

<b>Outcome</b>	<b>Variables/Indicators</b>	<b>Justification</b>
<b>Immediate Outcomes</b>		
Training since program	Training details (training type, duration, completion status, certificate earned, cost, who paid, who was the trainer); Subjective measures of training quality (rating of trainer / training)	If the program was implemented as designed, are treatment individuals receiving significantly more training than control?
<b>Primary Direct Outcomes</b>		
Employment status	Days worked in past 4 weeks; Days worked in past 7 days; Hours worked in past 7 days	Does the provision of business training significantly increase employment levels?
Skilled work	Each activity in the economic activities table will be classified as either skilled or unskilled	Does the provision of business skills training significantly alter the types of employment individuals engage in?
Individual income	Revenue from all economic activities (total cash earned in past 4 weeks / past 7 days); Revenue per activity (cash earned in past 7 days); Profits per activity (profits in past 7 days / 4 weeks); Profits in a good week / bad week; Mark-up (how much revenue can be earned from 10,000 USH worth of raw materials)	Does the provision of business training significantly increase earnings? We measure earnings in a number of ways in order to increase the likelihood that we are capturing accurate numbers.
Household assets	Household wealth index (household asset list, housing quality questions, landholdings, tools for business, machines for business, materials for business)	Do household assets increase as a direct result of training, and as a result of the increased earnings/employment opportunities stemming from participation?
<b>Primary Indirect Outcomes</b>		
Psychosocial	Distress index; Pro-social index; Hostility index; Locus of control; Optimism; Aspirations (ladder position now vs. ladder position in 5 years for wealth / respect / power within the community)	Does participation influence the mental state of individuals, and if so, through what channels?
Risky behaviors and risk preferences	Substance abuse ( alcohol use and abuse; tobacco use); Sexual practices (number of partners since Uhuru day, frequency of condom use); Peer group risky/violent behavior (are friends ever involved in disputes with police/local leaders or physical fights); Risk preferences (behavioral games, planning and preferences section)	Does success (and the prospect of future success) result in less risk-seeking behavior? In other words, is risky behavior now more costly due to outside opportunities? Alternatively, does the training lead to greater risk taking in certain domains?

Savings and access to financial services	Access to financial services (has bank account, participates in savings group, access to credit[sources of credit, current credit outstanding], perceived access to credit[could loans of various sizes be taken, and from whom]); Savings (current savings in bank account / with savings group / in all other locations)	Does success lead to greater access to financial services, both due to the connections made (informal system access) and status achieved (formal system access)? Are participants more likely to invest in their future selves through increased savings?
Investments in human capital	Education expenditure in past 12 months (on self / biological children / other family members / non-family members); Health expenditure in past 1 month (on self / biological children / other family members / non-family members)	Does participation affect the aspirations of youth, resulting in increased investment in both themselves and their close relations?
<b>Secondary Outcomes</b>		
Physical health	ADL index; Subjective health assessment by enumerator (condition of respondent's footwear / clothing / face and hands); Number of days sick in past month	Does the potential increased income or access to services result in improved physical health for participants?
Minimal Quality of life (index)	Number of substantial meals per day; Number of times gone to bed hungry in past week; Sleep in an enclosed shelter; Changes of clothing owned; Access to clean water	Does the training increase the probability that a basic standard of living will be achieved?
Household characteristics	Dependency ratio (number of dependent children / incapacitated adults / adults capable of working in household); Marital status; Family connectedness index (how caring is household towards respondent, number of angry disputes with family and non-family members in past 2 weeks); Number of biological children	Does training increase the burden placed on youth by household members and cause tension in relationships? Or does it increase their standing within the household through marital status and improved relations?
Social standing and relations with the community	Index of social support; Relativity ladders (wealth, respect, sought for advice, power, access to basic services); Marginalization index; Relations with community (how understanding are neighbors, trouble getting along with neighbors, importance in village/community); Relations with elders (how frequently should village youth take elders' advice, respect for elders)	Standing within, and relations with, the community could conceivably improve through a number of the channels presented above (e.g. economic success, change in mental state, change in marital status, change in behavior).
Changes in outcomes of other household members	Enrollment of biological children of school age; Future relativity ladders	Increases in income/employment, as well as a change in forward-

	on biological children's health and education status relative to their peers	looking behavior, could lead to increased investment and more positive outlook by participants for their children
Increased investment in other income-generating assets	Information will come from economic activities table	With an altered future outlook could come an increase in productive investments (outside of human capital investments)
Political participation	Voting ; Community meeting attendance/action; Leadership; Access to public officials	Does training empower youth to engage themselves politically?
Political awareness	Knows month and year of next presidential election; Knows name of current LC3 / LC5	Does training empower youth to inform themselves politically?
Views on ethnicity	Are members of same tribe living outside village considered kin; Are people from Northern Ethnic groups / Southern or Central ethnic groups considered kin	How has the potential for interaction with a wider group of individuals through businesses and training altered perceptions of ethnicity
Levels of conflict	Conflict with authorities (disputes with community leaders/police); Conflict with friends and family (disputes with neighbors/family members); Violent conflict (physical fights)	Has training lessened aggressive behavior by making it more costly through providing better livelihood options? Or has training increased conflict by straining relations with non-funded community members?
Transfers (household)	Transfers in (source, amount); Transfers out (recipient, amount)	Is a (perceived) NGO transfer viewed as a substitute for private transfer (from other households), thus lessening the flow of transfers in? And consequently, does this perceived transfer raise demand for the household to transfer out?
Perceived status and decision-making power of women in the household	If wife earns money can she make a purchase/refuse to buy alcohol for her spouse; Can wife refuse sex if she knows husband is unfaithful	Are female participants empowered within the household? Or are male participants, through working with female group members, more willing to respect women's decisions?
Business formalization	Keeps expense log; Formally registered business; Pays business taxes; Has employees (family, non-family)	Does a training style program promote formalization? Are there spillovers to the community through employment opportunities and tax revenue?
<b>Adverse Outcomes</b>		

Social exclusion	Group participation table (number of community groups they belong to)	Is training perceived as an injustice in the eyes of non-funded community members? If so, treated individuals may be excluded from informal social organizations?
Adverse outcomes for women in typically male-dominated activities	Information comes from economic activities table (employment, earnings, satisfaction, etc.)	Are females able to perform well in certain vocations?
<b>Other Measures of Interest</b>		
Perceived returns to vocation/training	How much does the most/least skilled craftsperson earn; How much could respondent earn; How much could respondent earn after 9 months of training	If the returns to training/engaging in certain vocations are high, why did individuals fail to invest? Do expected returns differ from actual returns?
Numeracy	A series of basic math questions designed to test numerical ability	Numeracy measures are potentially important to entrepreneurial success, from planning to managing daily operations.

**Building Better Entrepreneurs**  
**Updated Implementation and Evaluation Plan**  
**26 September 2012**

**Study Relevance and Contribution**

The objective of this project is to develop methods of training Ugandan high school students in entrepreneurship skills that will improve their labor market outcomes and business success. Business and labor market success are thought to depend on a series of hard skills (e.g., financial decision making) and soft skills (e.g., negotiation and communication). This project will investigate the relative importance of hard skills versus soft skills in business success and more broadly in the youth's school-to-work transition. The project will strengthen, experimentally, the training of these skills in Ugandan entrepreneurship programs in high schools. The goal of the current endeavor is to: (a) leverage insights from the economic and social sciences toward the goal of improving entrepreneurial success in developing countries, and (b) test whether "hard" versus "soft" skills better predict consequential entrepreneurial and business longevity outcomes, and a better performance in the labor market, particularly among young people and women.

Uganda, like most low-income countries in the world, has a large share of youth who are either unemployed or underemployed. This is not only a concern of the welfare of these youth, but also a waste of valuable human capital available for economic growth and can lead to social strife. Youth living in these countries encounter numerous challenges entering into and succeeding in the labor market. Living in economies where employment opportunities are scarce and self-employment often the only option, youth need the right combination of human, financial, and social capital that will give them a chance to turn their energy and ideas into entrepreneurship opportunities that lead to the creation of more and better jobs.

In addition, in these economies, most families depend on income from their own small enterprises (including farms) or working for small enterprises. These enterprises suffer from not having access to human capital trained in business skills. Hence, economic growth and employment could be enhanced through an increase in supply of skilled labor.

The hard skills training will build upon the currently existing hard skills-based curricula and increase the intensity of the training in a few core technical areas, namely: financial literacy, the role of budgeting, calculating and keeping track of expenses, revenue and profits, the importance of re-investment for business growth, and a number of other topics. The full development of this component will build on the existing curriculum and the experience of the International Labour Organization (ILO)'s entrepreneurship education modules, tested in over 40 countries worldwide.

The soft skills training will also build upon existing soft skills-based curricula harvested from both the Young Entrepreneurs Program (YEP) and Educate!, a local NGO that mentors young people in starting businesses. These existing curricula will be refined through guidance from economic and social science research pointing to the critical importance of a few core social skills areas including: building and accessing social networks, how to influence and persuade, how to perceive and listen to others, and how to effectively and creatively negotiate. The full development of this component will build on the existing undergraduate business curriculum at major business school and will be adapted and rigorously piloted tested to match the Ugandan context.

Since the target population is youth in their last years of high school, the research will first measure the effect of entrepreneurship training on attitudes and skills. The project will also measure the training on positive labor market outcomes and business success (such as self-employment, business creation, job

creation through start-ups, and earnings) one year after completing the training. The project will also assess the importance of soft skills versus hard skills and synergies from the combination of the two on labor market and business success. Ultimately, the research will provide evidence on how these skills help to build better, sustainable and bankable businesses. To capture the chain of effects on young people's decisions and outcomes and measure labor market outcomes, the research will span over a period of four years.

As an experimental design, the analysis will isolate the causal impact of the training, net of other potential confounding factors. The core questions of interest include:

- Can students learn entrepreneurial skills from an interactive classroom program?
- Which type of training is most important for developing successful entrepreneurs?
- What is the economic impact on secondary school students of receiving entrepreneurship education? In particular, is there an impact on business start-ups and employment creation?
- Are trained students more entrepreneurial by necessity or choice?
- Are there heterogeneous effects of entrepreneurial training? This include effects based on:
  - Gender
  - Risk and time preferences of students
  - Initial bargaining and business skills
  - Success of family
  - Psychological indicators such as stress

### **Scalability and Policy Relevance**

The longer-term goals of the work supported by the USAID DIV grant are to:

- i. Improve future successful entrepreneurship, labor market outcomes, and income of today's youth through strengthening entrepreneurship training in high school.
- ii. Strengthening the teaching of both hard skills (e.g., financial decision making skills) and soft skills (e.g., negotiation skills) that are thought to be critical for business success and more broadly in youth school-to-work transition. This will lead to more successful and sustainable farms and micro-enterprises. It will also help youth find better jobs with higher incomes, and thereby lower poverty and raise overall levels of happiness.
- iii. Generate rigorous evidence on the effectiveness of teaching hard and soft skills in producing successful entrepreneurs so as to guide educators on the makeup of successful entrepreneurship curriculum

The impact study will have potential economic, educational, social, and scientific impacts on the following stakeholders:

*High School Students:* A strengthened entrepreneurship curriculum is expected to give youth the skills that will enable them to improve their overall wellbeing, both economically and psychologically. This will hopefully include expanding the concept of what it means to be an entrepreneur, along with increased rates of starting businesses, expanding and improving family business, and succeeding as an employee in businesses owned by others. Moreover, many of the soft skills taught in this curriculum are really life skills that important to be successful in other aspects of life. Girls in particular will benefit from being

better able to better negotiate adverse sexual pressure in relationships that might lead to unwanted early and frequent pregnancy.

*Schools:* Schools will benefit from findings on design features of entrepreneurship curricula and additional training techniques to maximize learning and future success. They will be able to give students richer educational experiences through which they will hopefully make more informed and adaptive decisions about their education and labor market choices.

*Ugandan Policy Makers:* Uganda has a fast growing population of youth, but few options for formal sector employment. The Government of Uganda had made improving youth employment through entrepreneurship a development priority in order to continue to drive economic growth. In addition, after a long-run civil war in the north, the government has also targeted youth employment as a method to combat possible conflict recidivism. Information and analysis from the baseline survey will provide key information to government agencies, such as the Ministry of Education and the National Curriculum Development Center, on schools and students' profiles and interest on entrepreneurial learning. These findings will be available in 2013. Long-term and substantial impact findings will be available in 2016. Research findings will support the government's interest in increasing investment on entrepreneurship education. The scale-up potential of the program in Uganda will help reach over 150,000 young men and women annually in upper secondary school per year.

*Private Sector Firms and Family Enterprises:* In the long-run, when successful entrepreneurship training is at scale, large numbers of family enterprises and small businesses will benefit from new cohorts of youth entering the labor market with business skills. Such human capital should improve the productivity of these businesses generating increased profitability. As such the owners of these businesses will prosper and will catalyze economic growth.

*NGOs and Civil Society:* These organizations often focus on entrepreneurial activity as a way to increase economic activity in a community and help the most vulnerable groups. This research will offer critically needed insight into exactly how entrepreneurial development is best maximized.

*Other African and Non-African Countries:* Large numbers of countries face youth employment problems similar to Uganda. Lessons learned from this research in Uganda will also be broadly disseminated in neighboring countries where replication of the program would lead to supporting more young students.

*Donors (Multilateral, Bilateral and Private):* The wider development community, including NGOs and international organizations, will be interested in the results. The ILO, for example, has developed such training programs in over 40 countries in the last 20 years. It is interested to understand the impact of such programs, and if there is a more cost effective approach. The project could then have direct global economic impacts for similar programs run around the world.

### **Data Collection Methods and Indicators**

Outcomes in both treatment and control schools will be measured over time using surveys for schools and students.

A baseline survey will be conducted before the start of the programs for both the schools and a selection of students in the schools.

The school survey will measure the main characteristics of the school, including location, quality, etc. It will be administered in all schools included in the evaluation sample. The following modules will be included in the school survey:

- Number of students in total
- Total and per capita budget of the school
- Quantity and quality of teachers

- Prior exposure of the school to entrepreneurship curricula
- Previous experience of the teachers that will run the program
- Location

The student survey will include the following information about the student and their household:

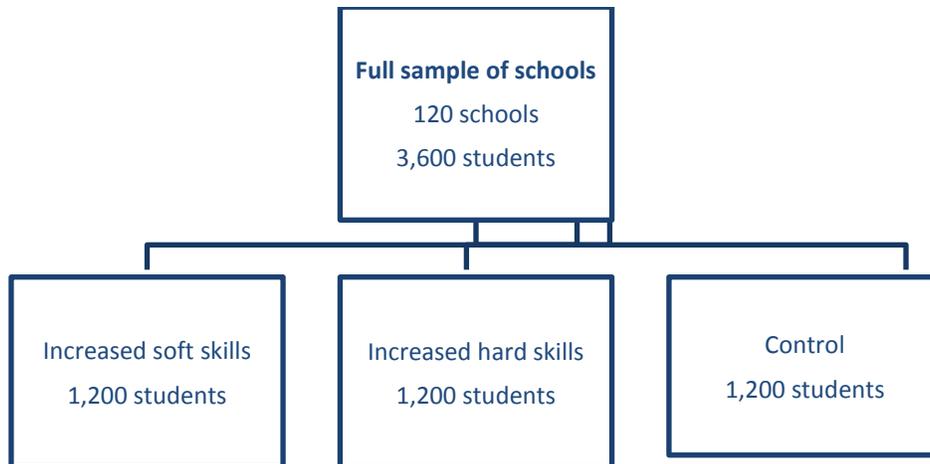
- Household roster (including individual demographics)
- Physical characteristics of the household with regard to sanitation, hygiene and water facilities, as well as other major housing facilities and amenities
- Household economy module (including income and assets)
- Education and school attendance
- Student knowledge about entrepreneurship
- Student attitude towards entrepreneurship
- Baseline psychological variables, including the Big 5, stress, and pro and anti social behavior

A follow-up survey will be collected approximately 24 months following the end of the training in treatment schools to determine the impact of the program on student outcomes listed earlier. The main indicators of interest will be as follows:

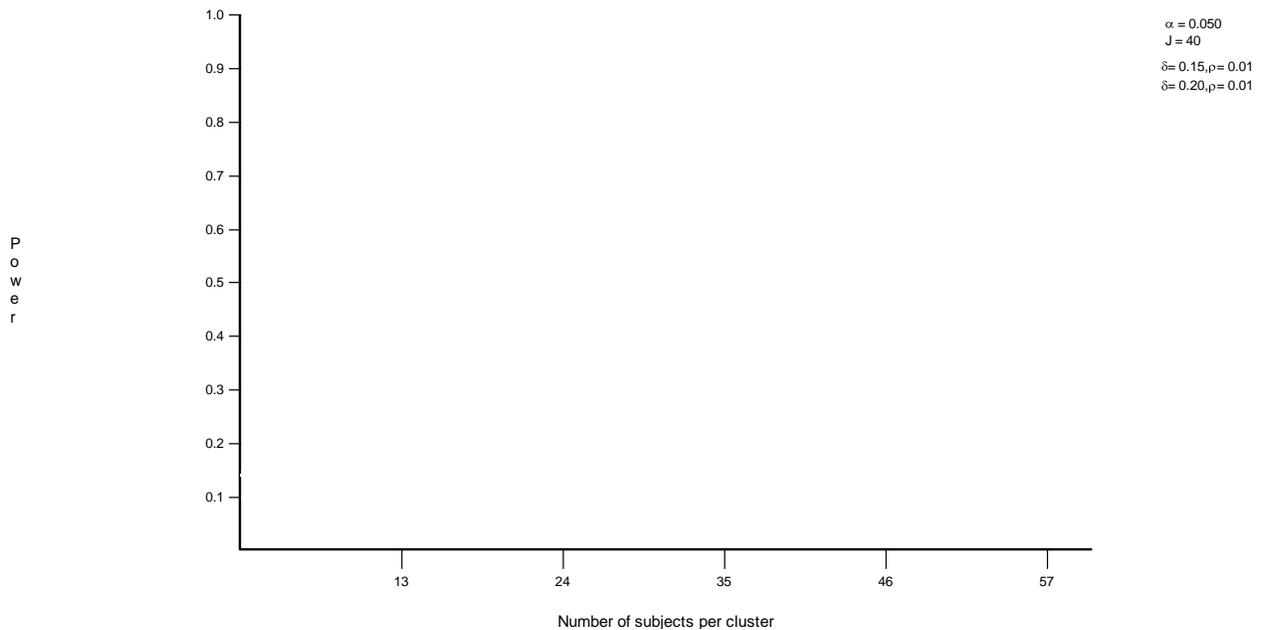
- Income and consumption
- Employment status
- Quality of employment
- Number of employees, if any
- Psychological indicators, including stress and happiness

### **Technical Design**

The project will use a cluster randomized assessment of impact on skill develop and on subsequent labor and business success. Schools will be randomized to receive either (i) increased training in hard skills, (ii) increased training in soft skills, or (iii) the regular entrepreneurship course from the national curriculum (control). Detailed baseline (pre-intervention) and endline (post-intervention) data collections will be used to evaluate the effect of these different entrepreneurship skills interventions and determine the most effective way(s) to increase entrepreneurship activities in developing countries with saturated labor markets. Since the target population is youth in their last years of high school, the research will measure the effect of entrepreneurship training on attitudes, preferences, psychological well-being and social skills. How this effect and the exposure to training prompt positive labor market outcomes (such as self-employment, business creation, and job creation through start-ups), and ultimately how this helps to build better, sustainable and bankable businesses. Accordingly, to capture the chain of effects on young people's decisions and outcomes, the research will span over a period of four years.



With any evaluation, it is important in the design phase to attempt to avoid being “under powered”, i.e. having too few observations (in this case students) to detect an effect. The sampling is based on a power of 0.8 and significance level of 0.05. Using household data from Uganda, we estimate sample sizes based on household-level data on wealth for those that finished secondary education to detect a 10% change in outcomes. Assuming a cluster design using Optimal Design (figure below) with 40 clusters, low intra-cluster correlation, power of 0.8, alpha = 0.05 and effect sizes ranging from 10-15%. This gives 60 students per cluster, totaling 60\*20=1200 per arm.



Assuming randomization within clusters based on other RCTs done in Uganda with cash grant and training programs, 900 students per arm has proved very powerful. The conservative estimate is the cluster design, giving approximately 1200 students per arm.

Baseline surveys will be used to establish that randomization achieved balance. A follow-up survey approximately 24 months after graduation will be used to assess the impact on labor market outcomes and business success. The experimental design will allow assessment of the separate impact of soft skills

versus hard skills and synergies of them combined on labor market and business outcomes. The specific trainings are as follows.

**The hard skills curriculum:** The hard skills training will build upon the already hard skills-based existing curriculum and increase the intensity of the trainings in a few core technical areas. The current curriculum was developed as a joint effort of the Youth Employment Network of the ILO and the government of Uganda. The joint work on the revision started in July 2010 and the curriculum was rolled out in early 2012. Given the time commitments of teachers and the difficulties of rolling out the curriculum, the actual learning of the students is not expected to be very strong.

The full development of this component will build on the existing curriculum and the experience of the International Labour Organization (ILO)'s entrepreneurship education modules, tested in over 40 countries worldwide. According to an initial review, it will include increased trainings on:

- Financial literacy, including calculating interest rates and general business numeracy.
- Developing a business proposal. By the end of the course, the students are expected to have completed a basic business plan. The business plan will serve as a blue print for the students in their business and help in accessing finance.
- The role of budgeting in the successful development and implementation of a business.
- How to calculate and keeping track of expenses, revenue and profits.
- The importance of re-investment in the business for business growth.
- How to draft a marketing strategy.
- Methods for planning staff needs.
- How to cost goods and services effectively.
- Optimal legal form of the business including process for getting licenses and the permits.
- How to assess of the environmental impact of planned business.
- Forecasting finances.
- A business game that simulates business operations to experiment on the challenges of managing small businesses with product portfolios in different markets.

**The soft skills curriculum:** For 100 years psychologists have theorized that there is much more to human intelligence than “hard” or quantitative intelligence. The concept of “Social Intelligence” began to gain traction in the 1920’s with E. L. Thorndike’s seminal work. Since then, all models and theoretical treatments of emotional and social intelligence factor out to a few fundamental underlying dimensions (Riggio, 1986<sup>1</sup>; Salovey & Mayer, 1990<sup>2</sup>; Thorndike, 1920<sup>3</sup>, 1936<sup>4</sup>). These dimensions all describe (1) the ability to appraise one’s own and others’ emotional and motivational states, and (2) the ability to regulate or control these states within oneself and in others and (3) use such emotional and motivational information toward advancing an a social goal such as to influence, persuade, transact effectively, communicate more clearly, or befriend more quickly.

The current content and teaching techniques of the ILO curriculum will be redeveloped based on the experience of a local NGO called Educate that works in entrepreneurship training and international experience. According to an initial review, it will include increased trainings on a suite of trainable skills

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<sup>1</sup> Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology*, 51, 649–660.

<sup>2</sup> Salovey, P., & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.

<sup>3</sup> Thorndike, R.K. (1920). Intelligence and Its Uses. *Harper's Magazine*, 140, 227-335.

<sup>4</sup> Thorndike, R.L. (1936). Factor analysis of social and abstract intelligence. *Journal of Educational Psychology*, 27, 231-233.

harvested from psychology, sociology, and economics (named “soft skills” by the business community) which predict facets of entrepreneurial success (e.g., Moss & Tilly, 1996<sup>5</sup>; Nickson, Warhurst, Commander, Hurrell, & Cullen, 2011<sup>6</sup>). Many scientists and practitioners have argued strongly for the increased reliance upon soft-skills training and education in business education (e.g., Burke, Drasgow, & Edwards, 2004<sup>7</sup>; Navarro, 2008<sup>8</sup>). For example, having a particular structure to one’s social network leads to an increased likelihood of having entrepreneurial success (Stuart & Sorenson, 2005<sup>9</sup>). Thus, knowing how to build and structure one’s social network is of utmost importance to increasing the likelihood of entrepreneurial success.

The four most critical and predictive dimensions of “soft skills” build on each other and are taught in the following order: (1) Building and Maintaining Social Networks, (2) How to Perceive and Listen to Others, (3) How to Influence & Persuade Others, and (4) How to Effectively and Creatively Negotiate. The last module, negotiation, pulls together many of the skills taught over the course of the teaching term. Below is a brief background and pedagogical plan for each. The content for these 4 modules will be taken directly from the YEP and Educate! Curricula and supplemented and edited to reflect the most cutting edge insights from business education. Materials will be grounded deeply by the cultural fabric understood by Ugandan youth by a hired teaching assistant who has had extensive experience with the Ugandan culture and teaching in Uganda.

*Social Networks:* To be a successful entrepreneur, the people you know are as important as your idea is (Stuart & Sorenson, 2005<sup>10</sup>). In addition, it is not only *who* you know, but *who THEY know*. Below are diagrams of two kinds of networks. The diagram on the left (Panel A) depicts an “embedded network.” Families, classes, and small work-groups are described by embeddedness: everyone knows everyone fairly well. This kind of network is not particularly effective for launching an entrepreneurial idea because these networks are small, informationally and resource redundant, and you can’t “buy” others’ help by introducing them to anyone (i.e., “brokering” between otherwise unconnected networks). In contrast, the network on the right (Panel B) depicts what has come to be known as an “entrepreneurial network.” In this kind of network, you know many different kinds of KEY people who have access to whole other networks non-redundant with your own. Principles taught in this module include: (1) what does your current social network look like? (2) What kinds of additions do you need to your network? (3) How to add different kinds of people to your network. (4) How to broker connections between people (and their associated networks). (5) Strategies to maintain contacts after they have been established. (6) How to call on people when you need them. (7) What is the difference between weak and strong social network connections?

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<sup>5</sup> Moss, P., & Tilly, C. (1996). “Soft” skills and race: An investigation of black men's employment problems. *Work and Occupations*, 23, 252-276.

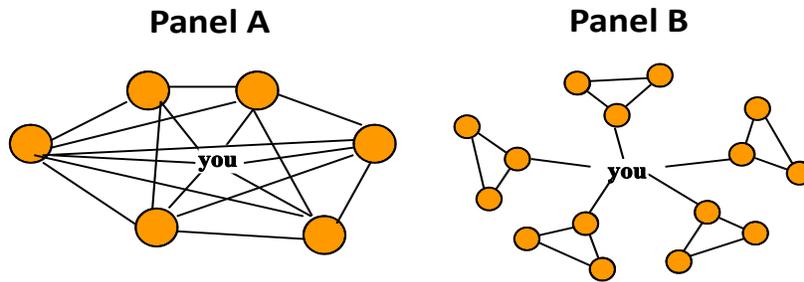
<sup>6</sup> Nickson, D., Warhurst, C., Commander, J., Hurrell, S. A., & Cullen, A. M. (2011). Soft skills and employability: Evidence from UK retail. *Economic and Industrial Democracy*, 33, 65-84.

<sup>7</sup> Burke, M. J., Drasgow, F., & Edwards, J. E. (2004). Closing science–practice knowledge gaps: Contributions of psychological research to human resource management. *Human Resource Management*, 43, 299-304.

<sup>8</sup> Navarro, P. (2008). The MBA core curricula of top-ranked U.S. business schools: A study in failure? *Academy of Management Learning and Education*, 7, 108-123.

<sup>9</sup> Stuart, T. E., & Sorenson, O. (2005). Social networks and entrepreneurship, pp. 233-252. In S. Alvarez, R. Agrawal and O. Sorenson (Eds), *Handbook of Entrepreneurship Research*, Berlin: Springer-Verlag.

<sup>10</sup> Ibidem



*Influence & Persuasion:* One of the common assumptions made about influence is that “some people are just good at it.” This is incorrect. One of the common assumptions made about persuasion is that only some people can be persuaded—this is also incorrect. This module teaches Cialdini’s (e.g., Cialdini, 2001<sup>11</sup>) 6 building blocks of persuasion: (1) reciprocity, (2) liking, (3) commitment and consistency, (4) authority, (5) social proof, and (6) scarcity. Students are given in-class and out-of-class assignments in which they will practice their influence and persuasion skills to: (a) persuade others of their point of view on an issue, (b) sell goods, and (c) trade upwards from a small object to as valuable an object as possible in 5 trades (the winner of this context receives a prize and public recognition).

*Listening to and Perceiving Others:* The ability to read other people and know their intentions, goals, preferences and emotions is a skill that helps you manage them, persuade them, coordinate them, manage conflicts between them, know when they are lying to you, and enlist them toward your vision and goals. At the most basic level, watching and listening to others and what they say, is a critical skill that most of us do not have the tendency to do. This is a skill which can be taught through practice in a classroom setting with materials (e.g., photos of African faces expressing different emotions) train the accurate detection of emotions such as: happiness and sadness. Antecedents and consequences of emotional experiences are discussed at length. Further, “people reading” skills are also taught in dyads (people working with each other to predict and then test how each other is feeling in various role-plays and improvisations) and in small groups. Role plays to practice listening skills will be used to exercise the critical point that a person cannot know what another person wants or feels unless you stop your own mind from thinking what you want and feel and listen to and think about their wants and feelings.

*Negotiation:* The final module builds on the previous three modules and also contains unique value-added hands-on learning. The primary assumption shattered in this module is that all negotiations are about a fixed resource (i.e., “the myth of the fixed pie”). Negotiations are NOT always a zero-sum game. In fact, more often than not there are creative and integrative solutions to problems such that both parties can trade what they are least interested in for what they are most interested in (provided the other party has the reciprocal valuation of the same commodities). These critical learning points are covered. Students are given opportunities to practice utilizing the skills in the classroom (in dyadic simulated negotiations) and in the community with strangers. They are also given skills to learn how to “expand the pie” and think creatively about solutions to common problems. Principles taught are: (1) how to expand the goods being discussed (i.e., the myth of the “fixed-pie”), (2) how to build relationships during a negotiation (and before and after), (3) how to be more directive and assertive when appropriate, (4) different types of issues facing negotiators, Students will engage in a number of in-class and out-of-class negotiations in order to demonstrate and practice each concept.

For the interventions, we are identifying and partnering with about 20 host schools located in 4 different geographic clusters (the regional centers of Mbale, Jinja, Mbarara, Gulu and districts immediately surrounding them). 10 schools will be devoted exclusively hard-skills and 10 schools will be devoted to soft-skills, to minimize spillover effects. Each school will host 120 students for the duration of the

<sup>11</sup> Cialdini, R. B. (2001). The science of persuasion. *Scientific American*, 284, 76-81.

program (3 weeks). We will compensate each school for security guards, cooks, supervisors, and utilities. Each teacher will teach 2 classes per day with 30 students in each class. IPA will hire staff to supervise students, as well as a staff of auditors to monitor teaching quality.

### **Gender Appropriateness**

Women in Uganda, and in many Sub Sahara Africa nations, face a number of constraints to the success of their businesses. These include family duties and societal constraints, along with a history of lower quality education than men. It is also not clear which training will benefit them more, the hard or soft skills. This research will explicitly look at the effect of the different trainings on young women to determine what works best for their contexts by analyzing differential outcomes from the young men for each training.

## **Status Report: Milestone 2**

**AID-OAA-F-12-00014**

**“How to Make Better Businesses:  
Experimental Evidence of the Components of Entrepreneurship”**

Principal Investigators:

Nathan Fiala (German Institute of Economic Research)

Paul Gertler (University of California, Berkeley)

Dana Carney (University of California, Berkeley)

Silvia Paruzzolo (Youth Employment Network)

Written by:

Alina Xu (Innovations for Poverty Action)

March 2013

### **Teacher recruitment and training**

IPA contracted Educate!, an NGO that focuses on entrepreneurship training and mentorship for high school students, to recruit and train teaching facilitators for the evaluation. Educate! recruited teachers using the same methods it uses to recruit for its own after-school training and mentorship programs, i.e. placing newspaper advertisements, renting a billboard, and word-of-mouth. Educate! conducted two rounds of recruitment and training, training 59 teachers total in its standard four-week teaching curriculum.

### **Curriculum**

IPA contracted two consultants to develop the hard and soft skills entrepreneurship curricula. The curricula are based on materials compiled by Principal Investigators Dana Carney and Silvia Paruzzolo and are based on proven materials developed by the ILO and UC Berkeley. The curriculum development process took place between January and March 2013. After a series of piloting exercises and revisions, the curricula were finalized in mid-March.

# Milestone 5

**AID-OAA-F-12-00014**

**“How to Make Better Businesses:  
Experimental Evidence of the Components of Entrepreneurship”**

Principal Investigators:

Nathan Fiala (German Institute for Economic Research)

Paul Gertler (University of California, Berkeley)

Dana Carney (University of California, Berkeley)

Silvia Paruzzolo (Youth Employment Network)

Written by:

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December 2013

## **Baseline Data Collection**

As mentioned in the Baseline Report (Milestone 3), baseline data collection for the Skills for Effective Entrepreneurship Development (SEED) evaluation took place in October 2012, during the students' final term of their final year of secondary school (Senior 6). Note that no preliminary findings are available because data collection on student outcomes has not yet taken place. (Endline data collection is scheduled for 2015, two years after the start of the program, to allow time for the effects of the program to materialize.)

The evaluation team collected data on a wide range of background characteristics, including household and economic indicators; prior exposure to entrepreneurship training; prior experience owning/working for a business; social and psychological characteristics; and cognitive ability.

The evaluation team decided to recruit students for the program and administer the baseline survey at the same time due to the difficulty of tracking students once they leave secondary school. Enumerator teams visited over 200 schools in all regions of Uganda to recruit students and administer baseline surveys. Teams first asked school administrations for permission to advertise the program and asked them to gather all Senior 6 students in one room at the appointed time. School staff members were asked to leave the classroom to preserve confidentiality and to avoid putting undue pressure on students. When students were assembled, the enumerators gave a brief introduction to SEED, highlighting key information that would influence their decision to apply for the program: enrollment was free; a round-trip transport refund would be provided; the training was a residential program that provided meals; students would have the chance to write business plans and enter a competition for a large cash prize.

*Survey Implementation:* Due to the infeasibility of administering one-on-one surveys to large numbers of students in a school setting, the baseline survey was self-administered. Each student received a copy of the questionnaire and completed it independently, though the process was guided by an enumerator team who read and explained certain sections aloud and proctored the remainder. The survey consists of 10 sections and took 1-1.5 hours to administer. Enumerators were trained to walk around the room and monitor students closely while they were completing the survey to check for student errors and to make sure students were not copying their neighbors. They were instructed not to assist students in answering knowledge-based questions, such as calculation of profit or interest. Enumerators were, however, permitted to help student in cases that would enable them to better understand a question by defining a commonplace word that the student had trouble with, for example.

*Auditing:* Enumerator team leaders audited a random selection of ten surveys in each batch, counting numbers of errors in student completion of the survey. These include blanks, circling errors (i.e. circling too many options), skip pattern errors, illogical values, and illegible writing. Team leaders then gave feedback to enumerator teams on how to improve their monitoring during the survey.

*Problems and Concerns:* Enumerators encountered some variation in the ability of S.6 students to understand the survey, based on their familiarity with English and prior exposure to similarly structured exams. It should also be noted that though enumerators monitored students during the survey, the evaluation team cannot rule out the possibility that questions were filled out improperly by students who did not ask questions or who encountered difficulty when an enumerator was in another part of the room, particularly in larger schools.

Some enumerators reported that they suspected students thought that IPA was "testing" them, and that students would be admitted based on whether they filled out the survey completely or had the "right" answers, for instance. Enumerators had stressed prior to the survey administration that all students have an equal chance of admission and the survey is merely for research purposes.

### Baseline Characteristics

The following is a summary of selected student characteristics at baseline, using data from both treatment and control groups (total sample size: 4,414).

Baseline Characteristics	Male	Female
Total	2,858	1,556
Age	20.4	19.3
Enrolled in A-level entrepreneurship course	35.8%	34.9%
% who work for someone else's business	48.0%	31.5%
% who own a business	49.6%	31.7%
Current Subjective Family Wealth (scale of 1 to 10)	4.7	5.0
Future Subjective Personal Wealth (scale of 1 to 10)	7.9	8.2
Score on Digit Span test of short-term memory (% correct)	41.5%	41.1%
Score on Raven's Test of cognitive ability (scale of 1 to 10)	5.4	5.4
Score on index of math and business knowledge	60.5%	58.3%
Leadership Index (scale of 1 to 5)	4.2	4.2
Extroversion Index (scale of 1 to 5)	2.7	2.8
Emotional Stability Index (scale of 1 to 5)	3.9	3.8

	Yes - University	Yes - Vocational School	Maybe - University	Maybe - Vocational School	No
Do you plan to attend university after secondary school?	70.5%	9.0%	16.2%	3.6%	0.7%

The proportion of males who expressed interest in the program (and therefore who were recruited into the sample) was nearly double that of females, though this may reflect a higher proportion of males enrolled in Ugandan secondary schools in general. About a third of all students in the sample are taking the entrepreneurship elective course at school. Less than a third of girls say they work at a business or own their own business, while nearly half of boys say they do. Both boys and girls anticipate that they will be substantially wealthier in the future than they are now. On key psycho-social characteristics and measures of cognitive ability, both boys and girls have very similar scores. Nearly three-quarters of all students plan to attend university after graduating from secondary school.