and skill-development programs to become more adaptable. It helps entrepreneurs to address issues of access and affordability, since most skill-development programs are expensive, especially if they require direct, in-person training.

**Access, Geography, and Affordability**

**Technology can increase access to educational resources.** Using online or SMS-based programs to compliment in-person training not only increases access to training programs, but also reduces the cost of them. For example, the African Management Initiative delivers professional-development courses to both individuals and organizations through an online social-learning platform as well as through face-to-face training sessions. Arifu, mentioned above, also cites that their platform can reduce the cost of training outreach programs by 90 percent. An independent evaluation for one of Arifu’s first clients, a multinational agribusiness company, showed that participants in the training program increased

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**Spotlight on Brazil: Using Technology to Target Solutions**

![Geekie focuses on training students for university entrance exams and provides an online platform that adapts to students’ needs and goals. They make learning to study for these exams more efficient, and they serve both private and public school students. Over 3 million students currently use the platform, and many of these come from the poorest regions in Brazil. Students who use this platform typically improve their scores on exams by 30 percent. The company also sends teachers and school managers reports about their students to help them improve their teaching methodology.](image-url)

**Já entendi** is a small business focused on training Brazil’s low-income workers with a new teaching methodology that can transform written books and training manuals into multimedia content (videos, mobile apps, and more) that target workers who have typically been poorly educated. The company works with employers to develop these programs so they can better train their own workers.

Technology allows education and skill-development programs to become more adaptable. It helps entrepreneurs to address issues of access and affordability, since most skill-development programs are expensive, especially if they require direct, in-person training.
their income by 65 percent over four months. The company was also able to increase their sales three-fold for much less than the cost of traditional training programs.

Online learning helps reduce the price point for a high quality, standardized curriculum. By lowering costs and creating new avenues to deliver and access training, these kinds of technology-based interventions can open up new opportunities for more people to benefit from skill-development and training programs. The roundtable discussions revealed that technology can also potentially tackle the challenges that geography plays by bringing the programs to people in rural areas. However, there are questions about the ability of online training to reach the most marginalized and extremely poor in areas with scarce internet access, and how much it would benefit them if there is no direct connection to a job.

Improving Coordination and Connections

Entrepreneurs also play an important intermediary role in linking people to jobs and information that will help job seekers determine what kinds of career options exist, and what is required to secure those jobs. They also tend to be the ones who actively engage with employers to find out what their needs are and to adjust education and skill-development programs accordingly.

Medha is a training and internship program based in Uttar Pradesh, India, that connects students to the job market. It focuses on improving the employability of youth through real-life and simulated activities, assignments, and analysis. It includes 30 hours of classroom and non-classroom activities, and 150 hours of on-the-job training. Medha has worked hard to get local governments and college boards to incorporate career-related skills into their curriculum and maintain a student-centered approach to education. Medha currently works with 30 different employers and 35 educational institutions and has placed approximately half of their employability program graduates into jobs.

Medha owes part of its success to persistence with the universities and employers. While the program does offer important employability training that blends soft and technical skills, it also plays a key role in linking students with employers and bridging the chasms in communication between employers and education providers.

Fostering Innovation

Beyond the examples cited above, education-focused entrepreneurs and social enterprises play an important role as innovators. Entrepreneurial innovations have the potential to improve the quality of teaching and provide access to better learning materials. Entrepreneurs can take advantage of information and communications technology (ICT) to build solutions that can improve the way soft skills are developed, as pointed out in the Spotlight on Brazil (page 16). Education enterprises like Já Entendi also have a unique opportunity to fill in the gaps of public education by targeting the most marginalized students. Of course, there may be limitations in terms of business sustainability in targeting these groups, as will be discussed in the next section.

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This finding became prominent in the Brazil roundtable. Although that discussion focused on primary education, the opportunities and examples for innovation in primary schools are still relevant and applicable to secondary education and beyond.

Serious games are simulations of real-world events or processes designed for solving problems. Their main purpose is to train or educate users, and, according to the “From Education to Employment” report, they offer great platforms for training and educating youth.
Entrepreneurs can also work with employers to develop serious games\textsuperscript{21} to complement apprenticeship programs to develop technical skills. In their “From Education to Employment” report, Barton, Farell, and Mourshed discuss how apprenticeship programs are a proven way to bridge the education-to-employment gap, but they are often expensive, and there is usually limited space. While serious games are a relatively new development, as is the research on their effectiveness, initial results are promising. The authors of the aforementioned report indicate that serious games can be a great way to teach similar skill sets that apprenticeship programs might work to develop. Platforms like Fold It, which lets users solve puzzles for science, could be used to teach basic skills.

By focusing on these areas, entrepreneurs contribute to bridging skill gaps as they help expand access and reduce the costs of education and skill development. They support knowledge building and coordination efforts by acting as intermediaries and connectors between students and employers. Through technology, they can help reduce the barrier that geography can play for many rural youth. They can even help tackle attitudes toward gender roles that hold women back.

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**Spotlight on India: Tackling stereotypes that hold young women back**

In addition to improving the employability of youth, Medha has also made meaningful strides in breaking gender stereotypes. According to their experience, nearly 70 percent of students enrolled in college are young women, and they make up a large number of students in the organization’s purview. Cultural norms restricting women’s economic mobility have posed a challenge not just for the girls, but also for potential employers. For example, Eureka Forbes was hesitant to hire women as door-to-door sales representatives, given that such jobs are not considered suitable for women. But Medha persuaded Eureka Forbes to take on a few female Medha training program graduates as interns. These young women were able to make quick connections with stay-at-home mothers, who represent a large portion of Eureka Forbes’ clientele. Sales shot up, and the company’s apprehensions were dispelled.

This is important in the Indian context because women and youth have been withdrawing from the Indian labor market. In fact, unemployment rates have increased quickly for high-skilled women: Indians with a diploma suffer particularly, with unemployment rates reaching 34.5 percent for women and 18.9 percent for men during 2009–10.\textsuperscript{22}

4. THE CHALLENGES

Despite the opportunities outlined above, education-focused entrepreneurs face numerous challenges in trying to achieve their goals. These challenges can be grouped into the following four categories: getting started, scale versus quality, impact and perceptions, and managing government relations.

Getting Started

Not surprisingly, entrepreneurs cite access to finance as a key challenge in getting started. This is no different from any other sector, but education-focused entrepreneurs face even greater challenges related to market knowledge and customer acquisition. Because most entrepreneurs have not worked as educators or educational administrators themselves, they do not always understand the education sector and the needs for improvement as deeply as they might think. According to participants in the Brazil roundtable, a lot of education-focused entrepreneurs do not spend enough time doing field research or working closely with stakeholders to create solutions that best suit young people’s needs.

In addition, customer acquisition can be tough. Roundtable participants indicated that it is difficult to get people to pay for training. Even though entrepreneurs can help reduce the costs of training programs, if there is no guarantee of a job upon completing the program, many people remain reluctant to pay. Sometimes it is even impractical to ask customers to pay if they are truly at the base of the pyramid. While the base of the pyramid is the most vulnerable, and therefore needs the most training, they are often the least able to pay. Consequently, while entrepreneurial solutions have the potential to target more marginalized groups, it becomes a difficult business model to launch and to sustain. Entrepreneurs who do wish to target those with the most need might rely more on philanthropic funding than entrepreneurs targeting groups with slightly higher levels of income.

Scale versus Quality

One of the most commonly cited challenges mentioned across the roundtables was scaling programs while maintaining the quality of the interventions. Scaling, and especially scaling quickly, risks losing the personal and customizable aspects of services offered. Yet customization often makes training programs most valuable for the trainee. While some technological innovations with responsive user interfaces may help, it is usually the combination of in-person and digital training that is most effective. It can also be difficult for entrepreneurs to adequately test their models in the public education system due to bureaucratic systems and sometimes difficult relationships with governments. Yet testing models is essential to being able to scale.

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23 While it is difficult for those living in extreme poverty to pay for training services, insight from a roundtable held at ANDE’s Annual Conference pointed out that scalable training models do involve some sort of investment on the part of the trainee. This is, in part, because people tend to value what they pay for more than what comes for free.
### BRAZIL MARKET INSIGHTS

#### The Gaps

<table>
<thead>
<tr>
<th>Content that is high quality and that can strengthen cognitive and soft skills.</th>
<th>The Opportunities &amp; Inspiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the most promising areas for entrepreneurship action involves creating complementary courses and activities for teachers: this can include producing digital material for the classroom, evaluation systems and aids, and technological infrastructure.</td>
<td><strong>•</strong> Real world example: <strong>Geekie</strong> – a platform that complements in-classroom learning to help students perform better on university entrance exams.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access and innovation to try new solutions and reach more at-risk youth.</th>
<th><strong>•</strong> There is room for experimentation and practice inside the classroom, especially to create a personalized process for developing soft skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>•</strong> Real world example: <strong>Já Entendi</strong> – using technology to reach low-income workers.</td>
<td><strong>•</strong> Increasing collaboration here requires concerted effort between education providers and employers. It is currently unclear what role entrepreneurs can play to increase this in Brazil, though lessons from other countries in this study may apply.</td>
</tr>
</tbody>
</table>

#### The Opportunities & Inspiration

<table>
<thead>
<tr>
<th>of employers have difficulty filling jobs. The toughest jobs to fill are: technicians, skilled trades, production/machine operators, administrative staff, and laborers.1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>of youth are unemployed (2013 numbers). Young women are more likely to be unemployed: 18% of female youth are unemployed, and 11% of male youths are unemployed.2</td>
<td>of workers not in agriculture are in the informal economy.3</td>
</tr>
</tbody>
</table>

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4 See page 16 for a profile of Geekie

5 See page 16 for a full profile of Já Entendi
Challenges Education-Focused Entrepreneurs Face in Brazil:

- **Government and Regulatory Environment:** There is a **high cost to trying new solutions in public schools**, which can include barriers to implementation. In addition, there is **no efficient feedback loop** in government systems to be able to adapt to what is or is not working.

- **Market knowledge:** Entrepreneurs need to **understand the market better**. Many entrepreneurs **aren’t familiar with the dynamics of low-income populations**. This makes perceiving stakeholder needs and getting support from other actors in the ecosystem difficult.

- **Customer acquisition:** Many entrepreneurs think that buyers will come to them, but they **need to go after the schools** and pitch their services. When pitching corporations, they need to come with **tested solutions and a clear business model**, and one that fits well with the focus areas of the corporation.

- **Testing and scaling models:** Entrepreneurs need spaces where they can share their work, test processes, learn how to improve their solutions, and work to be able to scale their solutions. Part of this involves **improving data collection methods**.

**What successful education-focused entrepreneurs do:** They clearly **define their goals**, **use data** to support new educational activities, **respect teachers’ experiences and support them** in their work, and earn the **support of actors outside the school**. Any sustainable solution will also need to increase communication and collaboration between education providers, enterprises, and students.

**Collaborative Solutions**

- **Governments:** Design a public education policy that will be flexible in terms of testing new models, and that will be easy to update.

- **Capacity development providers:** Promote interaction between finance institutions to invest in education-focused entrepreneurs, and those who will become product/solution users.

- **Corporations:** Offer mentorship opportunities to education-focused entrepreneurs, helping them with business ideas and to understand how to manage relationships with the government and schools.

- **Entrepreneurs:** Remember that they should be able to monetize their product, and show results from solutions they have tested ahead of time.
Impact and Perceptions

Measuring the impact of education and skill development is hard to do. Many entrepreneurs wonder what to measure and how to do it. Do you define it by job placement or job duration? Do you define impact by long-term financial stability? Measuring soft-skill development is even more difficult, since these kinds of skills are not as easily quantifiable. In addition, most soft skills cannot be taught and mastered in an intensive, six-week training program, as was pointed out in the Kenya roundtable. This suggests that soft-skill building should be integrated into education starting in primary school.

While it remains difficult for education-focused entrepreneurs to measure their impact, they also face challenges in how customers judge the quality and impact of these interventions. Sometimes customers judge the quality of education and training based on things like the quality of uniforms and gadgets rather than learning and skill development. For entrepreneurs trying to offer vocational programs, they also have to deal with the negative perception of vocational training.

In many places, people still place higher value on white-collar jobs, and there are cultural taboos of learning a skill or trade such as carpentry or welding.

Managing Government Relations

Another layer that adds complexity to the idea of delivering entrepreneurial solutions to education and skill development is the fact that education is typically considered a public good. Therefore, national and local governments define and regulate what education should look like as part of a mandate to try to ensure equal access to education for all. The dynamics of government relationships and opportunities varies greatly by country. Here are the key insights participants in each roundtable put forth:

In Brazil, roundtable participants indicated that there are often high barriers to implementing innovative solutions, as well as a high cost of experimentation in public schools. First, entrepreneurs struggle to build relationships with public education providers. Second, the process for constructive and iterative feedback
could be improved to become more efficient and welcoming for entrepreneurial solutions. As arbiters for guaranteeing equal access to education, governments often want one model that can scale evenly across all regions and municipalities. However, that might not be feasible, especially when testing new solutions, as some regions might require more intensive interventions than others.

**In India**, the government created the National Skill Development Corporation (NSDC) in order to help solve the challenges of skill gaps and unemployment. NSDC provides loans or invests in entrepreneurs with the aim of catalyzing a number of large, for-profit, vocational institutions. Accompanying NSDC, the Indian government has come out with several other initiatives that aim to catalyze action. This is a positive sign. Yet roundtable participants noted that accessing these schemes and working with the government and schools still poses challenges. Medha’s experience shows that it requires heavy persistence, and that even when education-focused entrepreneurs are able to influence local curricula, many believe there is still not enough emphasis on entrepreneurship and entrepreneurial skill building. Vocational skill training continues to be the mainstay when tackling youth unemployment.

While education-focused entrepreneurs face some of the same challenges as any entrepreneur, there are a few things that stand out:

- Education-focused entrepreneurs sometimes **struggle to understand the real needs** of those being educated or trained, as well as how to practically implement solutions because they do not have a background in education.

- It can be **tough to reach the extremely poor while earning a profit**, as business models are not easy to define or implement.

- It is difficult to know how to measure impact.

- **Managing relationships with government programs and schools requires persistence and patience.**

- **Scaling solutions across municipalities without sacrificing quality presents significant hurdles.**

Yet understanding these challenges creates room for discussion on how to help education-focused entrepreneurs reach their full potential and focus on sustainable solutions for the future of education.

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25 These initiatives include the Skill India Mission, the National Policy on Skill Development and Entrepreneurship, and the Model Skill Loan Scheme.
5. LOOKING AHEAD: EDUCATION FOR THE 22ND CENTURY

Recommendations

The following recommendations emerged from the roundtables for how employers, the public sector, intermediary organizations, and entrepreneurs can best contribute to bolstering entrepreneurial solutions to education and skill development. Given the focus of this report, these recommendations are targeted towards education-focused entrepreneurship. For more comprehensive recommendations for bridging the skills gap, please see the Further Reading list at the end of this report.

For Employers

Corporations looking to hire next-generation employees need to build relationships and partnerships with education providers and entrepreneurs who are trying to bridge the gaps. This can take a variety of forms including offering internships, apprenticeships, and mentorships to students through their schools. The organizations and enterprises highlighted in this report are working to help employers with this task, and employers can seek to engage by voicing their needs to the education providers as well as the intermediary groups.

For example, through its SAP Skills for Africa initiative, SAP is helping bridge the gap between talent and skill seekers. By creating a scholarship program for talented unemployed graduates, a dual-study program in association with leading universities, and an alliance program with other local universities, SAP is directly addressing the ICT skills gap, boosting local talent, and providing job opportunities for young graduates so that countries like Kenya can become ICT hubs.

For the Government and Public Schools

The government and public schools can embrace having private-sector voices share their cognitive and soft-skill requirements when they’re designing their curricula. In terms of public policy, the government can make sure that regulations allow for flexibility in allowing entrepreneurs to test and scale their models in public schools or through national skills-development branches. For instance, in India, the National Skill Development Corporation has worked with Ennovent (an ANDE member) to run a challenge called “Power To Empower” to discover innovative and implementable solutions that contribute to creating a sustainable vocational skill development ecosystem in India.

For NGOs, Investors, Intermediaries, and others

NGOs, investors, intermediaries, and other groups can consider supporting education-focused entrepreneurs working in this space.

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26 For more extensive policy recommendations, please refer to youthunemployment.com, a site Dalberg developed based on their extensive research, consulting, and experience.
As mentioned previously, whether they’re in Kenya, India, Brazil, or another emerging-market country, entrepreneurs struggle to provide education and skill-development services to the poorest of the poor. Yet these groups are more likely to find themselves unemployed when markets dip. NGOs and investors can provide early stage support to help these businesses scale their products for the base of the pyramid.

For example, Omidyar Network invests in the Anudip Foundation, a nonprofit that targets high schools in India. The program provides a three-month training program that focuses on soft skills, workplace readiness, job placement, and more. It has achieved a 70 percent placement rate into jobs or microentrepreneurship for the more than 45,000 students it has trained since the program began in 2006.

When other intermediary organizations invest in, or help build the capacity of, education-focused entrepreneurs, they can keep in mind the challenges and opportunities outlined in this report to best target their support for entrepreneurs trying to bridge the education-to-employment gaps.

**For Entrepreneurs**

When entrepreneurs want to start new ventures in education and skill development, they should keep in mind the challenges outlined above that these kinds of entrepreneurs face, and do their groundwork to try to mitigate them. That can mean doing extensive research and diving into the education world as much as possible to understand the needs, customers, and markets. It can also mean thinking about impact measurement before starting in order to understand what works. This is essential in order to scale models that are successful.

It is also important for entrepreneurs in this space to reach out to employers, not only to find out what their skill requirements are, but also to try to build connections that can help link youth who use the entrepreneurs’ software or training programs to real jobs. For example, Nairobits, an organization based in Nairobi, trains youth in ICT, entrepreneurship, and life skills; and it maintains strong relationships with employers in order to increase opportunities for youth who do enter into the formal sector. While Nairobits is an NGO and not an enterprise, for-profit entrepreneurs can still take lessons from organizations like this and learn to do the legwork that is required to build connections.

All of these suggestions require flexibility and long-term vision. Any sustainable solution means keeping youth at the center by focusing on employability as well as employment, especially given how rapidly the world and career paths are changing. Making a significant dent in youth unemployment is no easy task. But it is an important one that can make a real difference for millions of people around the world.
**The Gaps**

- **Soft skills**: Determination, decision-making, communication, leadership, entrepreneurial spirit, critical thinking, and teamwork.

- **Technical skills**: Essential for the tech sector, focusing on coding and written communication.

- **Coordination**: Better alignment between education and the workforce is needed.

- **Geography**: Challenges in rural areas.

**The Opportunities & Inspiration**

- Use online platforms to reduce the price point of high-quality content for soft skill development.

- **Real world example**: The African Management Initiative (AMI) delivers professional development courses online and through face-to-face sessions.

- **Train local talent and build networks**.

- **Real world example**: Andela provides a 4-year program to train software developers.

- **Strengthen education and training enterprises**.

- **Real world example**: Spire's Career Accelerator program.

- **Use mobile technology to supplement in-person training**.

- **Real world example**: Arifu provides a platform to digitize training for rural areas.
Challenges Education-Focused Entrepreneurs Face in Kenya:

- **The trade-off between scale and quality.** It’s difficult to maintain a personable, customized approach as these programs and solutions grow. Scaling models without the use of technology is even more challenging. **But where technology is available, it can help mitigate some of these trade-offs.**

- **Customer acquisition.** It is difficult to get people to pay for training, or sometimes impractical if serving the base of the pyramid. Programs that were more successful in acquiring customers had partnerships with employers that offered direct links to jobs after the completion of the program.

- **Delivery and time investment.** Developing critical thinking and problem-solving skills requires an ongoing investment, usually in the context of a professional environment, and is not something that can typically be taught in a six week course.

- **Finding and retaining talented management** is difficult, but important to entrepreneurial success.

- **It is difficult to measure impact** directly and to quantify the quality of training.

Collaborative Solutions

Suggested solutions include taking a blended approach to achieve scale and maintain quality using a mobile or digital platform as the base training, but that could be accompanied by in-person training at regular, but less frequent intervals. To provide mentorship and ongoing training, another mobile solution could be an app that allows for feedback and learning between employers and employees, though admittedly this would take training and a culture that would embrace this as well.

The education system needs disrupters (like entrepreneurs) to shift the education system focused on rote memorization to creative and entrepreneurial thinking. Social enterprises can more easily target marginalized groups who end up in the informal sector.

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FURTHER READING


“Digital Jobs in Africa: Catalyzing Inclusive Opportunities for Youth.” Dalberg.


“Reaching the Marginalized.” UNESCO. 2010.


Workforce Connections. USAID and Fhi360.
