

Copyright

by

Laura Ruth Richards

2018

**The Report Committee for Laura Ruth Richards
Certifies that this is the approved version of the following report:**

**A Guide to Entrepreneurship Training Programs for Women in Low
and Lower-Middle Income Countries**

**APPROVED BY
SUPERVISING COMMITTEE:**

Supervisor:

Catherine Weaver

John Doggett

**A Guide to Entrepreneurship Training Programs for Women in Low
and Lower-Middle Income Countries**

by

Laura Ruth Richards

Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degrees of

Master of Global Policy Studies

Master of Business Administration

The University of Texas at Austin

May 2018

Acknowledgements

The research completed in the meta-synthesis evaluation and the write-up of the findings, including in this report, was done as a part of a team effort. Michael Deegan, Estevan Delgado, and Sarah Blumberg contributed in equal part to this section and I would like to thank these colleagues for their collaboration on this project.

Abstract

A Guide to Entrepreneurship Training Programs for Women in Low and Lower-Middle Income Countries

Laura Ruth Richards, MGPS/MBA

The University of Texas at Austin, 2018

Supervisor: Catherine Weaver

This thesis proposes an evidenced-based model for an entrepreneurship training program aimed at women in low and lower-middle income countries. The model was informed by a meta-synthesis evaluation of seventy-seven similar programs. The evaluations were coded and ranked based on quality, validity, reliability, transparency, bias and ethics. Best practices, data trends and conditions for success of these programs were extrapolated from the meta-evaluation and applied in the example business model described. The key drivers of a program's success included: the use of multi-pronged approaches, the addition of mentors or coaches, community inclusion in program design, program flexibility, clear monetary gains, public-private partnerships, customization, and continuing support post-program. The example program, called Business Innovations for Good, includes these elements and includes an environmental sustainability component, as many women entrepreneurs in low and low-middle countries work in the agricultural sector. The business model analyzes the market and competitive landscape, as well as describing the financial situation and team structure. Business Innovations for Good is not intended to serve as an

ideal program, but it is meant to be a step toward research-based programming and implementation. Further research is still needed into what causes the success or failure of an entrepreneurship training program in a low or low-middle income country. Additionally, it is crucial that program evaluators set and practice more stringent evaluation standards in order to more accurately measure the true impact these programs have on their participants, their participants' businesses, and their communities.

Table of Contents

INTRODUCTION	1
META-ANALYSIS OF SKILLS-BASED INTERVENTIONS FOR FEMALE ENTREPRENEUREURS IN LOW AND LOWER MIDDLE-INCOME COUNTRIES	4
Executive Summary	4
RESEARCH OBJECTIVE	4
METHODOLOGY AND ANALYSIS	4
RESULTS AND CURRENT PRACTICES	5
SYNTHESIS OF RESULTS	6
RECOMMENDATIONS	7
CONCLUSION	8
Background	9
Methodology	12
ASSESSMENT TOOL	13
RUBRIC	14
EVALUATION	15
RCT/QED Results and Analysis	17
EVALUATION RESULTS	17
DATA TRENDS	20
QUALITY OF INTERVENTIONS	21
DRIVERS OF PROGRAM SUCCESS	23
Use of Multi-Pronged Approaches	24
Inclusion of Personal Mentors/ Coaches	24
Community-Based Designs	25
Qualitative Results and Analysis	26
EVALUATION RESULTS	26

DATA TRENDS	28
QUALITY OF INTERVENTIONS	30
DRIVERS OF PROGRAM SUCCESS	32
Program Flexibility	32
Clear Monetary Gains	33
Public-Private Partnerships	33
Continued Support	34
Customization	34
Synthesis and Discussion	36
Recommendations	38
PROGRAM IMPLEMENTERS	38
PROGRAM EVALUATORS	40
Limitations	41
Conclusion	43
EXAMPLE BUSINESS MODEL: BUSINESS INNOVATIONS FOR GOOD45	
Executive Summary	45
The Opportunity	46
The Solution	48
POCKET MBA	48
LONG-TERM MENTORSHIP	48
CONNECTION TO FUNDERS	49
Market Analysis	50
Competitive Analysis	51
Competitive Advantage	53
SUSTAINABILITY	53
ROBUST COURSEWORK	53
WOMEN-FOCUSED	54

Market Entry	55
Financial Projections	57
PHASE 1	57
PHASE 2	57
PHASE 3	57
Long-Term Franchising and Licensing	59
Management Team	60
LAURA RUTH RICHARDS, DIRECTOR	60
RUSHONGOKA WA-MPIIRA, PROGRAM COORDINATOR	60
DEBORAH NAATUJUNA, OUTREACH DIRECTOR	61
BRIAN NDYAGUMA, LEAD ENTREPRENEURSHIP TRAINER	61
CONCLUSION	62
Appendix	64
APPENDIX 1: CODE BOOK, METHODOLOGY FOR CONSTRUCTING SCORES	64
APPENDIX 2: INCOME STATEMENT (YEARS 1 – 3)	69
APPENDIX 3: CASH FLOWS (YEARS 1 – 3)	70
References	71

INTRODUCTION

Female entrepreneurs in developing countries often struggle to gain access to the resources they need to start, build, and grow their businesses. Development professionals have been working toward solutions for this issue over the past several decades and a few trends have emerged. The microfinance trend in international development has seen some success, but that success has been slowed by the lack of financial literacy and management skills of the receiving small and middle enterprises (SMEs) and entrepreneurs.¹ As such, skills-based training programs by NGO's, the private sector, and governmental organizations have popped up to meet this unmet need. These programs, generally, seek to provide entrepreneurs in developing countries access to business skills in order to more effectively utilize funds that come their way, whether that is through microfinance institutions, grants or earned revenue. These programs are varied in their approaches to teaching and evaluation and, like microfinance institutions, have seen mixed success.²

This paper analyzes evaluations of entrepreneurship training programs and, subsequently, describes a business model that is informed by the learnings from that synthesis-evaluation. The included business model describes the organization founded by the author of this paper, Business Innovations for Good, henceforth referred to as B.I.G. Ideas. BIG Ideas is a skills-based training program for female entrepreneurs in the agriculture sector in Uganda. I started BIG Ideas in 2016 while I was interning at a local NGO in Uganda and working with female entrepreneurs. After running a pilot of the BIG Ideas program, I decided to take a step back and review evaluations of similar programs

¹Bandiera, O., Buehren, N., Burgess, R., Goldstein, M., Gulesci, S., Rasul, I. and Sulaiman, M. 2012. "Empowering adolescent girls: evidence from a randomized control trial in Uganda". Washington, DC: World Bank.

²Bandiera, O., Buehren, N., Burgess, R., Goldstein, M., Gulesci, S., Rasul, I. and Sulaiman, M. 2012. "Empowering adolescent girls: evidence from a randomized control trial in Uganda". Washington, DC: World Bank.

that have been run in low-income countries, to learn best practices and what conditions have driven success for these programs and the women they serve. Although BIG Ideas already employed some best practices, such as community partnerships, assurance of well-trained instructors, and a five-year plan for impact evaluation, there were also several practices that BIG Ideas adopted as a result of this evaluation, including increased program flexibility, long-term mentorship, and partnerships with banks.

The meta-evaluation is included first, to give readers a sense of what interventions have already been done in low and lower-middle income countries and how they have fared in the eyes of evaluators. The business plan that follows is intended to demonstrate how learnings from many interventions can be combined into a single program and is meant to leave readers with an idea of how to design a program that not only seeks to address skill-gaps, but also attempts to work on deeper issues of injustices toward women and the environment. Thus, the model is intended to be a proposal for a program that aims to not only support entrepreneurs, but also aims to build gender equality and mitigate environmental degradation, as many women entrepreneurs in low and lower-middle income countries work in the agricultural sector. Working at the intersection of these three issues allows programs to amplify their positive impact, not only on the entrepreneurs the programs work with, but also the surrounding communities and environment.

Focusing on female entrepreneurs has the potential to magnify the impact of entrepreneurship training programs. According to the United Nations (2009), working women invest 90 percent of their income back into the community, compared with 35 percent for working men. The Organization for Economic Co-operation and Development (2018) found that women's ownership of productive resources and assets accelerates the

pace of national development, reduces poverty and inequalities, helps to improve school attendance, and fortifies children's health and nutrition.³

The business model described in this paper, that of BIG Ideas, focuses on female entrepreneurs and requires each cohort to be at least 70 percent female. Female entrepreneurship is an important step in supporting female land and resource ownership and achieving better livelihood and economic opportunities for women. The model outlined in this paper aims to provide opportunities for women to overcome some of the many obstacles associated with obtaining business skills and access to resources. The business plan for BIG Ideas is not meant to be prescriptive or ideal, however. BIG Ideas serves as an example of a program incorporating research-based practices and should continue to be evaluated and built upon, in order to improve outcomes for female entrepreneurs in low and lower middle-income countries.

The ultimate objective of this paper is to provide an analysis of evaluations of skills-based programs for women that have been implemented to date to inform future program designs and evaluations. Further, this paper offers specific recommendations for how programs and their evaluations can be improved, with the hope that future evaluators and implementers will review this report and improve on past efforts, including BIG Ideas.

³OECD. 2018. "Investing in Women and Girls". www.oecd.org/dac/gender-development/investinginwomenandgirls.htm.

META-ANALYSIS OF SKILLS-BASED INTERVENTIONS FOR FEMALE ENTREPRENEUREURS IN LOW AND LOWER MIDDLE-INCOME COUNTRIES

Executive Summary

RESEARCH OBJECTIVE

The objective of this meta-evaluation is to measure the impact of skills-based training programs on women living in Low and Lower Middle-Income Countries (LLMICs). The Brookings Institution and the World Bank have called for a greater emphasis on vocational education and business skills training to empower women and their communities. Skills-based interventions for female entrepreneurship are becoming prevalent in the gender and development field, yet there is a dearth of research on the effectiveness and ultimate success of participating women. Thus, this synthesis meta-evaluation seeks to provide an analysis of the quality of relevant interventions completed to date in LLMICs and the evaluations that have drawn conclusions about them.

METHODOLOGY AND ANALYSIS

This review focuses on skills-based interventions for entrepreneurship promotion: technical and vocational education and training (TVET) and entrepreneurship education and training (EET) initiatives. Our evaluation contributes to this literature by analyzing the impact of 18 skills-based training programs for women living in LLMICs.

After systematically compiling LLMIC skills-based training evaluations, we used an assessment tool to determine if evaluations adhered to several criteria. Our team adapted this tool from the existing peer-reviewed literature to determine the quality of each evaluation based on: (1) potential study bias, (2) quality of baseline evaluations, (3)

relevance of study objective, (4) sampling and study methodology, (5) analytical methods, (6) ethics, and (7) reporting strategy.

We tailored the assessment tool to evaluate both randomized control trials (RCTs), quasi-experimental designs (QEDs), and qualitative studies. For example, we looked for clear and transparent sampling strategies for the RCTs and QEDs, assigning the highest score for those studies that used random assessment. However, these same criteria could not be applied to the qualitative studies, which mostly did not use random methods or even note their sampling strategy.

Our code book methodology rates each of the evaluation criteria on a three-point Likert Scale, and lowers the overall score of studies that earn only one “2” code or a single “1” code (see Appendix 1). The rationale of scoring in this way is that a study that receives a score of two or one in any category may bias the analysis overall. Noting that the overall score measure is unforgiving to studies with a single criterion score of “1,” we have also provided the average score for each individual study according to our eligibility criteria. Our analysis ensures rigorous reporting of methods and results to further support the credibility of a development publication and add to its potential impact on future study designs.

RESULTS AND CURRENT PRACTICES

After coding each study for content and quality, we discovered the following results:

- Qualitative evaluations received the lowest scores. Due to the lack of information about methodology in these qualitative evaluation reports, it is difficult to tell whether the issues lie within the implementation of the evaluation or if the issues were in the write-up of the evaluation. Our analysis can inform future evaluators

regarding proper qualitative evaluation techniques and robust reporting standards and will add to the quality and credibility of future qualitative evaluations and reports.

- The “quality of baseline” category served as a check for how well the evaluators constructed and elucidated their baselines prior to the studies presented. Many studies did not provide the baseline used or how the baseline was created. If an intervention has a positive impact, providing a quality baseline description only strengthens the argument.
- For RCTs and QEDs, when assessed for potential bias, or independence between the program implementer and the evaluator, we determined that each study was produced by an outside evaluator. This is a notable strength for these study evaluations.
- Many RCT and QED evaluation reports did not obtain an overall score of three because of methodological or analytical reporting gaps in otherwise robust evaluation reports.

SYNTHESIS OF RESULTS

1. In programs that trained both men and women, many of the programs had lower female participation.
2. Training programs have more consistent attendance and less attrition from participants if the value added by the program is concrete and the potential monetary impact is clear.
3. When the implementing agencies of training programs gain buy-in from local government officials and international organizations operating in the region, those SME’s are more likely to gain access to sustainable markets.

4. Support from other small enterprises, family acquaintances, and community members in implementing business opportunities can greatly enhance the success of female SME's in LLMICs.
5. SME's were more likely to have successful outcomes when the implementers of the training programs had tailored the training plans and products to the specific needs of the participating female entrepreneurs.
6. After assessing the aggregate data from this evaluation, certain practices need standardization for better intervention reporting and validity.
7. It is particularly useful to know whether the surveys used in assessing an intervention were validated in a previous study or if the questions were developed specifically for the intervention at hand.

RECOMMENDATIONS

1. Female training programs should be scheduled at times that work for participants, which is usually on weekends since many of the participants work full time during regular business hours and have other family obligations.
2. All RCT and QED studies used surveys for baseline data, but most did not divulge the content or order of questions. Studies that did include explicit evaluation questions or objectives did not operationally define them or how they would relate findings to the main objective. Authors should provide access to supplemental materials that define the study's theory of change and evaluation metrics.
3. The qualitative studies lacked clear methodology in reporting, often not mentioning sampling methods or assessment instruments used. We assume that this is due to constraints on publication length and readability. This could be rectified by providing access to supplemental methodology papers in an online format.

CONCLUSION

Technical and vocational education and training (TVET) and entrepreneurship education and training (EET) initiatives for female entrepreneurship are becoming more prevalent. This meta-synthesis evaluation highlights common threads for success and remaining gaps in the literature that analyzes the effectiveness of skills-based training interventions among women. Our review of experimental and qualitative evidence for skills-based interventions contributes to general understanding of economic development within the gender and development field.

Overall, RCT and QED studies received low scores under Relevance of Objective criterion, Reporting, and Quality of Baseline Data and Construction. Qualitative studies received low scores under Sampling, Reporting, and Quality of Baseline Data and Construction categories. None of the studies received a quality ranking of “3”, indicating that there were weaknesses in analysis across all studies. Future research on the quality of current evaluation standards is needed to have a clear understanding of the impact of skills-based training programs.

Background

Increasingly, international development practitioners focus on sustainable training programs to expand economic opportunities and improve the livelihoods of the world's poorest women and their families. Human capital development is viewed as critical for poverty alleviation, especially among women, who often face additional constraints due to traditional gender norms. The core of human capital theory rests upon attainment of "more knowledge, skills, and capabilities" to increase the "probability of reaching improved performance outcomes" [Bullough, 2015; Becker, 1964; Mincer, 1958]. Microeconomic conditions are not favorable for women in developing countries, where they face a "youth bulge" and "wage and salary employment is limited" [Cho, Y; Honorati, M (2014)]. Female financial empowerment initiatives are important for economic growth. Women living in poverty are often uneducated and/or illiterate. Investment in women and their families also increases the likelihood of re-investment into community development initiatives.

Development programs largely focus on microfinance and the funding of women's self-help groups to provide operational enhancements for both scaling female-led enterprises and advancing prospective female entrepreneurs. While local access to financial capital is essential for these seminal projects, there have been calls by both the Brookings Institution and the World Bank for a greater emphasis on vocational education and business skills training to empower women and their communities. Berge et al (2011) notes that the impact of financial capital "demonstrates that the growth effect of finance may critically depend on dimensions such as the entrepreneur's educational background, business skills, and mindset." Micro-finance-based projects are common across Low- and Lower Middle-Income Countries (LLMICs), due to perceptions of low-cost and high impact results within

a short time period. However, Berge et al (2011), challenges these assumptions by emphasizing the lack of support from the literature, which does not show “microfinance as a particularly powerful tool for business growth when given to female entrepreneurs.”

Constraints other than financing that are essential to micro-enterprise development include deprivation of needed skills and capabilities. Skills-based interventions for female entrepreneurship are becoming prevalent in the gender and development field, yet there is a void of research on the effectiveness and ultimate success of women participating in entrepreneurship program. The scope of this review focuses on skills-based interventions for entrepreneurship promotion: technical and vocational education and training (TVET) and entrepreneurship education and training (EET) initiatives. Our evaluation contributes to this literature by analyzing the impact of skills-based training on women living in LLMICs. The final 18 TVET and EET studies included in our review consisted of one or more approaches to female entrepreneurship.

Characteristic	<i>RCT/QED</i>	<i>Qualitative</i>
<i>Type/model of TVET, EET</i>		
Technical Education/Training	1	3
Life Skills Education/Training	3	2
Vocational Education/Training	4	4
Entrepreneurship Education/Training	10	4
Apprenticeship Training	1	0

Table 1: continued next page

Mentor/Personal Coach	7	0
-----------------------	---	---

Table 1: Main Intervention Characteristics

Below, our meta-synthesis evaluation is structured as follows: Section 2 describes our methodology and evaluation process; Section 3 delves into the results and analysis for RCT and QED studies; Section 4 looks at the results and analysis of qualitative studies; Section 5 is our synthesis and discussion. Section 6 outlines our separate recommendations for implementers and evaluators; section 7 highlights the limitations of our evaluation; section 8 is our conclusion.

The results of our study identify the general impacts of these interventions among differing contexts. We will also identify evidence gaps in the literature for this topic, specifically surrounding effective and robust research methodologies.

Methodology

This study pulled randomized controlled trials (RCTs), studies of quasi-experimental design (QED), and qualitative studies for LLMICs. We restricted our search to evaluations and studies published within the last 15 years, from 2002 through 2017, to focus on recent research developments within the field.

Our main research question was regarding the extent to which skills-based training programs impacted women living in LLMICs. This question was central to our report and guided our search protocol. We focused on a combination of the following search terms to identify potential studies for inclusion in our synthesis evaluation: “women,” “entrepreneur,” “skills,” “small scale enterprise,” “gender,” “impact evaluation,” “systematic reviews,” “training,” “Africa,” “Sub-Saharan Africa,” and “Afghanistan”. We also used bibliographic back-searching to locate studies that fit our criteria.

We utilized the following academic databases and development agencies for our first pull of impact evaluations:

- Google Scholar
- 3ie Impact Evaluations
- The World Bank
- The U.S. State Department
- USAID
- J-PAL
- The African Development Bank
- Eldis.org
- University of Texas Libraries Catalog

This resulted in 77 total studies, with a mix of RCTs, QEDs, qualitative studies, and case studies.

In the second round of our inclusionary analysis, we read the executive summary and/or methods of each paper to identify evaluations wherein the main intervention (and dependent variable) was skills-based in nature, either as part or independent of programs providing financial resources and other operational enhancements. These skills-based programs include -- but were not limited to -- business and managerial skills, financial literacy and recordkeeping, and access to consumer markets.

In a third round, coders found that multiple evaluations were based on the same study. Four RCT evaluations were removed to ensure a heterogeneous population of studies, in order to enhance the comparability across studies. After expanding eligibility criteria to lower middle-income countries, four additional RCT and QED studies were added. 18 studies met the eligibility criteria: 10 RCTs, 1 QED, and 7 qualitative studies, with all our viable studies limited to interventions in LLMICs.

ASSESSMENT TOOL

After compiling our final collection of evaluations, we used an assessment tool to determine evaluation compliance across many criteria. The tool was modeled after the assessment instrument used in the Center for Global Development's *Evaluating Evaluations: Assessing the Quality of Aid Agency Evaluations in Global Health*. (2017)

We chose this tool because it focuses on the relevance, reliability, and validity of evaluations and assesses their alignment with social science methodological standards. This tool provided a framework to examine sampling methods, objectives, analytical methods, ethical considerations, and reporting standards across all studies. Our team

adapted this tool by also creating a coding system to examine the criteria of sustainability, quality baseline data construction, and checks for bias.

The team further tailored the assessment tool before implementation, creating two evaluation frameworks: one for the RCTs and QEDs, and the other for the qualitative studies. The two frameworks accounted for the different approaches among these methods and appropriate standards specific to the two strata, while holding each to explicit and rigorous assessment criteria. For example, we looked for clear and transparent sampling strategies for the RCTs and QEDs, assigning the highest score for those studies that used random assessment. However, this same criterion could not be applied to the qualitative studies which mostly did not use random methods or even note their sampling strategy.

RUBRIC

After finalizing our list of studies, we created a rubric to assess the statistical confidence and generalizability of reported outcomes for each study in an unbiased manner (Appendix A). After applying the tool, coders ranked each of the criterion from a value of one to three, with three indicating a high score and one indicating a low score. The criteria are defined and explained below:

- **Bias:** This criterion looked for independence of the evaluator from the implementing group. If the evaluating body did not explicitly state their relationship to the implementing group, the authors would research this information to ensure the evaluators did not have a pre-existing relationship to the implementers.
- **Quality of baseline data/construction:** This served as an assessment of the baseline, looking at whether one was established before the intervention or not, and if the methodology was described and justified.

- **Relevance of objective:** This criterion relates to how well the objectives of the evaluations reflect the objectives of the interventions themselves.
- **Sampling and reliability:** This metric assessed the studies' sampling methods, assigning a high score to those that used random sampling and described their methods in full detail, lower scores to those that used purposive sampling, and the lowest scores for convenience sampling.
- **Analytical validity and reliability:** This criterion was used to analyze the sampling methods further by considering how well the study considered all appropriate covariates that may influence findings.
- **Ethics:** This served as a tool to examine whether primary or secondary data used was properly handled and de-identified
- **Reporting:** This looked at how well the evaluation presented its findings in a useful and transparent fashion for the study to be understood and replicated with actionable and justified recommendations.

EVALUATION

The team then reviewed all the scores for each study and assigned a final value from one to three to each study. Three indicated that the study was of high quality and attained a score of three in every category. Two indicated that the study was of average quality and contained at least one rating of two, but no ratings of one. Finally, a final score of one indicated the study was of low quality according to our codebook and contained at least one score of one.

All metrics must have been coded with a score of “3” for the evaluation to achieve a “3”, the highest-level score. To earn a score of “2,” the scores must be a mix of “2s” and

“3s”, with no scores of “1.” To earn a final score of “1,” one or more of the criteria must have been rated with a score of “1.”

The rationale of scoring in this way is that a study that receives a score of two or one in any category will bias the entire analysis. Averages were also calculated for each of the studies and are presented along final scores in Tables 1 and 2 below. The studies were each analyzed by two team members independently and scores averaged.

RCT/QED Results and Analysis

EVALUATION RESULTS

A systematic review of the literature revealed six RCTs and one QED that met our criteria for our meta-synthesis analysis. After using the evaluation criteria outlined in our methods section, we found the following results:

Score	Number of studies
3	0
2	8
1	3

Table 2: RCT and QED Final Scores

These scores were determined using the code book's criteria. The average of the overall scores across all RCT and QED studies is 2.38. Noting that the overall score measure is unforgiving to studies with a single criterion score of "1," we have also provided the average score for each individual study according to our eligibility criteria. The average of the averages was 2.59, with 4 of the studies receiving an average score of 2.63.

<i>Evaluation Criteria</i>	RCT One ⁴	RCT Two ⁵	RCT Three ⁶	RCT Four ⁷	RCT Five ⁸	QED Six ⁹	RCT Seven ¹⁰	RCT Eight ¹¹	RCT Nine ¹²	QED Ten ¹³	RCT Eleven ¹⁴
----------------------------	----------------------	----------------------	------------------------	-----------------------	-----------------------	----------------------	-------------------------	-------------------------	------------------------	-----------------------	--------------------------

Table 3: continued next page

⁴Adoho, F., Chakravarty, S., Korkoyah, D.T., Lundberg, M.K. and Tasneem, A. 2014. "The impact of an adolescent girls employment program: the EPAG project in Liberia".

⁵Bandiera, O., Buehren, N., Burgess, R., Goldstein, M., Gulesci, S., Rasul, I. and Sulaiman, M. 2012. "Empowering adolescent girls: evidence from a randomized control trial in Uganda". Washington, DC: World Bank.

⁶Premand, Patrick; Brodmann, Stefanie; Almeida, Rita; Grun, Rebekka; Barouni, Mahdi. "Entrepreneurship Education and Entry into Self-Employment among University Graduates". World Bank, published in the World Development <http://creativecommons.org/licenses/by-nc-nd/3.0/igo> <http://dx.doi.org/>.

⁷Cho, Y., Kalomba, D., Mobarak, A.M. and Orozco, V. 2013. "Gender differences in the effects of vocational training: Constraints on women and drop-out behavior".

⁸Berge, L.I.O., Bjorvatn, K. and Tungodden, B. 2014. "Human and financial capital for microenterprise development: Evidence from a field and lab experiment". *Management Science*, 61(4), pp.707-722.

⁹Blattman, Christopher, Eric P. Green, Julian Jamison, M. Christian Lehmann, and Jeannie Annan. 2016. "The Returns to Microenterprise Support among the Ultrapoor: A Field Experiment in Postwar Uganda". *American Economic Journal: Applied Economics*, 8(2): 35-64.

¹⁰Bandiera, Oriana, Robin Burgess, Narayan Das, Selim Gulesci, Imran Rasul, and Munshi Sulaiman. 2013. "Can basic entrepreneurship transform the economic lives of the poor?" STICERD - economic organisation and public policy discussion papers series 43, Suntory and Toyota International Centres for Economics and Related Disciplines, LSE

¹¹de Mel, Suresh and McKenzie, David J. and Woodruff, Christopher. 2012. "Business Training and Female Enterprise Start-Up, Growth, and Dynamics: Experimental Evidence from Sri Lanka (July 1, 2012)". World Bank Policy Research Working Paper No. 6145. Available at SSRN: <https://ssrn.com/abstract=2116143>.

¹²Field E, Jayachandran S, Pande R. 2010. "Do Traditional Institutions Constrain Female Entrepreneurship? A Field Experiment on Business Training in India". *American Economic Review Papers and Proceedings*.

¹³Klinger, Bailey, and Matthias Schündeln. 2007. "Can Entrepreneurial Activity be Taught?" Quasi-Experimental Evidence from Central America. Center for International Development Working Paper Series. Harvard, December.

¹⁴Gine, Xavier; Mansuri, Ghazala. 2014. "Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan". Policy Research Working Paper;No. 6959. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/19367> License: CC BY 3.0 IGO.

Implementer	Economic Empowerment of Adolescent Girls and Young Women (EPAG)	BRA C Ugan da	Tunisian Governm ent	Technic al Educati on and Vocatio nal Educati on and Training Authorit y (TEVE TA)	Promotio n of Rural Initiatives and Develop ment Enterpris e (PRIDE)	Women 's Income Generat ing Support (WINGS)	Targeted Ultra poor (TUP)	Start and Improv e Your Busine ss (SIYB)	SEW A Bank	TechnoSe rve	Pakistan Poverty Alleviati on Fund (PPAF) National Rural Support Program (NRSP)
Location	Liberia	Ugan da	Tunisia	Malawi	Tanzania	Uganda	Banglad esh	Sri Lanka	India	El Salvador, Guatemal a, Nicaragu a	Pakistan
Overall Score	2	2	1	2	1	2	2	2	2	2	1
Average Score	2.88	2.50	2.25	2.88	2.38	2.63	2.63	2.75	2.63	2.63	2.38
Bias	3	2	3	3	1	3	2	3	2	3	3
Quality of Baseline Data/ Construct ion	3	2	2	3	3	2	2	3	2	2	3
Relevanc e of Objective	3	3	1	3	1	3	3	2	3	3	1
Relevanc e of Data	3	3	3	3	3	3	3	3	3	3	1

Table 3: continued next page

Sampling and Reliability	3	3	3	3	3	2	3	3	3	2	3
Analytical Validity and Reliability	2	3	2	2	3	3	3	2	2	3	3
Ethics	3	2	2	3	3	3	3	3	3	3	3
Reporting	3	2	2	3	3	2	2	3	3	2	2

Table 3: RCT and QED Evaluation Scores

DATA TRENDS

Table III above displays the performance of each individual study across each evaluation criterion. The mode score for RCT and QED studies was a ranking of “2”. Three of the studies conducted in Tunisia, Tanzania, and Pakistan received rankings of “1s”. All three studies received a “1” under the relevance of objective criterion. The studies did not clearly state or operationally define the main questions and objectives for the analysis. Tanzania also received a “1” for bias as the study did not clearly show the independence of the evaluator from the implementer. None of the studies explicitly delineated between the two entities.

Ten of the 11 studies were ranked “3s” under the Relevance of Data criterion. This entails that the studies used appropriate data collection instruments for the needs of the study. Also, data relevant for each study was evaluated. The study in Pakistan was the one exception. The study received a ranking of “1” because the study did not have a clearly defined objective.

Six of the studies received a ranking of “2” under the Reporting criterion. These studies received this ranking because they did not clearly identify data collection instruments for easy replication. All RCT and QED studies used baseline and often midline and end line surveys. However, they often failed to include the type of questions or content used. Six studies also received a ranking of “2” for Quality of Baseline Data and Construction. These studies did construct a baseline prior to intervention, but the methodology behind baseline construction was not clear.

All RCT and QED studies used confidence intervals to identify significant impact. However, none of the studies included a power analysis. It is likely that this was omitted due to the large samples sizes across all studies. Sample size for treatment and control groups ranged from 759 to 4,000 women.

All development and evaluation organizations have publication standards to guide internal and independent reviews of these documents before their release. Our analysis ensures rigorous reporting of methods and results to further support the credibility of a development publication and add to its potential impact on future study designs.

QUALITY OF INTERVENTIONS

<i>Study</i>	Eval. Score	Location	Independent Variable (intervention)	Sample	P-value
RCT 1	2	Liberia	6 months Livelihood/life skills training and 6 months follow-up/support to start small businesses	Women aged 16-27 with basic literacy/numeracy skills (Monrovia)	EPAG training had a significant positive impact on wage employment for job skills track ($p < 0.01$), and self-employment for business track ($p < 0.01$).

Table 4: continued next page

RCT 2	2	Uganda	Vocational training for small-scale enterprises, including: (1) business skills, (2) hairdressing, (3) tailoring, (4) computing, (5) agriculture, (6) poultry rearing, (7) and small trades operations. Life skills training: (1) Health, (2) legal knowledge (child marriage, domestic violence)	Adolescent girls aged 14-20, 100 treatment community centers, 50 controls (Kampala, Mukono, Iganga, Jinja)	Significant at the 99% confidence level: (1) HIV/pregnancy knowledge, (2) entrepreneurial ability, (3) self-employment, (4) IGA Significant at the 95% confidence level: (1) hours spent on self-employment on a typical day, (2) engaged in any IGA, (3) condom usage
RCT 3	1	Tunisia	Business training and coaching to develop a business plan.	High-skilled university students (2/3 women)	Small increase in self-employment ($p < .01$), but overall employment remained unchanged
RCT 4	2	Malawi	Entrepreneurship and vocational training. 1) Occupation apprenticeships, 2) Training modules, 3) a \$28 stipend (meals and housing)	Vulnerable youth (orphans, school dropouts) aged 15-24	Training significantly impacted entrepreneurial skill development for both men and women ($p < .01$)
RCT 5	1	Tanzania	Business training and/or business grant: 1) Bookkeeping, 2) marketing, and 3) investment analysis.	PRIDE members with loans between 500,000 and 1,000,000 TZ (Magomeni, Buguruni)	No effect on business performance of training for female entrepreneurs. Program impacted female mindset and business knowledge ($p < .05$)
QED 6	2	Uganda	Five days of business training, \$150, and supervision and advising (additional induced group formation for subset)	Poor war-affected women in Northern Uganda (120 villages)	Group formation impacted savings and HH transfers ($p < .01$), WINGS impacted work hours and income ($p < .01$)

Table 4: continued next page

RCT 7	2	Bangladesh	Business activity (livestock rearing, small retail etc.), complementary and intensive training, livestock packages equivalent to \$140 USD	Poor Bangladeshi women (40 regions of rural Bangladesh)	TUP positively impacts hours devoted to self-employment, specialization in self-employment, total annual earnings (p < .01)
RCT 8	2	Sri Lanka	Business training only, or business training combined with cash grant 15,000 Rs	Self-employed business owners, potential business owners (Colombo, Kandy)	SIYB positively impacted profits (p < .01) and sales (p < .05) for potential business owners.
RCT 9	2	India	Training module including 1) financial literacy, 2) business skills, 3) aspirational videos	Women enrolled in SEWA bank and own businesses or are self-employed.	Program positively impacted borrowing (p < .1) and any type of business income among Scheduled Caste (SC) Hindus (p < .01).
QED 10	2	Central America (El Salvador, Guatemala, Nicaragua)	(1) Business skills training, (2) \$150 cash after training and satisfactory business plan, (3) multiple one-on-one advising meetings, and (4) self-help group formation.	Nascent men and women entrepreneurs that applied for TechnoServe business competition	The training program had a positive impact on business expansion (p < .01) but does not significantly impact business launch.
RCT 11	1	Pakistan	Business training, opportunity to participate in loan lottery, “hand-holding” sessions for subset of treatment sample.	Microfinance clients, select community organizations (Bahawalpur, Hyderabad, Attock)	Business training positively impacted expenditures and assets, outlook on life (p < .01). Training did not improve performance of existing female businesses.

Table 4: Summary of RCT and QED Interventions by Evaluation Score and Statistical Rigor

DRIVERS OF PROGRAM SUCCESS

RCT and QED interventions included a mix of training programs which differed in their approaches, target demographic, and in location. However, three trends emerged as drivers of success and are outlined below:

Use of Multi-Pronged Approaches

One clear driver of success is use of comprehensive interventions. There are interlinkages between health, income, education, and social capital among females in LLMICs. In Uganda, Bandiera et al (2012) analyzed an intervention targeting both health and economic challenges, finding it as or more effective than a siloed approach. Training improves female knowledge of business practices, but by itself is insufficient to change female livelihoods and generate growth. In addition to financial and human capital constraints, women face challenges due to traditional gender roles, which may prevent women from having ownership over the resources they produce as entrepreneurs (Bandiera et al (2012); Berge et al (2014); Blattman et al (2016); de Mel et al (2012)).

Inclusion of Personal Mentors/ Coaches

Another common theme that emerged is the importance of continued supervision and investment through personal mentors or coaches. Premand et al (2015) evaluated a new entrepreneurship track sponsored by the Tunisian government, that promoted the employability of university graduates. The track offered business training, private coaches, and supervision in finalizing a development plan. The program increased levels of self-employment and improved business skills. In Central America, applicants in the TechnoServe business plan competition were also paired with mentors and consultants. The training program had a significant impact on business expansion. In Liberia, after EPAG training, adolescent girls were given six months of follow-up support to enter wage employment or start a business. The training was found to have a significant positive impact on both wage and self-employment.

Community-Based Designs

Drivers of success are community-based approaches that invest in social capital. Women in developing countries are constrained by family obligations such as childcare and house work. They were more likely to complete trainings when the centers were close to their home. Bandiera et al (2012) analyzed an intervention randomized across adolescent development clubs as access points for treatment, rather than school-based interventions. Collaboration within development communities also proved instrumental in boosting income through labor-sharing and cooperative cash crops. Blattman et al (2016) [RCT 7] showed that encouraging development of social groups significantly impacted savings and household asset transfers.

Despite these best practices, skills-based training programs show mixed results for female entrepreneurial success. Attainment of human capital is not enough to overcome financial and cultural constraints. Due to family obligations, women spend on average 10 hours less per week in their business. Women also have lesser say in decisions important for household, such as financial management and investment decisions. Participation in training programs is more expensive for females compared to their male counterparts, as women are more likely to participate in training after exiting the formal economy. Further research is needed to address female motivation and constraints for micro-enterprise development in LLMICs.

Qualitative Results and Analysis

EVALUATION RESULTS

Our review of skills-based program evaluations revealed seven studies that met the qualifications described in the analysis section. After coding each study for both content and quality using the code book described in the methods section, we discovered the following results:

Score	Number of studies
3	0
2	1
1	6

Table 5: Qualitative Final Scores

As mentioned above in the section describing the analysis of the RCT and QED studies, the code book methodology lowers the overall score of studies that earn only one “2” code or a single “1” code. Thus, below we have also included a quantitative summary of the average scores of each study, rounding up when the tenth decimal point is 0.5 or above and rounding down when the tenth decimal place is 0.4 or below. The mean score using the code book’s criteria for overall scores was 1.11. The mean average score across all studies was 2.29.

Our evaluation criteria assess the quality of each study, based on the following metrics: bias, baseline data, objective and data relevance, sampling strategy, analytical validity and reliability, ethics and the robustness of reporting. These criteria were selected to assess both the quality of the evaluation and the transparency of the evaluation report. The mode score of the qualitative evaluations, based on the code book, was a score of “1”. As the majority of the qualitative evaluations received the lowest score, the standards used

in reporting and potentially in qualitative evaluation are lacking. Due to the lack of information in the evaluation reports, it is difficult to tell whether the issues lie within the implementation of the evaluation or if the issues were in the write-up of the evaluation. Our analysis can inform future evaluators regarding proper qualitative evaluation techniques and robust reporting standards and will add to the quality and credibility of future qualitative evaluations and reports.

However, it is important to note that a weakness in one aspect of the evaluation reduces the overall score of the evaluation (according to the coding strategy) even when other aspects of the evaluation and its report are strong. For example, all the qualitative evaluations except for one received a score of “1” on the Sampling and Reliability criteria. As a score of “1” on any criteria results in an overall score of “1” according to the coding strategy, score averages are also reported for consideration.

<i>Evaluation Criteria</i>	Qual One¹⁵	Qual Two¹⁶	Qual Three¹⁷	Qual Four¹⁸	Qual Five¹⁹	Qual Six²⁰	Qual Seven²¹

Table 6: continued next page

¹⁵United States Department of State. 2017. “AWEP-IVLP Program Evaluation Report”. Washington, DC: Bureau of Educational and Cultural Affairs United States Department of State.

¹⁶Ganamotse, G.N., Samuelsson, M., Abankwah, R.M., Anthony, T. and Mphela, T. 2017. “The Emerging Properties of Business Accelerators: The Case of Botswana, Namibia and Uganda Global Business Labs”. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 3(1), pp.16-40.

Vancouver.

¹⁷Oxenham, J. 2002. “Skills and literacy training for better livelihoods: a review of approaches and experiences”.

¹⁸Johanson, Richard K., and Arvil V. Adams. 2004. “Skills development in sub-Saharan Africa”. World Bank Publications.

¹⁹Lemmon, G.T. 2012. “Entrepreneurship in Postconflict zones”. Council on Foreign Relations.

²⁰Lemmon, G.T. 2012. “Entrepreneurship in Postconflict zones”. Council on Foreign Relations.

²¹Johanson, Richard K., and Arvil V. Adams. 2004. “Skills development in sub-Saharan Africa”. World Bank Publications.

Overall Score	1	2	1	1	1	1	1
Average Score	2.24	2.68	2.05	1.92	1.55	1.52	2.29
Bias	3	3	3	3	3	3	3
Quality of Baseline Data/Construction	1	2	1	2	1	1	2
Relevance of Objective	3	3	3	3	2	2	3
Relevance of Data	2	3	3	2	1	1	3
Sampling and Reliability	1	3	1	1	1	1	1
Analytical Validity and Reliability	3	3	2	1	1	1	2
Ethics	3	3	3	3	3	3	3
Reporting	2	2	1	1	1	1	1

Table 6: Qualitative Study Evaluation Scores

DATA TRENDS

Examining Table 2 above, you can see precisely how each of the studies were coded as well as trends among individual evaluations for certain criteria. For example, when assessed for potential bias, or independence between the program implementer and the evaluator, we determined that each study was produced by an outside evaluator. Therefore,

every qualitative study included in this meta-evaluation scored a three in this category. Also, receiving high-to-medium scores were the Relevance of Objectives and Ethics categories. The Relevance of Objectives category was implemented to examine how well the study's objectives aligned with the purpose of the intervention being assessed. The ethics criterion was used to check the studies quality of ethical consideration, looking at de-identification of participants. All studies de-identified monitoring data and secondary data, therefore all received high scores.

The majority of studies received low scores in the Quality of Baseline, Sampling, and Reporting categories. The Quality of Baseline category served as a check for how well the evaluators constructed and elucidated their baselines prior to the evaluations or the case studies presented. Therefore, if the study did not mention the baseline prior to the intervention at all, it received the lowest score of 1. If they did describe the baseline, they received a 2 or a 3 depending on the quality of their description. We found that the majority of longitudinal and before/after studies, in fact, do not describe their baselines. Still, if an evaluator intends to make a case for the positive impact of an intervention, providing a quality baseline description strengthens the argument in qualitative studies. Depending on the research questions and objectives of a study, some studies may not require or have a baseline, such as those that evaluate interventions that have already begun without full baseline data. For the studies that we examined, however, we believe that they all would have benefited from including baseline data.

Likewise, all but one study received the lowest score under the Sampling category. The majority of studies did not describe their sampling methods at all, let alone justify their chosen-strategy. Again, if the evaluator wants to make a strong case for impacts from the intervention being assessed, knowing who participated in the study and how they were chosen builds credibility. The evaluation of the Global Business Labs program by

Ganamotse et al (2017) did report its sampling strategy. It did not use random sampling, but provided a detailed, logical justification, earning it a “3”.

The evaluators also found weaknesses among the reporting methods of the studies accessed. This criterion served as a check for the quality of the studies’ descriptions of analyses, presentation of results and limitations, as well as the availability of the assessment tools used. Many of the studies presented their results in the form of outcomes, such as numbers of trainings given, or number of participants trained. Others did present impacts of interventions but did not go into detail describing their method of analysis or did not include the assessment tools used in their study. Because of the lack of information provided among qualitative studies in this category, no studies received a score of three.

QUALITY OF INTERVENTIONS

<i>Study</i>	<i>Eval. Score</i>	<i>Location</i>	<i>Independent Variable (intervention)</i>	<i>Results</i>	<i>Weaknesses</i>
Qual One	1	Benin, Ghana, Kenya, and Madagascar	Three-week training exchange program in the United States	72% of participants expanded into new local, regional, and/or international markets -9/10 more confident about their business abilities -majority of those surveyed developed new management procedures	Some program participants were unable to be reached or did not respond to the study.
Qual Two	2	Botswana, Namibia and Uganda	Business acceleration model of the Global Business Labs (GBL)	GBL reached out to over 20,000 youth in the three operating business labs creating over 400 jobs, training of faculty, inspiration and local economic development.	Some insights are difficult to compare across different participating countries.
Qual Three	1	Guinea, Kenya, Senegal, Uganda	Livelihood and literacy training	Those who had completed literacy training were more willing to work towards developing their livelihoods and learn about the operations of their cooperatives	Running livelihood and literacy trainings together is less effective than doing it separately.
Qual Four	1	Kenya	Training on technical and managerial skills	88 percent of the master craftsperson's applied their new skills; 73 percent made new or improved products; and 58 percent penetrated new markets	Vocational training institutes unfortunately did not become sustainable providers of training
Qual Five	1	Afghanistan, Rwanda, and El Salvador	Pro-bono business consulting, computer and English training as well as other classes	Bpeace's Fast Runner entrepreneurs employ 2,136 workers and have contributed \$6.4 million total into their local economies	The program struggled to adapt its capacity-building advisory skills to varying levels of entrepreneurs

Table 7: continued next page

Qual Six	1	the Middle East, Africa, South and East Asia, Latin America, and the Caribbean (Afghanistan, Iraq, Liberia, DRC, S. Sudan, Central African Republic)	Self-study workbooks and business training	Trained more than 135,000 people with a satisfaction rate of 89 percent.	Services are not free and stipends/reduced rates are not given out--this can create barriers to recruiting participants
Qual Seven	1	Tanzania	Skills-based courses based on niche market needs	Preliminary assessments indicate that the courses are cost effective, provide adequate training, and are successful in introducing trainers to the informal sector.	There is low financial sustainability.

Table 7: Summary of Qualitative Studies by Evaluation Score and Statistical Rigor

DRIVERS OF PROGRAM SUCCESS

In our evaluation of qualitative studies, several key themes emerged suggesting that specific conditions contribute to the success of skills training programs. These guiding principles are outlined below:

Program Flexibility

One clear driver of success is program flexibility. Participants in these programs were working full time on their businesses. Thus, it may have been difficult for them to take time off work to take part in a training program; the opportunity cost of losing income may be too high for them to rationalize attending the training program. Creating a program that is flexible to respond to the changing time constraints and learning needs of participants is crucial for programmatic success, according to a study by the World Bank. For example, in the evaluation by Oxenham (2002) of the apprenticeship training

improvement program in Kenya found that initially it was difficult to attract craftsmen to attend since they would be losing income from work. The implementers later restructured their content and delivery approaches to fit within their schedules. This flexible approach made the program more successful by eventually attracting more participants.

Clear Monetary Gains

Additionally, training should be marketed as an avenue to gain skills that will translate into tangible gains and business improvements. The training program should also have more consistent attendance and less attrition from participants if the value added by the program is concrete and the potential monetary impact is clear. For example, a study by Johanson and Adams (2004) stated that it was essential to make the connection between marketable skills and tangible gains apparent to those attending skills-based training, to reduce attrition and increase engagement. In the State Department's African Women's Entrepreneurship Program, 72% of participants expanded into new local, national, or international markets. Further, entrepreneurship education programs should include opportunities to engage actively in the skills being taught, including business planning, idea generation, and technical tasks.

Public-Private Partnerships

Another common theme that emerged from our synthesis evaluation was the vitality of public-private partnerships in supporting small and middle enterprise (SME) growth. When the implementing agencies of training programs gain buy-in from local government officials and international organizations operating in the region, those SME's are more likely to gain access to sustainable markets. For example, in Ganamotse et al (2017), a key to the success of the Global Business Lab program was partnering with local universities when establishing their accelerator program. This provided sustainability to the program,

and helped participants access investors and capital through the universities' networks. Partnerships with the private sector can also increase SME growth and the impact of the program by creating a pipeline for private sector investment in well trained entrepreneurs. Also, partnerships with local banks can help entrepreneurs gain access to capital, which is one of the greatest challenges that entrepreneurs in LLMICs face. A study by the Vocational Education and Training Authority (VETA) in Tanzania determined that training programs were more impactful when they also provided participants with access to sources of credit. Access to capital is especially a challenge for female entrepreneurs, who are the focus of this synthesis evaluation, which makes partnerships with local banks especially important for these programs.

Continued Support

Continued access to expert advice after the conclusion of programs also enhanced capacity building. Entrepreneurs were able to further enhance their businesses when they received advice and support. Guidance can come from experts in the industry, entrepreneurial role models, and successful SME's in the local communities. Further, support from other small enterprises, family acquaintances, and community members in implementing business opportunities can greatly enhance the success of SME's in LLMICs. The Global Business Lab (Ganamotse et al, 2017) program, for example, connects SME's to other SME's working in the similar markets, as well as mentors from all over the world. This added benefit helps new entrepreneurs confidently face challenges that occur after completing the accelerator program.

Customization

SME's were more likely to have successful outcomes when the implementers of the training programs had tailored the training plans and products to the specific needs of

the participating entrepreneurs. The 2012 study by Gayle Tzemach Lemmon stressed the importance of determining the varying skill levels within cohorts of learners, as those with basic knowledge should be taught record keeping, business plan development, and market opportunity identifications, whereas those who are operating more established businesses need to focus on scalability and investment capital. Business Edge, for example, develops entrepreneurial curriculum worldwide, but tailors all training materials to the needs of specific enterprises. This training methodology can be developed using a participatory approach with the entrepreneurs in the program.

This synthesis review has demonstrated that programs that employ a comprehensive approach to SME growth are the most successful. As mentioned above, crucial factors involve:

- Tangible skills training and the opportunity to practice those skills;
- Flexible scheduling;
- Access to markets via public-private partnerships;
- Access to capital via partnerships with local banks;
- Long-term mentorship; and
- Customization.

This 360-degree approach is linked to successful SME growth within the LLMICs.

Synthesis and Discussion

After assessing the aggregate data from the 18 studies included in this evaluation, it is clear that certain practices need standardization for better intervention reporting and validity. Future studies need to present a more robust development of the research question and objectives, as well as the means of accepting and rejecting hypotheses. Without a clear question or objective, it is difficult to parse out what type of data and data collection instruments are needed to strengthen the research design.

Authors should be transparent about what data they need to collect to establish the baseline, and what data they need to make comparisons. Furthermore, it is particularly useful to know whether the surveys used in assessing an intervention were validated in a previous study or if the questions were developed specifically for the intervention at hand. While this information is normally included in a research proposal for grant funding, it is our assumption that original, well-constructed theories of change are disregarded in the reporting and publication stage. This may occur because an anticipated significant outcome is not achieved (i.e., academics are deterred from publishing null results).

Moreover, all studies in our evaluation lacked a suitable monitoring plan to assess the long-term effects of a concluded intervention. This setback makes it difficult to understand the true impact of the different skills-based training programs. Sustainable monitoring is also important for expanding understanding of female motivations and constraints in LLMICs.

The concept of culturally appropriate interventions becomes muddled when interventions are expected to disrupt the cultural dynamic. All studies encouraged women to take on roles and pursue career paths that might not align with community norms or familial expectations. However, the findings suggest that entrepreneurial success exudes

multiple benefits for women. Implementers saw improvements in female control of monetary resources, savings, life satisfaction, self-confidence, and food security²². Negative externalities, such as domestic abuse or social marginalization, are also possible, however.

Overall, the meta-synthesis evaluation reveals the complexity and imprecise nature of impact evaluation in this area of study. Traditional and direct RCT studies are needed to elucidate the outcomes of highly specific interventions.

²²Adoho, F., Chakravarty, S., Korkoyah, D.T., Lundberg, M.K. and Tasneem, A. 2014. “The impact of an adolescent girls employment program: the EPAG project in Liberia”.

Recommendations

First, we will review common trends for effective skills-based training programs. We will then delve into implications of our research for future evaluators. These recommendations are based on implementer and evaluator access to sufficient resources, but it is understood that this may be difficult given real-world constraints.

PROGRAM IMPLEMENTERS

The following recommendations are for NGOs, nonprofit organizations and others that aim to develop and implement skills-based training programs for women in LLMICs:

1. Inclusion of a sustainability plan involving follow-up over three to five years or more to assess long-term impact and spillover effects. The plan should assess the economic status of the participants, as well as first and second order effects of the training programs. First order effects may include but are not limited to: increase in participants' knowledge of sustainable business models and improvement of participants' skills in accounting and budgeting. Second order effects might involve but are not limited to: increase in revenue for participants' businesses and potential social marginalization of women participating in the program.
2. Training programs should be scheduled at times that work for participants. This is usually on weekends, as many of the participants work full time during regular business hours. Potential participants of the training programs should be surveyed to determine the most optimal time for training program sessions, before they are officially scheduled. Additionally, programs and those implementing them need to be flexible enough to reschedule sessions if the majority of participants request it for particular sessions.

3. Programs should include a long-term mentorship component to extend beyond the conclusion of the program. Mentors and long-term coaches promote the employability of participants. Mentors can be professionals in the same industry as participants, successful entrepreneurs, or others who are committed to the mission of the program and have a track record of success.
4. Trainers involved in implementing the intervention should be adequately trained in the subjects they are teaching and incentivized to ensure continued involvement and engagement in the program. As such, trainers must demonstrate their expertise in the subject they will be teaching. Expertise can be demonstrated through experience in teaching or working in the subject matter, an assessment to ensure thorough understanding of the material, or participation in a course on the learning material and how to teach it.
5. The tangible and monetary benefits and requirements of the training programs should be stated upfront to reduce attrition. Participants will be motivated to attend and engage in each training, overcoming the opportunity costs of lost time at work, if the payoff of the program is clear. Thus, during the recruitment phase for program participants, implementers should communicate the financial impact the program has had on alumni and their businesses. If the program utilizes a new model, implementers should seek out programs that are as similar as possible and discuss the impact of those programs with potential participants.
6. Further, program implementers should partner with local organizations and businesses where possible. Garnering local support for the program may enhance the perception of the program and its alumni, with the potential of having some positive second order effects, such as increased business for the participants. Partnerships with banks near the programs are especially beneficial, to facilitate

women's access to funding and loans. Banks may view this partnership as mutually beneficial, as alumni in the program will have undergone training in financial management and, thus, loans to alumni may be viewed as less risky.

PROGRAM EVALUATORS

The following recommendations are for evaluators in the development field:

1. The bias criterion showed lower rankings than expected. The majority of eligible studies showed partial bias. To improve internal validity, it is important that studies show clear indications of evaluator independence.
2. Overall, studies lacked clear evaluation questions or objectives. Studies that did include explicit evaluation questions or objectives did not operationally define them or how they would relate findings to the main objective.
3. Study limitations were widely absent. Surprisingly, the majority of studies and reviews did not clearly define limitations. This component is important for replication and future research in the field.
4. The qualitative studies lacked clear methodology in reporting, often not mentioning sampling methods or assessment instruments used. This makes it difficult for replication and future research.
5. The majority of studies did not clearly identify data collection instruments. All RCT and QED studies used surveys for baseline data, but most did not divulge the content or order of questions.

Limitations of the Meta-Evaluation

The authors were constrained by time, as the evaluation needed to be completed within one semester (three months). Due to this external constraint, the eligibility criteria were expanded to increase the number of studies that were eligible in the sources that were readily available. The 18 studies originated from over 27 different countries. The mix of countries and cultural contexts hinders the external validity of our findings and recommendations. Three of the training programs were implemented in war-affected regions, including Liberia, Uganda, and Tunisia. All training programs differed in their selection criteria for participants, including level of business or entrepreneurial experience. Four studies focused on adolescents. Further research is needed before generalizing the results to other developing countries.

However, there is still some commonality among the studies as they are skewed towards Sub-Saharan Africa. Twelve of the studies originated in Africa, with seven conducted in Sub-Saharan African countries and three studies partially conducted in SSA. One additional study was conducted on a global level, including SSA countries.

The analyses in the majority of studies included in this meta-evaluation were based on short-term outcomes. Without a long-term view, it is difficult to ascertain the effectiveness of skills-based training interventions. All lacked clear guidelines for sustainability of monitoring and follow-up.

Finally, our evaluation is limited by the assessment tool. Low and medium scores in any category for a study may bias the entire analysis the ranking system and equally weighted metrics restricted variance among the studies. None of the studies met the rigor to receive a “3”. Instead, all studies were evenly split, with 9 ranked as “2s” and 9 ranked

as “1s”. This system made it difficult to reflect on more nuanced trends among the studies. As such, for future meta-evaluations, a recalibration of the assessment tool is needed.

Conclusion

Despite a dearth of research, TVET and EET initiatives for female entrepreneurship are becoming more prevalent. This meta-synthesis evaluation highlights common threads for success and remaining gaps in the literature analyzing the effectiveness of skills-based training interventions among women. Our review of experimental and qualitative evidence for skills-based interventions contributes to general understanding of economic development within the gender and development field.

In addition, the results of this meta-synthesis evaluation are dependent upon the rigor of the design and methodology of previous studies. Overall, RCT and QED studies received low scores under Relevance of Objective criterion, Reporting, and Quality of Baseline Data and Construction. Qualitative studies received low scores under Sampling, Reporting, and Quality of Baseline Data and Construction categories. None of the studies received a ranking of “3”, indicating that there were weaknesses in analysis across all studies.

The lessons learned from this synthesis review have informed the business model described below. The implementers of the program included in this report designed the program, Business Innovations for Good or B.I.G. Ideas, to be flexible, responding to participants’ needs both in terms of learning and scheduling. Additionally, the program connects participants to long-term mentors and follows up with alumni of the program annually for five years to assess the long-term impact of the program. Further, BIG Ideas partnered with the most well-renowned university in the region, Makerere University, and a local think tank, the Open Sustainability Institute, which has improved the legitimacy of the program in the eyes of participants and donors. The business model below details the

business case for such a program and describes how future implementers can design, develop and launch a skills-based program for female entrepreneurs in LLMICs.

EXAMPLE BUSINESS MODEL: BUSINESS INNOVATIONS FOR GOOD

Executive Summary

Business Innovations for Good (BIG Ideas) provides training in entrepreneurship and sustainable business development to women in East Africa. The BIG Ideas program was founded by Laura Ruth Richards in 2015 in collaboration with the Open Sustainability Institute (OSI) and the Resilient Africa Network (RAN Lab) at Makerere University. BIG Ideas teaches female entrepreneurs the essentials of business modeling, budgeting, project management, marketing, accounting, design thinking and sustainable development to help them spearhead environmentally friendly businesses within economies where their employment options are limited. Our nonprofit model will allow us to work with women who have the most outstanding business ideas but would not otherwise be able to afford such training. Participants are connected with long-term mentors in their home country and, upon completion of the program, participants pitch to a panel of relevant industry professionals, successful entrepreneurs and investors.

To ensure the long-term success of our entrepreneurs and the sustainability of our organization, BIG ideas employs a profit sharing model and we take equity ownership in the businesses that successfully graduate from the incubation program.

The Opportunity

The Brookings Institution (2014) found that more than three quarters of Uganda's population are under the age of 30, and 18 percent of that group not in employment, education or training (NEET).²³ Therefore, there is a major deficit in accessible opportunities for youth in Uganda. Additionally, for 66 percent of those who do work, only five percent earn an income, while the others are subsistence farm workers. However, Ugandans are not short on motivation or drive, as evidenced by their number one ranking on the 2016 Global Entrepreneurship Monitor (GEM).²⁴ A key problem is a lack of access to support for young entrepreneurs and innovators. Surveys by the SKY project funded by the United Kingdom of the Netherlands (2016) and OpenEd Fellowship (2016 – before our pilot program) indicated that 3/5 of young agribusiness entrepreneurs lacked crucial business management skills, including: financial, project, and people management, as well skills in innovation, stunting their ability to compete and cope with a heavily traditional agricultural ecosystem and the dynamic economy at large. A number of “business-rescue-mission” programs have been ongoing by entities like NAADS, Pakasa, CURAD, RUFORUM, RUCID and others, but these are largely technical in agriculture subjects. The few that do address business, such as CURAD, lack an interactive yet impact-oriented approach that leverages lean startup methodologies suitable for its participants. Our hands-on, impact driven approach is what sets us apart. BIG Ideas' local team in Uganda, comprised of three part-time trainers and four interns, includes experts and practitioners in

²³Ahaibwe, Gemma, and Swaibu Mbowa. 2014. “Youth Unemployment Challenge in Uganda and the Role of Employment Policies in Jobs Creation”. www.brookings.edu/blog/africa-in-focus/2014/08/26/youth-unemployment-challenge-in-uganda-and-the-role-of-employment-policies-in-jobs-creation/.

²⁴Patton, Anna. 2016. “Uganda Is a Land of Entrepreneurs, but How Many Startups Survive?” The Guardian, Guardian News and Media, 16 Feb. 2016, www.theguardian.com/global-development-professionals-network/2016/feb/16/uganda-is-a-land-of-entrepreneurs-but-how-many-startups-survive.

entrepreneurship and environmental sustainability, who can bring both theory and experience into the classroom.

The Solution

BIG Ideas seeks to give female entrepreneurs access to the skills and resources needed to start scalable and sustainable businesses. We use a three-pronged approach that involves (1) a “pocket MBA” tailored to the East African context; (2) long-term mentorship; and (3) opportunities to connect with potential funders.

POCKET MBA

A “pocket MBA” is a program that teaches the essential elements of an MBA program in an accelerated time period, in this case fifteen weeks. The coursework consists of the following classes: *design thinking and user-centered design, business modeling and market validation, web presence and web optimization, start-up financing and financial management, sustainability principles and practices, and team building and leadership*. The courses are designed to be practical, rather than theoretical, and be immediately applicable to the entrepreneurs’ work. It should be noted that this is not officially accredited coursework. The students will attend all classes at the Resilient Africa Network (RAN Lab) at Makerere University in Kampala, which is one of the most well-regarded universities on the continent of Africa.

The RAN Lab is an innovation hub in Kampala that supports many programs enabling start-ups enterprises, especially those focused on social ventures. BIG Ideas partnered up with the RAN Lab after the founder of BIG Ideas spent several months teaching courses at the RAN Lab facility and working with the RAN team.

LONG-TERM MENTORSHIP

The BIG Ideas team match participants in the program with mentors who are either entrepreneurs or leaders in the industry in which the participant is developing their

business. Mentors will be sourced through the network of the RAN Lab, Makerere University, the Open Sustainability Institute, and the BIG Ideas team.

CONNECTION TO FUNDERS

Although BIG Ideas will not initially be providing funding directly to entrepreneurs, the conclusion of the program will include a pitch to investors and local microfinance institutions. We will prepare our participants for the event with a session on effective pitch delivery. Investors will include business leaders, wealthy individuals, and government officials with the authority to allocate funds to start-up businesses. The BIG Ideas team will recruit investors through our networks, described above, and by demonstrating the successful outcomes of prior participants, which will be tracked over a five-year period post-graduation from the BIG Ideas program.

Market Analysis

BIG Ideas will focus its efforts on female entrepreneurs in their twenties and thirties from the Kampala area. Keeping our participants within this age range allows us to work with participants who have relatively similar amount of work experience. Kampala has a population of approximately two million inhabitants, 21% of whom are in BIG ideas' target age-range and 50% of whom are female. However, of that population of roughly 200,000, only about 20,000 Ugandans enter a higher educational institution each year, the majority of whom attend Makerere University.²⁵

In terms of entrepreneurship, Uganda boasts a vibrant community. 28% of its population supports itself through their own business ventures. Entrepreneurship in Uganda largely manifests itself in the form of street stalls and farming. While nearly 10% of Ugandans started a business in the past twelve months, on average, only 9,000 jobs are created each year.²⁶

Kampala nevertheless benefits from the presence of Makerere University and incentives provided by a network of international NGOs and the government. For example, the federal government's Youth Venture Capital Fund offers loans at 15% interest on up to \$7,000 USD, while groups like the Uganda Women's Entrepreneurs Association offer consistent networking and advocacy opportunities.²⁷ Such infrastructure has allowed the country, and Kampala in particular, to foster enclaves startups in industries such as technology, agribusiness and health.

²⁵UNICEF. 2015. "Ugandan Statistics". www.unicef.org/infobycountry/uganda_statistics.html. Global Entrepreneurship Monitor. <http://www.gemconsortium.org/>

²⁶UNICEF. 2015. "Ugandan Statistics". www.unicef.org/infobycountry/uganda_statistics.html. Global Entrepreneurship Monitor. <http://www.gemconsortium.org/>

²⁷UWEAL. 2018. "Programs". Uganda Women's Entrepreneurs Association. www.uweal.co.ug/services.html.

Competitive Analysis

Our current competitors are incubators and small business-focused government agencies based in Uganda. Prominent examples include Hive Colab²⁸, The Hub Kampala²⁹, FinAfrica³⁰, Uganda Investment Authority³¹, and Uganda Communications Commission³². Hive Colab is an innovation hub and startup incubator co-funded by The Netherlands' Ministry of Foreign Affairs and Dutch NGO Hivos. The Hub Kampala is a collaboration space for creative people and entrepreneurs. It offers daily, weekly and monthly work and meeting space. On its part, FinAfrica offers incubation, training and business mentorship to budding entrepreneurs. The firm charges start-up companies \$5.50 per visit for business mentorship and an average of \$12 per person for trainings.

The government-owned Uganda Investment Authority, a semi-autonomous investment promotion and facilitation organization, is currently in the process of setting up a mixed-use business incubation center to foster small and medium businesses. The incubation center will assist emerging companies in gaining access to mentors, training, shared spaces, professional assistance, capital, and other services for entrepreneurs.

Another government agency within the competitive space is Uganda Communications Commission. This agency has an incubation support initiative aimed at facilitating access to funds, facilities, skills and/or services needed for the growth of technology-based businesses, innovations, and technology transfer. Furthermore, it supports the establishment of facilities that provide a learning environment for new and

²⁸Hive Colab. 2018. "About Us". hivecolab.org/.

²⁹Design Hub Kampala. 2018. "Design Hub Kampala – Co-Working & Event Space for Creatives". designhubkampala.com/.

³⁰FinAfrica Uganda | Uganda's Enterprise Development Centre. 2018. "Home." www.finafrica.org/.

³¹Ugandan Investment Authority. 2018. "What We Do." www.ugandainvest.go.ug/.

³²UCC: Uganda Communications Commission. 2018. "The Consumer Parliament." www.ucc.co.ug/.

upcoming ICT businesses. The government agencies have been largely unsuccessful in the past in realizing their objectives due to bureaucratic and inefficient government practices.

Despite the multitude of competitors in this space, BIG ideas has already begun to gain traction, with twenty-five graduates and twice as many applicants as our program can currently accommodate in any one cohort. Our competitive advantage in the market is discussed in detail below.

Competitive Advantage

The BIG ideas program has a number of competitive advantages compared to the current industry participants that would help ensure success.

SUSTAINABILITY

Uganda is an agriculture-dependent economy riddled with business practices that cause severe damage to the environment and have eroded opportunities in the agricultural sector. A UN-supported study recently demonstrated that the rate of fertile soil loss is 24 billion tons per year, and Sub-Saharan Africa is the region affected the worst.³³ BIG ideas seeks to improve this by offering free and consistent training in environmentally sustainable principles and practices. Our course teaches entrepreneurs how to both minimize and measure their impact on their surrounding environment.

ROBUST COURSEWORK

BIG ideas teaches courses in Design Thinking and Market Validation, Business Modeling and User-Centered Design, Startup Financing and Financial Management, Sustainability Principles and Practice and Team Building and Leadership. We use an interactive, milestone-driven method, where fellows learn and practice together using the world's best startup tools and practices, such as Javelin Boards³⁴ and the Startup Science Toolkit³⁵. To optimize learning, we engage participants in a variety of formats, including experiential learning, teamwork, short engaging videos and individual assignments. Fellows also visit others' projects and model farms on "Sustainability Journeys", learning onsite from relevant industry professionals and their peers.

³³Watts, Jonathan. 12 Sept. 2017. "Third of Earth's Soil Is Acutely Degraded Due to Agriculture". The Guardian, Guardian News and Media. www.theguardian.com/environment/2017/sep/12/third-of-earths-soil-acutely-degraded-due-to-agriculture-study.

³⁴Big Jump. 2018. "Javelin Experiment Board". www.bigjump.com.au/javelin-experiment-board/.

³⁵Startup Science®. 2018. "Startup Science." startupsience.com/.

WOMEN-FOCUSED

Unlike competitors, BIG ideas focuses primarily on female entrepreneurs. This program is informed by the higher impact potential of women relative to men on economies as captured by previously-mentioned research by the UN, the Clinton Foundation and the OECD. According to the United Nations, “when women work, they invest 90% of their income back into their families, compared with 35% for men”.³⁶ Issues facing female entrepreneurs are weaved into the trainings and discussed directly by our all-female Board of Directors.³⁷

³⁶UN Philanthropy. 2009. “Clinton Global Initiative: Empowering Girls & Women”. www.un.org/en/ecosoc/phlntrpy/notes/clinton.pdf.

³⁷BIG Ideas. 2018. “About”. www.businessinnovationsforgood.org/about.

Market Entry

Through her experiences working to empower entrepreneurs in Uganda, BIG ideas founder Laura Ruth Richards has developed an extensive network with a variety of organizations in the local area.

With support from these groups ranging from discounted working spaces to free instruction for students, BIG ideas successfully entered the Kampala market in 2016 and has already supported more than twenty-five entrepreneurs to build and fortify their businesses. We marketed our program through our partner institutions: Makerere University³⁸, the Open Sustainability Institute (OSI)³⁹, and Django Girls⁴⁰. After reviewing applications, we interview a short list of potential participants to determine if the program is a good fit and to assess need for the program.

To transform itself into an entity that not only educates entrepreneurs but also supports the launch of new ventures, BIG ideas will need to foster its existing partnerships. In doing so, the company will ensure it has an on-going support system that can provide a dependable pipeline of talented entrepreneurs, seasoned educators, rigorous course materials, and dedicated mentors.

Once this baseline is established, BIG ideas will apply its learnings from incubators in both Austin and Uganda to develop a scalable business model. The goal is not necessarily to compete with existing incubators, but rather to fill a market niche that is largely vacant in Kampala—the support of female entrepreneurship.

To find talent, BIG ideas will leverage its existing relationships with local educational institutions such as Makerere University and co-working spaces like the RAN

³⁸Resilient Africa Network. 2018. “RAN Core Partners”. www.ranlab.org/.

³⁹Open Sustainability Institute. 2018. “About Us”. www.opensustainability.org/.

⁴⁰Django Girls. 2018. “Django Girls Is a One-Day Workshop about Programming in Python and Django for Women”. djangogirls.org/.

Lab. With capacity of up to twenty entrepreneurs for each 15-week training program, BIG ideas' success will depend upon its ability to maintain a steady pipeline of talent.

Financial Projections

PHASE 1

BIG ideas is a 501(c)3 nonprofit organization. Our revenue model involves three phases. In Phase 1, which will last six months, the BIG ideas management team will solicit in-kind donations of necessary items, including twenty laptops and five Wi-Fi devices. We are seeking in-kind donations from laptop computer manufacturers, such as Dell, school supply providers, internet gateway manufacturers, and the Ugandan business community in Texas. The twenty laptop computers we are seeking in the first year are expected to last five years with a residual value of zero, which is reflected in our straight-line depreciation scale (see Appendix 2 and 3).

PHASE 2

In the second phase, which will have some overlap with Phase 1, BIG ideas will seek grants and cash donations from both US-based and Ugandan-based organizations, foundations and government organizations. This phase will last three years. Our expenses will hover around \$25k to \$30k per year for the first three years. Most of our expenses are comprised of travel expenses, salaries, facilities fees, equipment, and website maintenance.

PHASE 3

The third phase of our revenue model will likely begin in our fourth year of operation. BIG ideas will employ a profit-sharing model with the organizations that are born from our program. Specifically, BIG ideas will receive around 5% of the organization's profits for their first five years of operation that they have profit. Additionally, BIG ideas has a pay-it-forward model, where participants who graduate the program are strongly encouraged to "pay-it-forward", by giving back to the program in at least one of three ways: (1) donations; (2) mentorship; or (3) volunteering as an instructor.

Salaries are comprised of four staff working three to four hours per week on a part-time basis for about forty-nine weeks a year. Salaries grow each year as a result of a projected 10% growth in the size of our program. The salary increases reflect an increase in hours worked and/or additional staff hired. The budget also grows to account for an estimated 2% inflation rate.

Long-Term Franchising and Licensing

Once BIG ideas is able to demonstrate a self-sustaining business model in Uganda with a steady revenue comprised of long-term grant contracts, reliable donations and consistent earned revenue, the company will target expansion to surrounding South and East African countries with similar technological capabilities and societal stability. One such country will include Rwanda, as Rwanda has been noted by the World Bank for the ease of doing business, which is facilitated by favorable access to credit, lack of governmental red tape, relatively reliable infrastructure, and the generally strong enforceability of contracts.⁴¹

To execute this global expansion, BIG ideas would leverage a franchise model that would allow for a balance between country-specific customization and company-wide branding and consistency.

Additionally, BIG ideas is in the process of opening a subsidiary company that will serve as a platform to digitize and monetize our curriculum. The curriculum is being optimized for online learning and will be sold on a module by module basis on our website. This for-profit entity will pump its revenues back into BIG ideas, minimizing the amount of traditional fundraising needed in the long-term. Demand for access to our learning materials online has already been demonstrated by learning facilities in Cameroon, co-working spaces in Rwanda, and a university in South Africa. Executive team members from these three facilities have reached to the BIG Ideas team and requested a licensing agreement in order to access our curriculum.

⁴¹World Bank. 2017. "Ease of Doing Business Index (1=Most Business-Friendly Regulations)". data.worldbank.org/indicator/IC.BUS.EASE.XQ.

Management Team

LAURA RUTH RICHARDS, DIRECTOR

Austin, Texas

Laura Ruth Richards is currently working on a Master of Business Administration and a Masters of Global Policy at the University of Texas at Austin. She has completed two and a half years of the three-year dual program and has taken several courses in entrepreneurship throughout that time.

As the current Executive Director, Laura will be managing the logistical aspects of the program. She has been leading teams and running service programs for seven years, including several educational programs, one of which she built from the ground up. Laura has eight years of experience working in the nonprofit sector in various leadership roles. Additionally, Laura worked in Uganda and Rwanda for several months this past year, where she developed and implemented trainings similar to the ones utilized in the BIG ideas program.

RUSHONGOKA WA-MPIIRA, PROGRAM COORDINATOR

Kampala, Uganda

Rushongoka Wa-Mpiira, is the Founder and Executive Director of the Open Sustainability Institute (OSI) and the BIG ideas Program Coordinator. Rushohongoka started OSI six years ago and has been successful in scaling it since that time. The Open Sustainability Institute is an independent nonprofit with several open initiatives, including: a knowledge and data hub, sustainability expeditions, and fellowships. Rushongoka is the lead trainer on issues of sustainability and sustainable development and is also responsible for organizing the Sustainability Journeys.

DEBORAH NAATUJUNA, OUTREACH DIRECTOR

Kampala, Uganda

Deborah Naatujuna, is the Engagement Manager at the Resilient Africa Network (RAN), where the Uganda fellows are hosted weekly. Deborah has been a manager at RAN for seven years and is an active member of her community. The Resilient Africa Network, funded by USAID, is a partnership of 20 African universities in 16 countries. It is led by Makerere University with Tulane University's Disaster Resilience Leadership Academy, Stanford University and the Center for Strategic and International Studies (CSIS) as partners. RAN hosts the BIG ideas program at its innovation lab in Kampala and provides expertise in the areas of innovation, business modeling and user-centered design, as well as access to its vast network of partners.

BRIAN NDYAGUMA, LEAD ENTREPRENEURSHIP TRAINER

Kampala, Uganda

Brian Ndyaguma is project manager by profession and entrepreneur with over 6 years working experience in business development, managing innovation hubs, innovations scaling, curriculum creation for innovators and innovation hubs. Brian has spent the last 4 years nurturing, training and mentoring over 3000 innovators around Uganda, Kenya, Rwanda and Tanzania. He has created training curriculums, sourced for and worked with innovation development partners, including Microsoft 4Afrika Program, Oracle, and others. Brian has conducted over 200 workshops for young people including university students, and winners for grants and innovation funding. He is knowledgeable with human-centered design methodologies, business modeling, organizational growth and scaling. Some of his training sessions have been at International Health Sciences University, Makerere University, Gulu University, University of Rwanda (Kigali), and Arusha.

CONCLUSION

Findings from the meta-synthesis evaluation demonstrate that successful approaches are multi-faceted, include high human investment, and are community-based. Training programs need to be flexible, have clear monetary gains, and incorporate public-private partnerships. However, these findings are based on short-term programming. The long-term benefits of these approaches remain vague. It is unclear how significant these approaches are for women in LLMIC long after the training and additional support systems dissipate.

Future research that can be sufficiently funded to improve evaluation standards is needed to have a clear understanding of the impact of skills-based training programs. In addition to incorporating the above recommendations into program design, implementers need to increase funding for long-term impact evaluation to expand operations so that follow-up support and assessments can be extended beyond the short-term training periods. Together, these improvements in methodology and programming will lead to better understanding of female entrepreneurs' motivations and constraints in LLMIC. These actions are essential for expanding economic opportunity and improving female livelihoods by amplifying their voice and agency within their respective communities.

Business Innovations for Good or B.I.G. Ideas integrated the learnings from this meta-synthesis evaluation, improving on its pilot program and has since run a second program consisting of thirteen entrepreneurs. The program is now more flexible, in regard to learning and scheduling. The BIG Ideas team surveys incoming participants on their current knowledge of the subjects taught and goals for the program and adjusts the learning materials accordingly. Additionally, participants can vote to change the timings of certain trainings and if a majority agrees the start time is modified. Further, BIG Ideas mentors now remain connected to participants and continue to support their ventures after the

conclusion of the program. The BIG Ideas team is continuing to work to improve the program and implement more of the best practices identified by the synthesis evaluation in this paper. BIG Ideas is making efforts to connect with additional local partners, especially banks, to facilitate access to loans for the program’s participants and expand community involvement. Also, the team is working to quantify the monetary gains that the program can bring, in order to communicate those potential benefits to incoming participants and mitigate attrition and absenteeism during the program.

The included business model is not meant to be the ideal intervention or “cure-all” for issues of economic development, gender parity, or environmental sustainability. It is but one attempt to at a research-backed, community-driven approach to inclusive and sustainable development. Entrepreneurs and others implementing programs in LLMIC’s should continue to build on this model with further research and scrutiny of programs and their impact evaluations and continued feedback and participation from the impacted communities in the design and governance of future programs.

Appendix

APPENDIX 1: CODE BOOK, METHODOLOGY FOR CONSTRUCTING SCORES¹⁹

3=all 3s	2=one or more 2s (NO 1s)	1= one or more score of 1
		Note: The rationale for the scoring is that low/medium scores in any category may bias the entire analysis

Bias

3	Was the evaluator independent from the project implementer?	Y
2	Was the evaluator independent from the project implementer?	Partially
1	Was the evaluator independent from the project implementer?	N

Quality of baseline data/construction

3	Was the baseline constructed before the project intervention?	Y
	Was the construction of the baseline data fully described and methodologically sound?	Y
2 (1 Y & 1 no)	Was the baseline constructed before the project intervention?	Y/N
	Was the construction of the baseline data fully described and methodologically sound?	Y/N
1	Was the baseline constructed before the project intervention?	N
	Was the construction of the baseline data fully described and methodologically sound?	N

Sustainability⁴²

3	Is there a future monitoring plan described? (at least 5 years ahead)	Y
2	Is there a future monitoring plan described?	Partially
1	Is there a future monitoring plan described?	N

Relevance of Objective Score

⁴²This criterion was eventually removed after coding since no studies analyzed included a sustainability plan and thus the criterion negatively-skewed initial results.

3	Do the evaluation questions and objectives/ purpose reflect the main objective of the program being evaluated? Must be completely aligned.	Y
2	Do the evaluation questions and objectives/ purpose reflect the main objective of the program being evaluated?	Partially
1	Do the evaluation questions and objectives/ purpose reflect the main objective of the program being evaluated?	N

Relevance of Data Score

3	Was the data collected on the following subjects relevant? <ul style="list-style-type: none"> • Program recipients • Program non-recipients • Goods and services 	More than 1 = Y
	Does the evaluation use secondary data? & Is the data relevant to the program evaluated?	If Y then Y
	Is the analytical approach appropriate for answering the research question/ objectives?	Y
	Were any of the following types of data used in the analysis? <ul style="list-style-type: none"> • Data on whether people used goods and services provided / on training outcomes? • Data on knowledge or behavior change 	At least 1 = 1 Y

2	Was the data collected on the following subjects relevant? <ul style="list-style-type: none"> • Program recipients • Program non-recipients • Goods and services 	At least 1 = Y
	Does the evaluation use secondary data? & Is the data relevant to the program evaluated?	Y & N
	Is the analytical approach appropriate for answering the research question/ objectives?	Partially
	Were any of the following types of data used in the analysis? <ul style="list-style-type: none"> • Data on whether people used goods and services provided / on training outcomes? • Data on knowledge or behavior change 	At least 1 = 1 Y

1	Was the data collected on the following subjects relevant? <ul style="list-style-type: none"> • Program recipients • Program non-recipients • Goods and services 	None
---	---	------

	Does the evaluation use secondary data? & Is the data relevant to the program evaluated?	Y & N
	Is the analytical approach appropriate for answering the research question/ objectives?	N
	Were any of the following types of data used in the analysis? <ul style="list-style-type: none"> • Data on whether people used goods and services provided / on training outcomes? • Data on knowledge or behavior change 	None

Sampling and Reliability Score

3	Random Sampling	Y
	Purposeful sampling & Do the authors provide adequate methodological justification for their sampling approach? & If the authors used purposeful sampling, did they seek heterogeneous populations?	Y Y Y

2	Convenience sampling & Do the authors provide adequate methodological justification for their sampling approach?	Y Y
	Purposeful sampling & Do the authors provide adequate methodological justification for their sampling approach? & If the authors used purposeful sampling, did they seek heterogeneous populations?	Y If either or both = somewhat

1	Convenience sampling & Do the authors provide adequate methodological justification for their sampling approach?	Y N/ somewhat
	Purposeful sampling & Do the authors provide adequate methodological justification for their sampling approach? & If the authors used purposeful sampling, did they seek heterogeneous populations?	Y If either or both = N
	Which sampling methods were used?	Don't know

Analytical Validity and Reliability Score

3	If randomized, is the randomization method fully described? If qualitative, are methods fully described (including interview questions) and justified?	Y Y
	Are all appropriate covariates that may influence findings considered in the analysis?	Y

	If not randomized, are all appropriate covariates that may influence findings considered in the analysis?	Y
--	---	---

2	If randomized, is the randomization method fully described? & Are all appropriate covariates that may influence findings considered in the analysis? If qualitative, are methods fully described and justified?	N Partially Partially
	If not randomized, are all appropriate covariates that may influence findings considered in the analysis?	Partially

1	If randomized, is the randomization method fully described? & Are all appropriate covariates that may influence findings considered in the analysis? If qualitative, are methods fully described and justified?	N N N
	If not randomized, are all appropriate covariates that may influence findings considered in the analysis?	N

Ethics

Y	<i>First determine if its human subjects research</i>	Y
	<i>Then Determine score</i>	
3	If monitoring data was used, was it de-identified? If the secondary data was used, was it de-identified?	Y & Y
	Was primary data collected specifically for the evaluation? & Do the authors indicate whether they got ethics approval or exemption? ²⁴³	Y Y

1	If monitoring data was used, was it de-identified?	N
	If the secondary data was used, was it de-identified?	N

Reporting Score

<i>Score is the average of the following answers</i>		
Are evaluation questions listed?		(1/2/3)
Are evaluation objectives listed?		(1/2/3)

⁴³This criterion was eventually removed after coding since no studies analyzed included mentioned an ethics approval and thus the criterion negatively-skewed initial results.

Are terms in evaluation questions operationally defined?	(1/2/3)
Are sampling methods described in enough detail to replicate? ⁴⁴	(1/2/3)
Does the evaluation involve random assignment to treatment? & Is the randomization method described? ⁴⁵	(Y/N) (1/2/3)
Was primary data collected specifically for the evaluation? & Data collection instruments are identified & Data collection instruments are available?	(Y) (1/2/3)*
Does the evaluation use monitoring data from within the program? And... Data collection instruments are identified & Data collection instruments are available?	(Y/N) (1/2/3)
Does the evaluation use secondary data from sources external to the program? And... The population of participants is fully described The data source is publicly available	(Y/N) (1/2/3)
Are the analytical methods described?	(1/2/3)
Are evaluation results presented for all questions?	(1/2/3)
Are estimates of error reported? ⁴⁶	(1/2/3)
Are evaluation limitations discussed?	(1/2/3)

⁴⁴This criterion was not applied to qualitative studies

⁴⁵This criterion was not applied to qualitative studies

⁴⁶This criterion was not applied to qualitative studies

APPENDIX 2: INCOME STATEMENT (YEARS 1 – 3)

Income Statement	2017	2018	2019
	Projected	Projected	Projected
Fund-Raising	5,000	25,000	50,000
In-Kind Donations	7,580	2,000	2,000
<i>Total Revenues</i>	12,580	27,000	52,000
<i>Direct Expenses</i>			
Trainers' Salaries	1,200	14,400	19,200
<i>Total Direct Expenses</i>	(1,200)	(14,400)	(19,200)
<i>Gross Surplus</i>	11,380	12,600	32,800
<i>Operating Expenses</i>			
SG&A	-	-	-
Website Maintenance	90	90	90
Facilities	-	397	397
Equipment	1,000	500	500
Equipment Depreciation	1,516	1,516	1,516
<i>Total</i>	(2,606)	(2,503)	(2,503)
Operating Income (EBIT)	8,774	10,097	30,297
Income Taxes	-	-	-
<i>Net Income/ Assets</i>	8,774	10,097	30,297

APPENDIX 3: CASH FLOWS (YEARS 1 – 3)

Statement of Cash Flows	FY Ended 31 Dec 2017	FY Ended 31 Dec 2018	FY Ended 31 Dec 2019
	Projected	Projected	Projected
<i>Cash Flow from Operations</i>			
Net Earnings	\$ 8,774.00	\$ 10,097.00	\$ 30,297.00
<i>Subtractions from Cash</i>			
Equipment Depreciation	(1,516)	(1,516)	(1,516)
In-Kind Donations	(7,580)	(2,000)	(2,000)
<u>Net Cash from Operations</u>	<u>-\$322.00</u>	<u>\$8,581.00</u>	<u>\$28,781.00</u>
Cash Flow for FY End	\$ (322.00)	\$ 6,581.00	\$ 26,781.00

References

- Ahaibwe, Gemma, and Swaibu Mbowe. 2014. "Youth Unemployment Challenge in Uganda and the Role of Employment Policies in Jobs Creation". www.brookings.edu/blog/africa-in-focus/2014/08/26/youth-unemployment-challenge-in-uganda-and-the-role-of-employment-policies-in-jobs-creation/.
- Adoho, F., Chakravarty, S., Korkoyah, D.T., Lundberg, M.K. and Tasneem, A. 2014. "The impact of an adolescent girls employment program: the EPAG project in Liberia".
- Bandiera, O., Buehren, N., Burgess, R., Goldstein, M., Gulesci, S., Rasul, I. and Sulaiman, M. 2012. "Empowering adolescent girls: evidence from a randomized control trial in Uganda". Washington, DC: World Bank.
- Bandiera, Oriana, Robin Burgess, Narayan Das, Selim Gulesci, Imran Rasul, and Munshi Sulaiman. 2013. "Can basic entrepreneurship transform the economic lives of the poor?" STICERD - economic organisation and public policy discussion papers series 43, Suntory and Toyota International Centres for Economics and Related Disciplines, LSE.
- Berge, L.I.O., Bjorvatn, K. and Tungodden, B. 2014. "Human and financial capital for microenterprise development: Evidence from a field and lab experiment". *Management Science*, 61(4), pp.707-722.
- BIG Ideas. 2018. "About". www.businessinnovationsforgood.org/about.
- Big Jump. 2018. "Javelin Experiment Board". www.bigjump.com.au/javelin-experiment-board/.
- Blattman, Christopher, Eric P. Green, Julian Jamison, M. Christian Lehmann, and Jeannie Annan. 2016. "The Returns to Microenterprise Support among the Ultrapoor: A Field Experiment in Postwar Uganda". *American Economic Journal: Applied Economics*, 8(2): 35-64.
- Cho, Y., Kalomba, D., Mobarak, A.M. and Orozco, V. 2013. "Gender differences in the effects of vocational training: Constraints on women and drop-out behavior".
- de Mel, Suresh and McKenzie, David J. and Woodruff, Christopher. 2012. "Business Training and Female Enterprise Start-Up, Growth, and Dynamics: Experimental Evidence from Sri Lanka". World Bank Policy Research Working Paper No. 6145. Available at SSRN: <https://ssrn.com/abstract=2116143>.
- Design Hub Kampala. 2018. "Design Hub Kampala – Co-Working & Event Space for Creatives". designhubkampala.com/.
- Django Girls. 2018. "Django Girls Is a One-Day Workshop about Programming in Python and Django for Women". djangogirls.org/.

- Field E, Jayachandran S, Pande R. 2010. “Do Traditional Institutions Constrain Female Entrepreneurship? A Field Experiment on Business Training in India”. American Economic Review Papers and Proceedings.
- FinAfrica Uganda: Uganda's Enterprise Development Centre. 2018. “Home”. www.finafrica.org/.
- Ganamotse, G.N., Samuelsson, M., Abankwah, R.M., Anthony, T. and Mphela, T. 2017. “The Emerging Properties of Business Accelerators: The Case of Botswana, Namibia and Uganda Global Business Labs”. Journal of Entrepreneurship and Innovation in Emerging Economies, 3(1), pp.16-40.
- Gine, Xavier; Mansuri, Ghazala. 2014. “Money or Ideas? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan”. Policy Research Working Paper;No. 6959. World Bank, Washington, DC. World Bank. <https://openknowledge.worldbank.org/handle/10986/19367>.
- Hive Colab. 2018. “About US”. hivecolab.org/.
- Johanson, Richard K., and Arvil V. Adams. 2004. “Skills development in sub-Saharan Africa”. World Bank Publications.
- Klinger, Bailey, and Matthias Schündeln. 2007. “Can Entrepreneurial Activity be Taught? QuasiExperimental Evidence from Central America”. Center for International Development Working Paper Series. Harvard.
- Lemmon, G.T. 2012. “Entrepreneurship in Postconflict zones”. Council on Foreign Relations.
- OECD. 2018. “Investing in Women and Girls”. www.oecd.org/dac/gender-development/investinginwomenandgirls.htm.
- Open Sustainability Institute. 2018. “About Us”. www.opensustainability.org/.
- Oxenham, J. 2002. “Skills and literacy training for better livelihoods: a review of approaches and experiences”.
- Patton, Anna. 2016. “Uganda Is a Land of Entrepreneurs, but How Many Startups Survive?” The Guardian, Guardian News and Media, 16 Feb. 2016, www.theguardian.com/global-development-professionals-network/2016/feb/16/uganda-is-a-land-of-entrepreneurs-but-how-many-startups-survive.
- Premand, Patrick; Brodmann, Stefanie; Almeida, Rita; Grun, Rebekka; Barouni, Mahdi. 2016. “Entrepreneurship Education and Entry into Self-Employment among University Graduates”. World Bank, published in the World Development <http://creativecommons.org/licenses/by-nc-nd/3.0/igo> <http://dx.doi.org/>

- ResilientAfrica Network. 2018. “RAN Core Partners”. www.ranlab.org/.
- Startup Science®. 2018. “Startup Science.” startupscience.com/.
- UCC: Uganda Communications Commission. 2018. “The Consumer Parliament”.
www.ucc.co.ug/.
- Ugandan Investment Authority. 2018. “What We Do.” www.ugandainvest.go.ug/.
- UN Philanthropy. 2009. “Clinton Global Initiative: Empowering Girls & Women”.
www.un.org/en/ecosoc/phlntrpy/notes/clinton.pdf.
- United States Department of State. 2017. “AWEP-IVLP Program Evaluation Report”.
Washington, DC: Bureau of Educational and Cultural Affairs United States Department
of State.
- UNICEF. 2015. “Ugandan Statistics”.
www.unicef.org/infobycountry/uganda_statistics.html. Global Entrepreneurship
Monitor. <http://www.gemconsortium.org/>.
- USAID. 2015. “Why Invest in Women”. www.usaid.gov/infographics/50th/why-invest-in-women.
- UWEAL. 2018. “Programs”. Uganda Women’s Entrepreneurs Association.
www.uweal.co.ug/services.html.
- Watts, Jonathan. 12 Sept. 2017. “Third of Earth's Soil Is Acutely Degraded Due to Agriculture”.
The Guardian, Guardian News and Media.
www.theguardian.com/environment/2017/sep/12/third-of-earths-soil-acutely-degraded-due-to-agriculture-study.tts.
- World Bank. 2017. “Ease of Doing Business Index (1=Most Business-Friendly Regulations)”.
data.worldbank.org/indicator/IC.BUS.EASE.XQ.
- World Bank Database. <http://data.worldbank.org/indicator/IC.BUS.EASE.XQ>.