

Evaluating the Return on Investment (ROI) for an “Empowered Entrepreneur Training” in Tanzania

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Acronyms

DSCS	Developing a Sustainable Cookstove Sector Project
EETH	Empowered Entrepreneur Training Handbook
EETP	Empowered Entrepreneur Training Program
JHU	Johns Hopkins University
ROI	Return on Investment
USAID	United States Agency for International Development
WIRE	Women Integration into Renewable Energy Value Chains Project

Introduction

There are 3 billion people – or 40% of the world population – who still rely on biomass¹ for cooking, lighting and heating. Exposure to household air pollution from traditional cooking practices alone is estimated to kill over 4 million people every year, while millions more suffer from cancer, pneumonia, heart and lung disease, blindness, and burns.² In regions such as sub-Saharan Africa, where the lack of access to clean energy solutions and electrification is particularly significant, nearly a third of the urban population and the majority of the rural poor are using biomass for cooking and heating in traditional open fires.³

Increased community engagement of local entrepreneurs or sales agents is considered to be crucial for scaling the distribution and adoption of cleaner cookstoves that can reduce the negative impacts of reliance on biomass and traditional cooking technologies. Local entrepreneurs can enhance the access of cleaner cooking technologies to consumers, while simultaneously increasing market access to such consumers and communicating marketing messages more effectively. There is a particular focus on engaging women entrepreneurs as sales agents in the cookstove sector, because they are the traditional household managers of energy and the cooks. The literature review reveals that women can more effectively market and sell products to other users (women), thus enhancing adoption, while also being able to reach new consumer segments through their networks. In countries where gender disparity is high, women as sales agents is a good way to access untapped female markets because women can buy directly from other women in the community and do not need to venture to cities or marketplaces.⁴

This Return on Investment (ROI) study examines the organizational impacts of Empowered Entrepreneur Training Handbook (EETH) activities, which were developed to support organizations that engage women entrepreneurs or sales agents in order to ultimately enhance the distribution and sale of cleaner cookstoves through increasing the personal agency, business skills, and leadership skills of entrepreneurs (particularly female entrepreneurs) that sell cleaner cookstoves.

This study focuses on the “Women Integration into Renewable Energy Value Chains (WIRE) Project” conducted by Energy4Impact (E4I), funded by the US Department of State (Bureau of Oceans and International Environmental and Scientific Affairs). WIRE is a 24-month project with the objective to accelerate access to clean energy for poor and rural communities by strengthening the role of women in the clean cooking (improved cookstoves, briquettes) and off-

¹ Biomass is fuel developed from organic material such as firewood or dung. Charcoal is usually produced by the heating of wood.

² World Health Organization. (2014). Household Air Pollution and Health. *World Health Organization*. Retrieved August 1, 2015 from <http://www.who.int/mediacentre/factsheets/fs292/en/>.

³ Global Alliance for Clean Cookstoves. (2014). Igniting change: A strategy for universal adoption of clean cookstoves and Fuels. *Global Alliance for Clean Cookstoves*. Retrieved from <http://www.cleancookstoves.org/resources/factsheets/igniting-change.pdf>.

⁴ Corporate Citizenship. (2012). “Women Mean Business: Empowerment in Developing Markets.” Corporate Citizenship.

grid lighting supply chains in Kenya and Tanzania through “business and technology training and mentorship, and support to access financing and market opportunities.”⁵

The business training and mentorship activities included in the WIRE project utilize methods and activities that Energy4Impact staff members were trained on through the ‘Empowered Entrepreneur Training Program’ (EETP). The EETP is conducted by Winrock International (Winrock) as part of the USAID-funded ‘Developing a Sustainable Cookstove Sector’ (DSCS) project, in partnership with Johns Hopkins University (JHU) and Visionaria Network.

In previous evaluations of Empowered Entrepreneur Training Program, positive impacts were measured for participants, demonstrating evidence of entrepreneurs’ personal growth and improved sales performance. This study lends greater insight into the business case for other organizations and companies to support conducting trainings from the Empowered Entrepreneur Training Handbook and methodology beyond the life of the DSCS project.

The following study utilizes the Kirkpatrick / Phillips 5-level evaluation model⁶ to determine the effectiveness of the Empowered Entrepreneur Training activities in the WIRE program, and ultimately seeks to answer the question: *Does the Empowered Entrepreneur Training have a positive return on investment for organizations and companies in the clean cooking sector?*

Overall, we determine an ROI of 115.9% for the training activities included in Energy 4 Impact’s WIRE project, based on reduction of mentorship time required for trained participants. There was also a 10.3% increase in sales for those trained. However, given that Energy4Impact is a nonprofit and does not make a profit from increased sales, we did not include that increase in the ROI calculation. Our research indicates that the training was effective in creating other intangible benefits prioritized by the WIRE program, even though these are not readily described in monetary terms, including for example: increases in grit, confidence in problem solving, self-esteem and work motivation.

Key Considerations & Limitations

There are several key considerations to note in this report. First, E4I is a non-profit organization that does not take a profit from the sales of entrepreneurs in the WIRE program, and therefore the ROI numbers presented in this analysis did not include sales data. Despite the short duration of the project, we collected sales data in the three months prior to and approximately four months post training that do provide insight into changes in sales at the individual level, and highlight how other companies may potentially profit from entrepreneurs’ sales.

Secondly, all Tanzanian entrepreneurs in the WIRE program were invited to participate in the Empowered Entrepreneur Training activities. However, approximately one quarter of the

⁵ “How lessons from recruiting female energy entrepreneurs into a gender-focused project are influencing its strategies”. July 13, 2017. Energy4Impact. Retrieved from <https://www.Energy4Impact.org/news/how-lessons-recruiting-female-energy-entrepreneurs-gender-focused-project-are-influencing-its>.

⁶ The Kirkpatrick / Phillips ROI evaluation model focuses on building a chain of impact from the specific training activity to the learning and behavioral changes, and then to business impacts in order to calculate Return on Investment (%).

entrepreneurs did not participate in the training activities, for a variety of reasons; some of which may have direct impacts on their capacity to be successful entrepreneurs. This can present a selection bias. We present average sales trends in the months prior to training and post training for both groups to illustrate that increases in average sales of trained entrepreneurs was likely not due to monthly economic fluctuations experienced by all entrepreneurs.

Thirdly, there was a limited period of time that the evaluation occurred due to timing constraints. The WIRE program began in March 2017 and the sales data were collected beginning in January 2017. Sales data were evaluated from January to March of 2017, and April to July of 2017 for both the control and intervention groups to understand the average sales in those time periods. The 4-month time period used for this study is a relatively short period to expect to see changes as a result of the training. While we have confidence in the analysis of business and behavioral changes, the results would be more influential if they could be confirmed at later 6-month and 12-month intervals. It is important to note that the WIRE program will continue to run through December 2018 and track the changes over time. This paper therefore does not capture final results of the program.

In addition, due to time constraints and availability of business records kept by entrepreneurs during the study period, we were not able to include several metrics deemed to be relevant to the WIRE program’s success, that might otherwise factor in to the overall training program benefit, including the number of new entrepreneur referrals, customer cash purchasing trends, the number of regions of operation per entrepreneur, the amount of time dedicated to business activities, business investment trends (capital sources and amounts), and the variation of product offerings.

Important to note is that two of the three authors on this paper are the co-authors of the Empowered Entrepreneur Training Handbook.

Background

The Empowered Entrepreneur Training Program (EETP)

The EETP is conducted by Winrock International (Winrock) in partnership with JHU and Visionaria Network as part of the USAID-funded DSCS project. The EETP aims to build in-house expertise at local energy organizations in the Empowered Entrepreneur Training Handbook (Handbook).⁷ The Handbook includes training lesson plans on key business, agency-based empowerment⁸ and leadership skills. The Handbook was designed for women entrepreneurs in the clean cooking sector, but has applicability to men and participants outside of the energy sector. The EETP included “training of trainers” workshops and coaching support for trainers to learn and practice methods and activities included in the Handbook.

⁷ The Empowered Entrepreneur Training Handbook was developed by Johns Hopkins University (JHU) and Visionaria Network with financial support from the United Nations Foundation’s Global Alliance for Clean Cookstoves (GACC). It can be accessed from the GACC website: <http://cleancookstoves.org/binary-data/RESOURCE/file/000/000/342-1.pdf>

⁸ Agency-based empowerment enhances an individual’s cognitive capacity to create and focus on her goals, and prepares him/her to effectively take advantage of opportunities when they arise.

Following participation in the EETP, certified trainers then train entrepreneurs and sales agents in their organization’s networks. Under the DSCS project, over 70 trainers were certified as Empowered Entrepreneur Trainers in Bangladesh, India, Indonesia, Kenya, Nepal, Nigeria, Senegal, Tanzania and Uganda, from over 20 different organizations engaged in the clean cooking and household energy sectors. Five employees at E4I were underwent training certification from 2015 to 2017. Two trainers who conducted the WIRE trainings in Tanzania were certified trainers from the EETP.

About the WIRE Program

The aim of the WIRE program is “to integrate 400 women in rural Kenya and Tanzania into the renewable energy supply chain by providing them with business and technology training and mentorship, and supporting them to access financing and market opportunities.”⁹ In total, 466 women entrepreneurs were selected for participation in the WIRE program, 217 of which are located in Tanzania, in the Geita, Mwanza, and Mara¹⁰ regions surrounding Lake Victoria. The main activities of the WIRE program include Capacity Development (training and mentorship) and Market Development (including capital access). WIRE’s business training and mentorship activities utilize the methods introduced to E4I through the EETP.

The implementation plan spans 24 months, from January, 2017 to December, 2018. In January and February of 2017, E4I staff members recruited women entrepreneurs to join the program and in March, the WIRE activities for women entrepreneurs commenced. The primary activities, deliverables and milestones of the WIRE program can be found in greater detail in Appendix 1.

The WIRE program was identified and selected for the ROI study given (1) quality of the certified trainers in E4I; (2) timing limitations for the ROI study aligning with the WIRE program training implementation; and (3) sufficient number of entrepreneurs in the WIRE program for the evaluation.

Methodology & Training Program

ROI Study Methodology

The study followed the Kirkpatrick / Phillips model for evaluating the effectiveness and cost-value (ROI) of training activities.¹¹ The first four levels of evaluation (Reaction/Satisfaction, Learning, Application/Implementation, Business impact) seek to determine the effectiveness of the training program, while the fifth level, (Return on Investment, or “ROI”) compares the

⁹ “New initiative to bolster women’s involvement in the energy sector”. Energy 4 Impact. October 4, 2016. <https://www.energy4impact.org/news/new-initiative-bolster-women%E2%80%99s-involvement-energy-sector>

¹⁰ The “Bunda” training location is located in the Mara region. Whereas Geita and Mwanza are the names of the training locations and the regions themselves.

¹¹ Kirkpatrick, D., and Kirkpatrick, J. (2005). *Transferring Learning to Behavior: Using the Four Levels to Improve Practice*. San Francisco, CA: Barrett-Koehler. ISBN 1-57675-325-5.

monetary value of the training program to the cost of the program. (see fig. 1 for an overview of levels and tools used in the training program evaluation).

Conducting an ROI evaluation can serve a number of functions. First it can ensure that the training program is meeting its objectives. Secondly, the ROI evaluation can assist in decision-making about program investments and help companies and organizations establish funding priorities. Related to this, if the ROI is found to be positive than it can support the continuation of organizations and companies conducting trainings from the Empowered Entrepreneur Training Handbook / methodology beyond the life of the DSCS project.

Figure 1. Overview of the levels involved in the evaluation methodology, indicators and research tools

Evaluation Level	Brief Description	Research tools
1. Reaction & satisfaction	Measures participants’ reaction to and satisfaction with the training program	- Immediate post-training survey
2. Learning	Measures sought after changes in knowledge / skills / attitudes of participants that the training impacts	- Pre-survey - Immediate post-training survey and competency test - 3-month post-training survey and competency test
3. Application & implementation	Measures sought after changes in on-the-job application, behavior change, and implementation that the training impacts	- Pre-survey - Immediate post-training survey - 3-month post-training survey - Survey/interview with trainers/managers 3-months post-training
4. Business impact (Results)	Tracks impact of business metrics for the organization that has resulted from the training	- Surveys/interviews with trainers/managers 3-months post training - Business metrics tracked over time with organization (pre-training and 3-months post training)
5. Return on investment (ROI)	Compares the monetary value of the business outcomes of the training program	- Fully-loaded costs of training understood (interviews and confirmations) - Business metrics tracked (pre and 3-months post)

WIRE Training Program

The WIRE project’s training program for participating entrepreneurs was a 3-day program, including a mix of empowerment, leadership, and business topics (see fig. 2 for a list of activities included in the WIRE training program).

Figure 2. List of WIRE Training Program Topics

WIRE Training Program Topics	
From Empowered Entrepreneur Training Program:	Not from Empowered Entrepreneur Training Program
<p>Empowerment:</p> <ul style="list-style-type: none"> -- Introduction to empowerment -- Understanding oneself -- Tree of Life -- Limiting beliefs -- Core beliefs -- Developing positive mental habits (cognitive reframing) <p>Leadership:</p> <ul style="list-style-type: none"> -- Introduction to leadership / Good & bad leaders -- Establishing & Developing Visions -- Setting goals -- Being proactive -- Problem solving -- Plan of action <p>Business:</p> <ul style="list-style-type: none"> -- Marketing -- Costing and Pricing 	<ul style="list-style-type: none"> -- Business Model Canvas (in the business section of the training) -- Introduction to Renewable Energy Technologies

In March, all entrepreneurs participating in the WIRE project (including those trained and those untrained) began to receive monthly mentorship sessions. E4I mentors are conducting mentorship sessions twice per month beginning in September 2017. The mentorship sessions focus on entrepreneurs’ businesses, and also included reflections and discussions on empowerment and leadership concepts – such as, importance of positive attitudes and transforming limiting beliefs. Mentors received training on the empowerment and leadership concepts from the certified EETP trainers at E4I.

The objectives of the training and mentorship in the WIRE project are: “(1) to strengthen the women entrepreneurs’ confidence and capacity to examine themselves for growth; (2) to provide mental tools to female entrepreneurs to more effectively manage their emotions and help them take on new challenges in their businesses and in life; and (3) to build the capacity of female entrepreneurs to understand, appreciate and apply concepts of good entrepreneurship practice through instilling an assertive attitude for effective business growth.”¹²

In total, 171 entrepreneurs, all of who are women, received the training. However, some of these women received the training in July of 2017 and were therefore not included in the analysis given the time period of the training analysis. The sales analysis includes 128 trained entrepreneurs and 93 untrained entrepreneurs, while the pre-, immediate post- and 3-month post-surveys that informed levels 2 and 3 of the training evaluation were collected for 103 trained participants.

¹² Training objectives were retrieved from the WIRE training objectives and agenda document provided to the evaluation team in March 2017.

Research Process

After determining the key skills, behaviors, attitudes and business metrics that the WIRE training program seeks to impact and identifying the relevant indicators, the research team developed research tools (see fig. 3). Working with E4I, the research team collected information from surveys, interviews and business metrics. Sales data (which can also be considered a proxy for productivity) was collected for participating entrepreneurs and for entrepreneurs in the WIRE program that did not receive the training, from January to July of 2017. Other hard business metrics tracked for entrepreneurs in the control and intervention group include: retention rates and mentoring time. Finally, the research team conducted the ROI calculation.

Analysis of the sales data were done using matched-pair t-tests for continuous data, where sales data were log-transformed data to account for data skewness.

Figure 3. Tools developed & relation to ROI model levels

TOOL	BRIEF DESCRIPTION	LEVELS EMPLOYED
1. Pre-training survey	Short pre-training survey to get a baseline of knowledge, skills, attitudes and behaviors that Energy 4 Impact seeks to gain from the training	- Learning - Application & implementation
2. Immediate post-training survey	Short post-training survey that has the same questions as the pre-training survey, in addition to several short questions that gauge how learners reacted to the training	- Reaction & satisfaction - Learning - Application & implementation
3. 3-4 month post-training survey	Same survey as the immediate post-training survey	- Learning - Application & implementation
4. Competency quiz (integrated into post-training survey)	Questions measure knowledge, skills and attitudes that may have shifted from the training and that are of interest to Energy 4 Impact	- Learning
5. Business metrics (tracked at pre-training & 3-4 month post training)	Measures business impact, with a focus on indicators specific to the needs and interests of Energy 4 Impact	- Business impact - ROI

Results

Level 1: Reaction & Satisfaction

Participants had a positive reaction to the training, as measured through an immediate post survey given to participants. Eighty-six percent of participants strongly agreed that the training was worth their time, and 82 percent of participants strong agreed that they learned new things relevant and important to the success of their business, as well as their personal life. Eighty-one percent of participants would recommend the training to women like themselves. Reaction and satisfaction were gauged through several statements that participants responded to on a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree (see fig. 4 for a list of the questions, average response, and percent of participants that strongly agreed with the statement).

Figure 4. Reaction & satisfaction results immediate following training

Statement (Responses on a scale of 1 to 5, 1 being strongly disagree and 5 being strongly agree)	Mean (SE) response	Percentage of participants rating 5 (highest)
The training was very worth my time	4.86 +/- 0.026	86%
I learned new things that are relevant and important to the success of my business.	4.82 +/-0.029	82%
I learned new things that are relevant and important to my personal life.	4.79 +/- 0.038	82%
I would recommend the training to other women like me.	4.80 +/- 0.033	81%
The trainers’ facilitation was clear and effective.	4.77 +/- 0.039	80%
The environment and logistics for the training were appropriate and comfortable.	4.81 +/- 0.036	83%

The high (80%+) proportion of trainees giving the highest ratings and reactions to the training indicate that the training was both relevant and effective for participating entrepreneurs.

Level 2: Learning + Level 3: Application

Changes in knowledge, skills, attitudes (Level 2) and behaviors (Level 3) were assessed through a pre-training and 3-month post-training survey that included interspersed standardized scales to measure psychometric competencies where available and possible (see fig. 5 for the psychosocial metrics and questions used in the survey).

Knowledge, skills and attitudes (Level 2) sought by Energy 4 Impact focused on:

- Confidence and resiliency
- Motivation
- Initiative
- Positive attitude and self-esteem
- Problem solving
- Belief of gender as a non-limiting factor
- Innovativeness
- Emotional management
- Decision making abilities
- Financial knowledge

In addition to the aforementioned pieces, sought after changes in on-the-job application, behavior change and implementation (Level 3) included:

- Ability and desire to learn from other entrepreneurs / sales agents
- Initiative to improve business / seize new opportunities
- Time dedicated to business activities

Survey results (see fig. 6) were calculated from 103 trainees¹³ who completed both the pre- and post-training surveys (3-months). Several questions in the survey were gathered through outside, publically available sources, such as those developed by the International Center for Research on Women (ICRW) for the Global Alliance for Clean Cookstoves as part of their social impact guide.¹⁴ In other cases, the research team developed questions – such as those to understand innovation in work and perceptions of gender as a limiting factor – that have not been validated in previous studies.

Results indicate that the training had a positive impact in knowledge, skills and attitudes that E4I sought to impact (see fig. 6). The average measure of psychological grit increased by 8.5 percent, with the percent of participants confident in problem solving increasing from 65.1 percent to 81.6 percent. One trainer says: “After the training... [Entrepreneurs began to] think that [they] can. [They] have the can in [their] heart, rather than the can’t.” Before the training 60.2 percent of participants strongly agreed that they were motivated in work, and after the training this increased 94.2 percent.

Prior to the training 63.1 percent of participants had a high or very high score of self-esteem, and after the training, 91.3 participants had a high or very high score. Participants also reported increases in being able to regulate their emotions. A mentor reported hearing from women that the training “has helped a lot to control emotions and face challenging situations... After the training [they] learned how to listen better, solve problems and give their views. Before the training, many were hiding their problems.” Impacts on emotional management were seen outside of work as well. Another mentor shares a story about one entrepreneur who has been better able to communicate with her husband after understanding how to regulate emotions and be proactive, as opposed to reactive, in situations.

Finally, there was also an observed increase in the percent of participants who feel that gender is a not limiting their success (52 percent prior to the training, 70.6 percent following). E4I staff remarked that women started to take up activities that tended to be dominated by men. A trainer says of the women entrepreneurs he works with, “They had this limiting belief that they couldn’t engage in making the metal clads because it had to do with using a hammer... Some of them have started learning to make metal clads.”

It is important to note that some of the indicators measured did not continue to improve over time, or signal ambiguous outcomes in some instances. For example, the percent of participants with a desire to learn from others decreased over time, from 79.6 percent to 74.8 percent. For the questions around decision making, individuals reported greater joint decision-making after three months post training. While it is unclear what the significance of this shift is, it could signal a trend to move from singular decision making to joint decision making thus engaging their spouses more collaboratively in decisions.

¹³ 171 entrepreneurs were trained as part of the WIRE project in Tanzania, we omitted those trained later in May and in July, as three months had not elapsed by the time of our analysis. The trainees included were each trained in March and April.

¹⁴ The GACC social impact guide can be accessed here: <http://cleancookstoves.org/resources/489.html>

Figure 5. Psycho-social metrics and questions used in the survey

Name of Variable	Type of measure (validated scale, shortened scale or single question) ¹⁵	Meaning
Environmental mastery	Validated 3 component scale (Ryff, 1995)	Higher value = greater ability to manage changes in one’s environment and make adaptation (range 3-15)
Psychological grit	Validated 12 component scale (Duckworth, 2007)	Higher value = greater ability to persevere when faced with challenges (range 1-5)
Work motivation scale	Self-created scale	Higher value = greater feeling of motivation (high score=5/5)
Self esteem measures	Self-created scale	Higher value = better sense of self-esteem (high score=3.5/4)
Emotional regulation (evidence of cognitive reframing)	Two of 6 questions of the Emotion Regulation Questionnaire (Gross and John, 2003)	Higher value = more likely to reframe negative thoughts to positive ones (high score=5/5)
Emotional regulation (evidence of emotion suppression)	Two of 4 questions of the Emotion Regulation Questionnaire (Gross and John, 2003)	Higher value = more likely to suppress negative emotions and not address them (high score=5/5)
Innovation in work: “I often wonder how things can be improved”	Single question	Percentage reporting highest score (5 – highly agree)
Innovation in work: “I often spend time to develop new ideas or solutions to my business problems”	Single question	Percentage reporting highest score (5 – highly agree)
Problem solving ‘I am confident to resolve a problem I face in my work.	Single question	Percentage reporting highest score (5 – highly agree)
Gender as a limiting factor to success, ‘ I think my gender limits my potential as a business person’	Single question	Percentage reporting lowest score (1 – highly disagree)
Decision making ‘Who usually decides how the money you earn will be used?’	Single question	categories include: self, joint or others/partners
Decision making ‘Who makes the final decision on large purchases?’	Single question	categories include: self, joint or others/partners
Decision making ‘Do you have to ask for permission to buy something for yourself?’ (% stating permission required any time)	Single question	Categories include: no, yes-some of the time and yes-all of the time
Desire to learn from others	Single question	Categories include: yes, consistently interested compared with only sometimes or less

¹⁵ Duckworth, A.L., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 9, 1087-1101.
 Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, 4, 99-104.
 Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.

Figure 6. Knowledge, skills, attitudes and behaviors measured before, just after training and 3-months POST training)

CHARACTERISTICS	PRE SURVEY	AFTER TRAINING POST	3-MONTH POST TRAINING	P value (pre-after training)	P value (pre-3 month post)
Environmental mastery (Ryff 3 point subscale) (range 3-15)	10.36 (2.27)	11.45 (2.04)	13.7 (1.73)	t = 3.36, p = 0.0009*	t = 13.21, p < 0.001*
Psychological grit (12 point scale) (range 1-5)	3.42 (0.41)	3.31 (0.43)	3.71 (0.33)	t = -1.78, p = 0.077	t = 5.35, p < 0.0001*
Work motivation scale (3 point scale) (% high score 5/5)	55.1%	47.5%	94.2%	Chi sq = 4.10, p = 0.0429*	Chi sq = 33.76, p < 0.0001*
Self esteem measures (4 point scale) (% high score of 3.5/4)	63.1%	68.6%	91.3%	Chi sq = 0.694, p = 0.405	Chi sq = 23.18, p < 0.0001*
Emotional regulation (evidence of cognitive reframing) (scoring 5/5)	29.1%	31.4%	70.9%	Chi sq = 0.325, p = 0.5686	Chi sq = 35.9, p < 0.0001*
Emotional regulation (evidence of emotion suppression) (scoring 5/5)	26.2%	34.8%	72.8%	Chi sq = 3.46, p = 0.063	Chi sq = 44.7, p < 0.0001*
SPECIFIC QUESTIONS					
Innovation in work: “I often wonder how things can be improved” (% of high score (5/5))	33.9%	39.0%	53.4%	Chi sq = 0.659, P = 0.417	Chi sq = 7.10, p < 0.0001*
Innovation in work: “I often spend time to develop new ideas or solutions to my business problems” (% of high score (5/5))	54.9%	49.2%	77.7%	Chi sq = 0.0678, p = 0.7946	Chi sq = 12.50, p < 0.0001*
Problem solving ‘I am confident to resolve a problem I face in my work. ‘(% of high score (5/5))	65.1%	59.8%	81.6%	Chi sq = 0.601, p = 0.438	Chi sq = 6.27, p = 0.012*
Gender as a limiting factor to success, ‘ I think my gender limits my potential as a business person’ (% low score (highly disagree (1/5))	52.0%	41.2%	70.6%	Chi sq = 2.38 p = 0.123	Chi sq = 7.45, p = 0.006*

Decision making 'Who usually decides how the money you earn will be used?' (Self)	56.7%	48.7%	10.7%	Chi sq = 6.8, p < 0.033*	Chi sq = 64.3, p < 0.0001*	
	Joint	33.1%	27.4%			88.4%
	Others	11.0%	23.9%			1.0%
Decision making 'Who makes the final decision on large purchases?' (Self)	41.9%	34.5%	8.7%	Chi sq = 6.9, p < 0.032*	Chi sq = 50.8, p < 0.0001*	
	Joint	41.0%	33.6%			89.3%
	Others	17.1%	31.9%			1.9%
Decision making 'Do you have to ask for permission to buy something for yourself?' (% permission required)	52.6%	47.9%	61.8%	Chi sq = 0.5197, p=0.471	Chi sq = 2.4, p = 0.12	
Desire to learn from others	79.6%	79.5%	74.8%	Chi sq = 0.0162, p = 0.899	Chi sq = 0.689, p = 0.407	

Level 4: Business Impact

Business-related indicators that are important to the WIRE project’s success include: increased retention of participating entrepreneurs, decreased mentoring time required per entrepreneur, reduced time spent responding to and solving problems faced by entrepreneurs, increased capital leveraged within entrepreneurs’ businesses, increased sales, and a greater diversity of products offered by entrepreneurs (see fig. 7 for a complete list of relevant business metrics and priorities determined through interviews with WIRE project staff & leadership). The business metrics were determined based on traditional ROI models, combined with interviews of key staff members and organizational leaders to identify important business metrics to the organization. The effectiveness of the WIRE project on entrepreneur’s business metrics are important to the reputation of EAI on the whole, and their ability to execute and justify training and mentorship programs in the future.

Figure 7. Business impacts

Business metric	Was data for this metric available for the study?
Sales (PRE / POST)	YES*
Retention rates (PRE / POST)	YES*
Mentorship time	YES*
Employees in Business	YES**
Regions of operation (PRE / POST)	NO
Product Mix / Changes	YES**
Time dedicated to business activities	NO
Customer purchasing trends	NO
Entrepreneur referrals	NO

*Metrics that can be monetized are further explored in this section and can inform the ROI result.

**No conclusions could be made. Changes in the product mix were insignificant. The number of employees in business was tracked, however, there was a miscommunication internally with EAI that resulted in a mistake with data collection.

Sales Impacts

An analysis of sales data, for groups trained before June (see fig. 8), was conducted and found a significant difference in monthly sales after the training program compared to those not trained. Because several entrepreneurs participating in the WIRE project were not able to attend the initial training program, but are still active in all other aspects of the project, we were able to isolate differences in sales between those that received the training (test) and those that did not (control).

Figure 8. Training batches, dates, and inclusion in sales analysis

Training Batch	Training Dates (2017)	Included in Sales Analysis? (Yes/No)
Bunda	July 5 th – 7 th	No
Mwanza (group 1)	March 22 nd – 24 th	Yes
Mwanza (group 2)	March 27 th – 29 th	Yes
Mwanza (group 3)	May 3 rd – 5 th	Yes
Geita	April 11 th – 13 th	Yes

For the sales analysis, we only included individuals who completed trainings by April (n=118). When comparing sales data, the pre-training period spanned January through March for Mwanza 1 and 2 and January through April for Geita (see fig. 8 for training batches and dates). Before training, average monthly sales were 243,579 TSH per month and 269,628 TSH per month after training, a difference of 26,049 TSH, or a 10.6% increase (p=0.0071). In US Dollars (USD) this equates to \$107.18 USD average monthly sales prior to the training versus \$118.64 USD average monthly sales following the training, a *significant* increase of \$11.46 per month.

By comparison, we examined the change in sales for those who were not trained at all in the study period. In this scenario, we compared sales prior to the WIRE program (January through March) and sales in the four months after the program began (April through July). For this group, before training average monthly sales were 185,628 TSH per month and 195,282 TSH per month from April through July. This indicates a *non-significant difference* of 9,654 TSH (5% change) (p=0.154) or in \$81.68 USD versus \$85.92 USD, a difference of \$4.25. This difference is not considered statistically significant because the variation of sales from pre- and post- training periods for untrained entrepreneurs is greater than the difference in the average sales.

All entrepreneurs – including those that underwent the training and those that did not undergo the training – experienced a sales spike in March. E4I staff members believe that this is a result of entrepreneurs’ excitement in starting the program and receiving increased support.

Mentorship Impacts

Before training, E4I staff anticipated 50-minute mentoring sessions for entrepreneurs for the duration of the mentorship period (February, 2017 – September, 2018).

Tanzanian WIRE program mentors and managers reported significant differences in time required to complete a mentorship session for entrepreneurs who were not trained compared to those who were. While they do not have a general, fixed rule, the typical mentorship session

duration is 50 minutes. This duration depends on the challenges and needs of individual entrepreneurs.

Multiple program mentors reported that an additional 10 to 15-minutes¹⁶ is required to address psychological challenges (state of mind, emotional distress, etc.) for those who did not receive the empowerment and leadership training, compared to those who did. The Tanzanian WIRE program manager commented that, “Mentoring [the] untrained entrepreneur is quite different from mentoring the trained one. [We need a] little bit more time to pass the untrained entrepreneur through the basics of some key, important topics.”

Retention Impacts

Retention is a significant indicator of success for the WIRE project. After 3-months, E4I’s project staff report zero drop-off of participants in the program. Because there is no drop-off among those trained or untrained, we are unable to determine any impact of the training on retention after 3-months.

Level 5: ROI Result

Critically, E4I is a non-profit organization that does not realize any direct financial benefit or cost from changes in WIRE program participants’ sales volume or product mix. Therefore, while sales and profits are included in this study, it is important to note that increased sales did not provide a direct return for E4I. Rather, the primary monetary return to E4I was found through the reduced mentoring time required for trained participants.

We also included an analysis of sales performance during the same time period because of its relevance to organizations in the cookstove sector who do realize financial benefit for increased sales and may be considering investment in an Empowered Entrepreneur training in East Africa.

ROI is calculated as the percentage return on program costs incurred:

$$ROI (\%) = ((\text{Program Benefit} - \text{Program Cost}) / \text{Program Cost}) \times 100\%$$

The ROI for E4I’s training activities in their WIRE program is calculated at 115.90%:

$$ROI (\%) = ((10,142 - 8,750) / 8,750) \times 100\% = \mathbf{115.90\%}$$

Program Benefits

The Program Benefit is calculated as \$ 10,141.90. This benefit was calculated based upon the time saved during mentoring sessions for those entrepreneurs who had received the training compared to those who did not. Mentorship time savings were identified at the beginning of the study-period as one of the areas with the greatest potential financial benefit to the training program for E4I.

¹⁶ When reconfirming the 10-15 minute additional estimate, the WIRE program manager reiterated the fact that it was just an estimate, and that it “might also be longer than that”.

In calculating the monetary impact of the reduced mentorship time, we utilize a 12-minute estimation for additional time required at each mentoring session for an untrained entrepreneur, based on interviews with E4I staff members. We analyzed the mentor visitation schedules to identify number of mentor sessions and examined mentor salary costs to E4I (daily full cost per mentor provided by E4I is \$66).¹⁷

The estimated total mentorship minutes for the duration of the WIRE program, if all participants are trained, is 307,300 minutes (6,146 sessions [fig. 9] x 50 minutes per session). If no participants are trained, the estimation for total mentorship minutes is 381,052 (6,146 sessions x 62 minutes per session). Based on the daily full cost of E4I mentors, the total cost forecast if all participants are trained is \$42,254.75, versus \$52,395.65 if no participants are trained. Therefore, the program benefit from mentorship time savings is calculated as \$ 10,141.90 (see fig. 10).

Figure 9. Mentoring Sessions Visitation Forecast

	# Sessions
Actual mentoring sessions conducted between February and June, 2017	938
Forecasted mentoring sessions between July and December, 2017	1,302
Forecasted mentoring sessions through September, 2018 ¹⁸	3,906
Total Forecasted Mentorship sessions during WIRE Program	6,146

Figure 10. Mentorship Cost Savings (Benefit) Calculation: Mentoring Visitation Forecast

	50 min. sessions	62 min. sessions
1. Estimated Total Mentorship Minutes	307,300.00	381,052.00
2. Estimated Total Mentorship Hours (60 mins per hour)	5,121.67	6,350.87
3. Estimated Total Mentorship Days (8 hrs per day)	640.21	793.86
4. Cost per Mentor per Day	\$ 66.00	\$ 66.00
5. Total Cost Forecast if ALL Trained	\$ 42,254.75	
6. Total Cost Forecast if NONE Trained		\$ 52,395.65
Forecasted cost savings from training ALL (Total Cost forecast if none trained – total forecast if all trained)	\$ 10,141.90	
Total number of Entrepreneurs (Mentees) in program	217	
Cost savings per Mentee (over 18 month mentoring period) (Forecasted cost savings from training all / total number of entrepreneurs (mentees) in program	\$ 46.73	

While it is not factored into the program benefit calculation, it’s worth noting that mentees’ business activities can also be negatively impacted due to increased mentoring time, as sessions are typically conducted during business hours at their business location.

Program Costs

The WIRE program costs relating specifically to the formal training program, in which the EETH was utilized, totaled \$8,750 (see fig. 11). The program costs were provided and detailed

¹⁷ Full cost estimate includes employee benefits and combined overhead expenses.

¹⁸ Based on E4I plans, we assume 2-mentoring sessions per month up through the end of September, 2018, which is the final month of mentorship, as indicated in the WIRE program (appendix 1). From October, 2017, onward, E4I forecasts 2 visits per month for every entrepreneur.

by E4I from its budgeted form at the start of the study period, and confirmed after all Tanzanian training programs were completed in August. Only 170 of 217 entrepreneurs were actually trained, but the budget was planned for all 217. The costs are therefore assumed for all 217, noting that the costs are marginal for the additional participants (overall costs include fixed costs such as venue and trainer’s time).

Figure 11. Training program cost

Cost per Training	\$ 1,750.00
# of Trainings for TZ Entrepreneurs	5
Training Program Cost for 5 Trainings	\$ 8,750.00

ROI + Sales Analysis

Many organizations involved in renewable energy value chains receive a profit for sales of energy technologies. Therefore, changes in sales volume as a result of training and mentorship would be factored into the program benefit calculation in a similar study. So, while E4I’s ROI calculation is not impacted by changes in sales, sales remain a relevant ROI metric to other organizations in the clean energy value chain that are considering a similar training and mentorship investment to support entrepreneurs and sales agents. Furthermore, while sales don’t contribute to E4I’s bottom line, they may translate it to a financial benefit eventually (e.g., through additional donor funding).

Overall a significant 10.3% increase in sales was found for trained entrepreneurs on average for April through July 2017, up from the average sales in January through March 2017. There was no significant increase in sales for the untrained entrepreneurs.

Conclusion

The ROI for integrating the Empowered Entrepreneur Training into the E4I WIRE program is 115.9%. This ROI is calculated through monetizing the reduced amount of mentorship time required for trained women entrepreneurs in the WIRE program. The ROI calculation does not include the 10.3% increase in sales that was found because E4I does not make a profit off of increased sales. However, this increase in sales is critical to consider and important for other organizations considering implementing the Empowered Entrepreneur Training, particularly if they make a profit from increased sales by entrepreneurs or sales agents. While the ultimate business impact of the Empowered Entrepreneur Training activities will not be fully realized, or understood until the end of the WIRE project in 2018, there is strong evidence that the EETP has had a positive and material effect on the operations and business of E4I as it relates to their execution of the WIRE project.

Beyond the changes in business impacts, the integration of the Empowered Entrepreneur Training resulted in largely positive changes in sought after skills, attitudes and behaviors. These include, but are not limited to, a 25% increase in the number of participants being confident in problem solving and a 44% increase in the number of participants reporting high or very high self esteem. Furthermore, there is a 56% increase in the number of participants that report being

strongly motivated in work and a 33% increase in the number of participants who feel that gender is not limiting their success.

Ultimately our analysis has revealed that implementation of the Empowered Entrepreneur Training has a positive ROI for E4I and increases the skills, attitudes and behaviors that the organization seeks to impact through the WIRE program.

APPENDIX 1: Primary activities, deliverables and milestones of the WIRE program

Primary Activities, Deliverables, Milestones	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
(1) DESIGN								
Develop a Project Implementation Plan on the training and mentorship program	X							
Develop a profile of potential beneficiaries	X							
Conduct baseline skills gap assessment	X							
Recruit 400 promising women entrepreneurs to engage in clean-cooking and solar lighting products distribution	X	X						
Conduct desk research of existing contextual literature on factors influencing consumer use and purchase of RE products	X							
(2) Training and Mentorship								
Develop a three-day training program and mentorship program		X						
Conduct three-day business and product training for 400 women entrepreneurs		X						
Provide mentorship support to 400 women entrepreneurs			X	X	X	X	X	
Facilitate the participation of star entrepreneurs and staff in wPOWER exchanges and workshops			X	X	X	X	X	
(3) Market Development								
Engage with MFIs to finance women’s entrepreneurs		X	X	X	X	X	X	
Engage quality verified products distributors		X	X	X	X	X	X	
Facilitate business-to-business linkages		X	X	X	X	X	X	
Facilitate the development of operational stock management and after-sales processes		X	X	X	X	X	X	
Conduct peer learning events and marketing campaigns (product demonstrations)		X	X	X	X	X	X	
Conduct networking events with producers and other enterprises involved in the clean cooking and solar lighting value chain		X	X	X	X	X	X	
(4) Monitoring, Evaluation and Reporting								
Conduct feedback surveys to establish the effectiveness of the program			X		X		X	
Produce a Progress Report assessing the overall project impact		X		X		X		X
Produce a Financial Report	X	X	X	X	X	X	X	X
Review the program and produce a Project Completion Report								X

ANNEX 1: Research Tools Utilized for the ROI Study

1.1 Business Metric Summary

Empowered Entrepreneur Training – Business Metrics

Energy 4 Impact – Tanzania

TRAINING BEGINNING MARCH 20, 2017

	BUSINESS METRIC	ABOUT	DATA DETAILS TO COLLECT
HARD BUSINESS METRICS			
1	Sales (PRE / POST)	Provide weekly or monthly sales numbers per entrepreneur broken down according to product type	<ul style="list-style-type: none"> • per Entrepreneur • per Product Category (ex. Stove model 1, model 2...; solar lantern model 1, model 2...; fuel type 1... etc.) • per Week • In what region was the sale made? (if available) • Was the sale made in cash or on an installment plan? (if available)
2	Retention rates (PRE / POST)	Provide retention rates of previous entrepreneurs and at 3-months post training retention rates of entrepreneurs in the training program	<ul style="list-style-type: none"> • per Entrepreneur • per Month • What is their status within the Energy 4 Impact program (active, inactive, other change)?
4	Mentorship time	Provide hours per week or month of mentorship required from E4I staff	<ul style="list-style-type: none"> • per E4I Staff assigned to this group of entrepreneurs • per Week • How many hours were dedicated to supporting this group of entrepreneurs
5	Employees in Business	Provide information on the number of employees involved in each entrepreneurs’ business.	<ul style="list-style-type: none"> • per Entrepreneur • # of employees • Gender of employees
6	Regions of operation (PRE / POST)	Provide information on where each entrepreneur operates / # of communities or regions, whatever parameter is most appropriate	<ul style="list-style-type: none"> • per Entrepreneur • per Week • What region(s) does the Entrepreneur sell in?
SOFT BUSINESS METRICS			
7	Product Mix / Changes	Provide information on what types of products the entrepreneurs are selling (including additions or changes to their business model and offerings)	<ul style="list-style-type: none"> • Per Entrepreneur • Per Month • What products are being offered (or discontinued)
8	Time dedicated to business activities	Provide hours per week dedicated to developing or improving business	<ul style="list-style-type: none"> • Per Entrepreneur

		operations. This would include time dedicated to your mentorship program, as well as any related assignments or independent activities to address a business challenge or try to improve their services, products, or any other operations <i>(To be collected in whatever manner EAI finds most relevant and convenient for program staff)</i>	<ul style="list-style-type: none"> • Per Week (even if collected monthly, ask for time spent per week – easier to estimate)
9	Investment trends from entrepreneurs: do they take out loans to invest in their business or use their personal cash? (PRE / POST)	Provide information on whether they use personal funds or loans to make investments in their business	<ul style="list-style-type: none"> • per Entrepreneur • per Week (or month if weekly data not easily available) • What % of inventory purchases or other investments in their business were made with a loan (with borrowed money, instead of their own money)?
ADDITIONAL METRICS TO CONSIDER IF DATA IS AVAILABLE			
10	Customer purchasing trends (PRE / POST)	Provide information on if customers tend to purchase completely on the spot (cash and carry), or use installments?	<ul style="list-style-type: none"> • per Entrepreneur • per Sale • per Week (or month if weekly data not easily available) • was the sale made in cash or installment?
11	Entrepreneur referrals (PRE / POST)	Provide information on whether each entrepreneur refers other entrepreneurs	<ul style="list-style-type: none"> • per Entrepreneur • per Week • Did the Entrepreneur refer a new entrepreneur to the program? If so, how many did they refer? (0, 1, 2, ...) • For each referred entrepreneur, if they begin the program what is there Entrepreneur ID?

1.2 Training Pre-Survey

Empowered Entrepreneur Training – Pre-Survey Energy 4 Impact - Tanzania

Name of Entrepreneur: _____

Entrepreneur ID: _____

Indicate how much you agree with the following statements on a scale of 1 to 5.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5
2	The demands of everyday life often get me down.	1	2	3	4	5
3	I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5
4	I do this work because I get much pleasure from learning new things.	1	2	3	4	5
5	I have overcome setbacks to conquer an important challenge.	1	2	3	4	5
6	New ideas and projects sometimes distract me from previous ones.	1	2	3	4	5
7	I do this work for the satisfaction I experience from taking on interesting challenges.	1	2	3	4	5
8	My interests change from year to year.	1	2	3	4	5
9	Setbacks don't discourage me.	1	2	3	4	5
10	I have been obsessed with a certain idea or project for a short time but later lost interest.	1	2	3	4	5
11	I am a hard worker.	1	2	3	4	5
12	I do this work for the satisfaction I experience when I am successful at doing difficult tasks.	1	2	3	4	5
13	I often set a goal but later choose to pursue a different one.	1	2	3	4	5
14	I have difficulty maintaining my focus on projects that take more than a few months to complete.	1	2	3	4	5
15	I finish whatever I begin.	1	2	3	4	5
16	I have achieved a goal that took years of work.	1	2	3	4	5
17	I become interested in new pursuits every few months.	1	2	3	4	5
18	I am diligent.	1	2	3	4	5
19	On the whole, I am satisfied with myself.	1	2	3	4	5
20	I feel that I have a number of good qualities.	1	2	3	4	5

21	I wish I could have more respect for myself.	1	2	3	4	5
22	I take a positive attitude toward myself.	1	2	3	4	5
23	I regularly keep accurate records of my business activities.	1	2	3	4	5
24	I am confident to resolve a problem I face in my work.	1	2	3	4	5
25	I think my gender limits my potential as a business person.	1	2	3	4	5
26	I often wonder how things can be improved.	1	2	3	4	5
27	I often spend time to develop new ideas or solutions to my business problems.	1	2	3	4	5
28	When I am feeling negative emotions (sadness or anger), I make sure not to express them	1	2	3	4	5
29	When I want to feel more positive emotion, I change the way I’m thinking about the situation.	1	2	3	4	5
30	I keep my emotions to myself.	1	2	3	4	5
31	When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	1	2	3	4	5
32	I feel that I have the final say in decisions that affect my business.	1	2	3	4	5
33	Who usually decides how the money you earn will be used?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
34	Who makes the final decision on large purchases?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
35	Do you have to ask for permission to buy something for yourself?	<input type="checkbox"/> Yes, all the time <input type="checkbox"/> Yes, some of the time <input type="checkbox"/> No <input type="checkbox"/> Other _____				
36	What statement best describes you:	1- I am un-interested in learning from other entrepreneurs. 2- I am interested in learning from other entrepreneurs but do not do so currently. 3- I am interested in learning from other entrepreneurs and do so sometimes. 4- I am interested in learning from other entrepreneurs and do so consistently.				

37	Which of the following recordkeeping activities will allow you to best track the performance of your BUSINESS activities over time:	<ol style="list-style-type: none"> 1- Maintaining separate records for business activities and personal (family) activities so that you can track and improve your business and personal finances. 2- Maintaining combined accounting records of business and personal (family) purchases and receipts so that you have it all in one place. 3- Maintaining separate records for business activities and personal (family) activities so you can more easily spend and track your money.
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Thank you!

Guide:

- *Questions 1-3: Environmental mastery scale. Gets at: confidence & resiliency*
- *Questions 4, 7, 12: Work motivation scale. Gets at motivation*
- *Questions 5-6, 8-11, 13-18: Grit scale. Gets at resiliency / initiative.*
- *Questions 19-22: Self-esteem scale. Gets at self-esteem, positive attitude.*
- *Question 23: Developed by EETP team. Gets at Financial knowledge*
- *Question 24: From EETP Master Trainer Baseline Survey for Trainees. Gets at problem solving*
- *Question 25: Developed by EETP team. Gets at gender as a limiting factor.*
- *Question 26-27: Adapted from innovative work behavior scale. Gets at innovativeness*
- *Question 28-31: Adapted from Emotional Regulation scale. Gets at emotional management*
- *Question 32-35: Developed by EETP team. Gets at*
- *Decision making abilities*
- *Question 36: Developed by EETP team. Gets at ability / desire to learn from other entrepreneurs*
- *Question 37: A short right / wrong answer to further get at financial knowledge*
- *Measuring elsewhere:*
 - *Initiative to improve business / seize new opportunities (through business metric tracking doc / reports from mentors*
 - *Time spent to go to other trainings / participate in market development activities (through business metric tracking doc / reports from mentors)*
 - *Time spent operating and improving upon existing business (through business metric tracking doc)*

1.3 Training Post-Survey (immediate)

Empowered Entrepreneur Training – Pre-Survey Energy 4 Impact - Tanzania

Name of Entrepreneur: _____

Entrepreneur ID: _____

Please rate the following on a scale of 1 to 5, (1 being strongly disagree and 5 being strongly agree):

A1.	The training was very worth my time.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree
A2.	I learned new things that are relevant and important to the success of my business.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree
A3.	I learned new things that are relevant and important to my personal life.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree
A4.	I would recommend the training to other women like me.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree
A5.	The trainers’ facilitation was clear and effective.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree
A6.	The environment and logistics for the training were appropriate and comfortable.	1- Strongly disagree 2- Disagree 3- Neither agree nor disagree 4- Agree 5- Strongly agree

A7.	Other comments:
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Indicate how much you agree with the following statements on a scale of 1 to 5.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5
2	The demands of everyday life often get me down.	1	2	3	4	5
3	I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5
4	I do this work because I get much pleasure from learning new things.	1	2	3	4	5
5	I have overcome setbacks to conquer an important challenge.	1	2	3	4	5
6	New ideas and projects sometimes distract me from previous ones.	1	2	3	4	5
7	I do this work for the satisfaction I experience from taking on interesting challenges.	1	2	3	4	5
8	My interests change from year to year.	1	2	3	4	5
9	Setbacks don't discourage me.	1	2	3	4	5
10	I have been obsessed with a certain idea or project for a short time but later lost interest.	1	2	3	4	5
11	I am a hard worker.	1	2	3	4	5
12	I do this work for the satisfaction I experience when I am successful at doing difficult tasks.	1	2	3	4	5
13	I often set a goal but later choose to pursue a different one.	1	2	3	4	5
14	I have difficulty maintaining my focus on projects that take more than a few months to complete.	1	2	3	4	5
15	I finish whatever I begin.	1	2	3	4	5
16	I have achieved a goal that took years of work.	1	2	3	4	5
17	I become interested in new pursuits every few months.	1	2	3	4	5
18	I am diligent.	1	2	3	4	5
19	On the whole, I am satisfied with myself.	1	2	3	4	5
20	I feel that I have a number of good qualities.	1	2	3	4	5
21	I wish I could have more respect for myself.	1	2	3	4	5
22	I take a positive attitude toward myself.	1	2	3	4	5
23	I regularly keep accurate records of my business activities.	1	2	3	4	5
24	I am confident to resolve a problem I face in my work.	1	2	3	4	5

25	I think my gender limits my potential as a business person.	1	2	3	4	5
26	I often wonder how things can be improved.	1	2	3	4	5
27	I often spend time to develop new ideas or solutions to my business problems.	1	2	3	4	5
28	When I am feeling negative emotions (sadness or anger), I make sure not to express them	1	2	3	4	5
29	When I want to feel more positive emotion, I change the way I’m thinking about the situation.	1	2	3	4	5
30	I keep my emotions to myself.	1	2	3	4	5
31	When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	1	2	3	4	5
32	I feel that I have the final say in decisions that affect my business.	1	2	3	4	5
33	Who usually decides how the money you earn will be used?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
34	Who makes the final decision on large purchases?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
35	Do you have to ask for permission to buy something for yourself?	<input type="checkbox"/> Yes, all the time <input type="checkbox"/> Yes, some of the time <input type="checkbox"/> No <input type="checkbox"/> Other _____				
36	What statement best describes you:	1- I am un-interested in learning from other entrepreneurs. 2- I am interested in learning from other entrepreneurs but do not do so currently. 3- I am interested in learning from other entrepreneurs and do so sometimes. 4- I am interested in learning from other entrepreneurs and do so consistently.				
37	Which of the following recordkeeping activities will allow you to best track the performance of your BUSINESS activities over time:	1- Maintaining separate records for business activities and personal (family) activities so that you can track and improve your business and personal finances. 2- Maintaining combined accounting records of business and personal (family) purchases and receipts so that you have it all in one place. 3- Maintaining separate records for business activities and personal (family) activities so you can more easily spend and track your money.				

Thank you!

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- *Measuring elsewhere:*
 - *Initiative to improve business / seize new opportunities (through business metric tracking doc / reports from mentors*
 - *Time spent to go to other trainings / participate in market development activities (through business metric tracking doc / reports from mentors)*
 - *Time spent operating and improving upon existing business (through business metric tracking doc)*

1.4 Training Post-Survey (3-months post)

Empowered Entrepreneur Training – 3-Month Post-Survey Energy 4 Impact - Tanzania

Name of Entrepreneur: _____

Entrepreneur ID: _____

Indicate how much you agree with the following statements on a scale of 1 to 5.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5
2	The demands of everyday life often get me down.	1	2	3	4	5
3	I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5
4	I do this work because I get much pleasure from learning new things.	1	2	3	4	5
5	I have overcome setbacks to conquer an important challenge.	1	2	3	4	5
6	New ideas and projects sometimes distract me from previous ones.	1	2	3	4	5
7	I do this work for the satisfaction I experience from taking on interesting challenges.	1	2	3	4	5
8	My interests change from year to year.	1	2	3	4	5
9	Setbacks don't discourage me.	1	2	3	4	5
10	I have been obsessed with a certain idea or project for a short time but later lost interest.	1	2	3	4	5
11	I am a hard worker.	1	2	3	4	5
12	I do this work for the satisfaction I experience when I am successful at doing difficult tasks.	1	2	3	4	5
13	I often set a goal but later choose to pursue a different one.	1	2	3	4	5
14	I have difficulty maintaining my focus on projects that take more than a few months to complete.	1	2	3	4	5
15	I finish whatever I begin.	1	2	3	4	5
16	I have achieved a goal that took years of work.	1	2	3	4	5
17	I become interested in new pursuits every few months.	1	2	3	4	5
18	I am diligent.	1	2	3	4	5
19	On the whole, I am satisfied with myself.	1	2	3	4	5
20	I feel that I have a number of good qualities.	1	2	3	4	5

21	I wish I could have more respect for myself.	1	2	3	4	5
22	I take a positive attitude toward myself.	1	2	3	4	5
23	I regularly keep accurate records of my business activities.	1	2	3	4	5
24	I am confident to resolve a problem I face in my work.	1	2	3	4	5
25	I think my gender limits my potential as a business person.	1	2	3	4	5
26	I often wonder how things can be improved.	1	2	3	4	5
27	I often spend time to develop new ideas or solutions to my business problems.	1	2	3	4	5
28	When I am feeling negative emotions (sadness or anger), I make sure not to express them	1	2	3	4	5
29	When I want to feel more positive emotion, I change the way I’m thinking about the situation.	1	2	3	4	5
30	I keep my emotions to myself.	1	2	3	4	5
31	When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	1	2	3	4	5
32	I feel that I have the final say in decisions that affect my business.	1	2	3	4	5
33	Who usually decides how the money you earn will be used?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
34	Who makes the final decision on large purchases?	<input type="checkbox"/> Respondent (self) <input type="checkbox"/> Spouse/partner <input type="checkbox"/> Joint <input type="checkbox"/> Either <input type="checkbox"/> Your father <input type="checkbox"/> Your mother <input type="checkbox"/> Spouse/partner’s father <input type="checkbox"/> Spouse/partner’s mother <input type="checkbox"/> Other _____				
35	Do you have to ask for permission to buy something for yourself?	<input type="checkbox"/> Yes, all the time <input type="checkbox"/> Yes, some of the time <input type="checkbox"/> No <input type="checkbox"/> Other _____				
36	What statement best describes you:	1- I am un-interested in learning from other entrepreneurs. 2- I am interested in learning from other entrepreneurs but do not do so currently. 3- I am interested in learning from other entrepreneurs and do so sometimes. 4- I am interested in learning from other entrepreneurs and do so consistently.				

37	Which of the following recordkeeping activities will allow you to best track the performance of your BUSINESS activities over time:	<ol style="list-style-type: none"> 1- Maintaining separate records for business activities and personal (family) activities so that you can track and improve your business and personal finances. 2- Maintaining combined accounting records of business and personal (family) purchases and receipts so that you have it all in one place. 3- Maintaining separate records for business activities and personal (family) activities so you can more easily spend and track your money.
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Thank you!

Guide:

- *Questions 1-3: Environmental mastery scale. Gets at: confidence & resiliency*
- *Questions 4, 7, 12: Work motivation scale. Gets at motivation*
- *Questions 5-6, 8-11, 13-18: Grit scale. Gets at resiliency / initiative.*
- *Questions 19-22: Self-esteem scale. Gets at self-esteem, positive attitude.*
- *Question 23: Developed by EETP team. Gets at Financial knowledge*
- *Question 24: From EETP Master Trainer Baseline Survey for Trainees. Gets at problem solving*
- *Question 25: Developed by EETP team. Gets at gender as a limiting factor.*
- *Question 26-27: Adapted from innovative work behavior scale. Gets at innovativeness*
- *Question 28-31: Adapted from Emotional Regulation scale. Gets at emotional management*
- *Question 32-35: Developed by EETP team. Gets at*
- *Decision making abilities*
- *Question 36: Developed by EETP team. Gets at ability / desire to learn from other entrepreneurs*
- *Question 37: A short right / wrong answer to further get at financial knowledge*
- *Measuring elsewhere:*
 - *Initiative to improve business / seize new opportunities (through business metric tracking doc / reports from mentors*
 - *Time spent to go to other trainings / participate in market development activities (through business metric tracking doc / reports from mentors)*
 - *Time spent operating and improving upon existing business (through business metric tracking doc)*