

# **Comparing the Impact of Business-Plan & Business-Canvas Based Training on Subsistence Entrepreneurs' Hope**

## **Abstract**

Entrepreneurial training is widely used in the emerging economies by public and private organizations as a tool for poverty alleviation. The most popular learning tools are the business plan and the business canvas. This study seeks two interrelated objectives: 1) Conceptualize an unexplored dimension of entrepreneurial training: their ability to improve the “emotional equipment” of aspiring entrepreneurs, with an emphasis on hope. 2) Compare the effects of the business plan and the business canvas training on participants' hope levels and perceived goals-attainment, A two-year quantitative longitudinal study was developed to establish the short and long run effects of receiving entrepreneurial training, and between the two types of training, over participants' levels of hope and perceived goal attainment. The study was developed in the context of a NGO training program developed in three Central American countries that targeted subsistence entrepreneurs. Results show that entrepreneurial programs significantly enhances participants hope levels both in the short and long term, and business goal attainment perceptions. In addition, both business plan and business canvas learning tools have different effects generating hope among subsistence entrepreneurs' perceive goal attainments. The article concludes with a discussion of these results implications for entrepreneurial learning theory and teaching practice.

## INTRODUCTION

Entrepreneurial activity has been suggested as a pathway out of poverty (Prahalad 2005). Universities, public agencies, and mission-driven organizations have attempted to support these self-driven efforts by the poor, building the human capital of micro-entrepreneurs in developing countries through business training (Karlan and Valdivia 2011). Despite the positive outcomes of entrepreneurial training (DeTienne and Chandler 2004; Galloway and Brown 2002; Martin et al. 2013), there is a call for further research on the links between entrepreneurial training, and entrepreneurs' capability improvements (Sánchez 2013). This paper aims to shed light on the relationship between both concepts.

Goals and hope have been identified as fundamental interrelated variables for economic development. Individuals' goals reflect a conceptual bridge between socioeconomic structures ("what society offers") and individuals ("what a person aspires for her/his own life"). Vigh (2009) uses the social navigation metaphor to articulate how people make sense of uncertain circumstances, disentangle them, and use goals to plot their escape towards better positions. However, goals do not materialize in a vacuum. Individuals need motivation to achieve their desired goals; hope emerges then as a motivator for individuals pursuing a sought after outcome (McGeer 2004). Hope has been identified as a fundamental variable motivating individuals to create change in their lives via innovation, which is key for entrepreneurial development (J. Rosa et al. 2012). As highlighted by Appadurai (2004), individuals upward social mobility is influenced by their "capacity to aspire" and their perception of available means at their disposal to achieve these desired ends.

This study aims to explore the extent to which entrepreneurial training programs may trigger hope for subsistence entrepreneurs, so that they can achieve their business-related goals. Moreover, we are interested in establishing the specific effects of two of the most widely used techniques for entrepreneurial training (i.e. business plan and business canvas) on the hope levels that individuals will hold about their chances of attaining their business goals. To this end, we carry out a longitudinal study to examine the short and long time effects of receiving a particular type of entrepreneurial training on individuals' levels of hope and perceptions of business goal attainment.

The paper is structured as follows. We start by reviewing the literature on the link between hope and entrepreneurship, and we discuss the most popular approaches to

entrepreneurial training. We then describe the longitudinal study, including its context and methodology, as well as the multivariate regression analysis. Finally, results and its implications for entrepreneurship teaching and learning are presented.

## LITERATURE REVIEW

### Hope and Entrepreneurship

Traditionally, the entrepreneurship literature (Carter et al. 2003; Davidsson and Honig 2003) has analyzed the capacity of entrepreneurs to launch new businesses in terms of their access to (a) **financial capital**, which refers to entrepreneurs' monetary resources to "buffer against random shocks and allow the pursuit of more capital-intensive strategies which are better protected from imitation" (Cooper et al. 1994); and (b) **social capital**, which refers to entrepreneurs' capacity "to command scarce resources by virtue of their membership to networks or broader social structures" (Portes 1998). Accordingly, entrepreneurial training programs have traditionally sought to increase participants' access to both, and to help them to achieve their goals. There is a robust literature that has looked into the effectiveness of entrepreneurial training programs on trainees (Elmuti et al. 2012; Galloway et al. 2015; Galloway and Brown 2002; Martin et al. 2013), which by and large report positive results. Considering that our study aims to investigate the general effect of entrepreneurial training on participants' goal attainment, this sets the stage for our first hypothesis, which reads as follows.

- **Hypothesis 1:** Entrepreneurial training positively influences participants' goal attainment perceptions in the a) short-term, and b) long-term.

Recently, however, psychologists found that psychological elements can also be a critically important element for entrepreneurship. The entrepreneurs' emotional forecast about their business success is a critical motivation for pursuing that goal (Zampetakis et al. 2015). Luthans et al. (2007) coined the term **psychological capital** (or "Psychap," for short) to encompass the different psychological variables that influence entrepreneurs' ability to face the emotional challenges of the business venturing. Psychap is composed of (1) confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when

beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans, et al., 2007, p. 3).

Different studies have analyzed the effect of the Psycap variables on entrepreneurs’ business venturing performance (Jensen and Luthans 2006; Fred Luthans et al. 2004). Among these variables, hope is the one with the most predictive power to explain how people facing economic hardship can score and thrive (Magaletta and Oliver 1999). To these authors, hope has a focused nature that allows people to link their sense of self with particular goals, including those that are business related (Luthans & Jensen, 2002).

CK Snyder’s Hope Theory established the way in which hope becomes a mechanism that contributes to individuals’ striving for positive goals. According to this theory, there is a virtuous reciprocal interaction between hope and goal attainment: a person hope has a positive impact towards goal accomplishment, and if progress is made towards a specific goal, her hope towards the accomplishment of such goal increases as well (Snyder 2002). Such goal-specific hope is a bi-dimensional construct, which includes individuals’ perceived capability to derive pathways to desired goals (“way power”), and the capacity to motivate oneself via agency thinking to use those pathways (“will power”) (Snyder 2002, p. 249). These two dimensions were further refined and developed as a) a pathway dimension, which provides individuals alternative adaptive contingency plans to achieve such goal, and b) an agency dimension, which gives individuals determination and motivation to accomplish a goal.

According to Hope Theory, the quality of both the established goals and the mechanisms through which goals are accomplished can impact hope levels (Snyder 1993). In this sense, entrepreneurial training programs become an opportunity for promoting not only entrepreneurs’ financial and social capital, but also the psychological one. Studies have analyzed how entrepreneurial programs promote different knowledge and skills (for a review, see Henry et al. 2005a, 2005b), but no study has looked into their emotional effects on entrepreneurs. In particular, there has not been an analysis on how those programs may enhance individuals’ hope for business goals attainment, empowering them to obtain their goals (agency) and envisioning alternative routes when faced with barriers (pathways). In that sense, entrepreneurial strengths-based training programs could provide individuals with not only skills, but also with the “emotional equipment” that may motivate individuals to enter into a socioeconomic upward spiral. This particular effect of entrepreneurial training over hope levels is the basis for the following two hypotheses.

- **Hypothesis 2:** Entrepreneurial training enhances participants' levels of hope pathways in the a) short-term, and b) long-term.
- **Hypothesis 3:** Entrepreneurial training enhances participants' levels of hope agency in the a) short term, and b) long-term.

The temporal aspect of hope was further analyzed by Feldman et al. (2009), who demonstrated that hope's agency and pathway have a different temporal influence over goal accomplishment perceptions. The authors found that in the short-term empowering an individual to achieve a particular goal (hope agency) has a higher influence on their perception of goal attainment than the generation of multiple routes to the goal (hope pathways). However, they suggest that the ability to generate multiple alternatives ways of reaching goals (hope pathways), especially when original ones are blocked, might also be useful in the long term. The goal-specific hope effect over goal attainment has been analyzed in various domains, including academic and athletic achievement (Curry et al. 1997), physical and mental health (Kwon 2002), as well as other desirable positive life and well-being outcomes (Scioli et al. 1997). In the management literature, hope has been identified as an important element for leadership (Peterson and Luthans 2003), workplace attitudes and employee retention (Peterson and Luthans 2003; Youssef and Luthans 2007), and organizational profitability (Adams III et al. 2002; Fred Luthans et al. 2005). In the case of entrepreneurship, hope has been linked with satisfaction with business ownership (Jensen and Luthans 2002), and with business creativity enhancement (Rosa, et al., 2012). Despite the relevance of the previous studies, questions about the effect of hope as a mechanism to enhance entrepreneurs' goal attainment remain unanswered; such a gap has prompted our next two hypotheses:

- **Hypothesis 4:** Participants' levels of hope pathways positively influences their goal attainment perceptions in the long-term.
- **Hypothesis 5:** Participants' levels of hope agency positively influences their goal attainment perceptions in the short-term.

### **Approaches to entrepreneurial training**

Entrepreneurial education is diverse. On this regard, Jamieson (1984) suggested a classification that includes three types of programs: education about enterprise, education for enterprise, and education in enterprise. This paper focuses on the second category, education for enterprise, which focuses on teaching the practical skills for business startup via the preparation

of a business plan template. In this type of program, the quality of these plans becomes then the evaluation output for measuring the program's goal accomplishment (Gibb 1997).

### ***The Business Plan***

The business plan has been a cornerstone of entrepreneurship training, both in academia and development organizations. Brinckmann et al. (2010) report that universities around the globe teach students interested in entrepreneurship how to prepare a business plan, that 80% of U.S. most prominent business schools train students in business plan preparation, and that leading entrepreneurship professors claim that developing business plans is the most important feature in their courses. Moreover, multilateral organizations such as the Inter-American Development Bank sponsors business plan competitions, and subsidize "guided preparation" programs (Chrisman et al. 2005), whose main objective is the development of business plans. All of this is based on the premise that such tools are an instrument of socio-economic development and help to create "Opportunities for the Majority" (IDB 2008).

The centrality of the business plan in entrepreneurial training is based on the benefits associated with planning. Although some authors may question whether entrepreneurs should plan or simply "storm the castle" (Brinckmann et al. 2010), most would accept that startups' chances of success increase with preparation. A copious literature has looked into the impact of formal business planning on small firms. These studies evaluate the extent to which the existence of deliberate planning efforts (Bracker and Pearson 1986; W. D. Jones 1982; Schwenk and Shrader 1993), its sophistication (Rue and Ibrahim 1998), or the existence of external guidance throughout the planning process (Chrisman et al. 2005) have had an impact on organizational performance and success rate. The business plan found its way into entrepreneurial education (and into the entrepreneurship literature in general) from the strategic planning literature, which was conceived for large organizations.

### ***The Business Canvas***

During the startup process, entrepreneurs need to define the way in which they will create value in the marketplace, setting boundaries to company activities and defining the good or service to be offered. These elements are usually defined in the venture's business model. Although the business model literature suffers from "lack of definitional clarity" (Zott et al. 2011, p. 1023), a widely-shared understanding of the concept is that "a business model describes the rationale of how an organization creates, delivers, and captures value" (Osterwalder and

Pigneur 2010, p. 14). While there are various popular emergent tools around business model design & innovation (Trimi and Berbegal-Mirabent 2012), here we will focus on the business canvas as defined by Osterwalder and Pigneur (2005, 2010), which has become the most widely used, both in the worlds of practice and academia.

According to Trimi & Berbegal-Mirabent (2012), the interest in business modeling—the specific processes by which entrepreneurs give shape to their actual business models—among scholars only emerged after 1998. Since then, the interest in the tools and practices associated with the topic has grown exponentially. This incipient literature evolved along two strands. The first has looked into the link between business model design and performance. Zott & Amit (2007) considered the performance implications of choosing alternative “efficiency-centered” and “novelty-centered” designs. The second research strand has focused on the link between business model design and innovation. According to Zott et al., it has become apparent that “the business model represents a new subject of innovation, which complements the traditional subjects of process, production and organizational innovation” (2011, p. 1032).

### **The business plan and the business canvas as learning devices**

Primarily, both the business plan and the business canvas are tangible document templates. The business plan can be defined as “a written document that describes the current state and the presupposed future of an organization (...) As frequently taught in business schools, business plans consist of 20 to 40-plus page documents that outline a proposed new product or service; the organizational and financial strategies to be employed; marketing, production, and management activities; and an examination of the competitive and environmental constraints and resources” (Honig 2004, p. 259).

The business canvas, on the other hand, is a visual chart with blocks that describe a company's value proposition, infrastructure, customers and finance (Osterwalder and Pigneur 2010). The canvas is composed of two halves. The right half is the model's “frontstage”: the business as seen from the customer perspective. On a theater play, we could imagine actors and singers performing in front a crowd. The canvas' left half represents the business model's “backstage”: the assets and activities that need to be in place for the “magic” to happen. In the same metaphor, we could imagine the screenwriter, the director, the choreographer, and the lighting console operator playing their roles, invisible to the public eye. While the right-hand side of the canvas deals with effectiveness (does the value proposition really solve the customer's need? Does it generate willingness to pay?), the left-hand side deals with efficiency

(how much does it cost to deliver the solution? How could we bring costs to a bare minimum without compromising the solution's effectiveness?).

At the same time, both are more than document templates, and serve as learning devices. Each has assumptions about what “really” matters, and directs our attention to certain activities and priorities (disregarding others), in pursuit of expected benefits. On the one hand, the business plan is seen as useful to reduce guesswork and guide the analysis that will assure alignment between the organization and the environment (Armstrong 1982). As Jones et al. point out, developing a business plan “must therefore be deemed a learning activity” (2013, p. 493). Proponents of the business canvas, on the other hand, argue that the planning and analysis upon which the business plan stands, is close to futile. “A business plan is essentially a research exercise written in isolation at a desk before an entrepreneur has even begun to build a product. The assumption is that it's possible to figure out most of the unknowns of a business in advance... [However] business plans rarely survive first contact with customers (...) These plans are generally fiction, and dreaming them up is almost always a waste of time” (Blank 2013a, p. 67). Advocates of the business canvas place their emphasis not on forecasting or analysis, but rather on ongoing experimentation and learning.

These arguments given in support of business plan and business canvas, reflect implicit assumptions about the way entrepreneurs make decisions. The traditional causation school of entrepreneurship assumes goal-oriented behavior, based on planning, where the entrepreneur looks for areas in which demand for a given product exceeds supply (Casson 2003; Khilstrom and Laffont 1979). On the other hand, the so-called effectuation school considers that goal-oriented behavior makes little sense in the absence of firms or industries: “How do we make the pricing decision when the firm does not yet exist (i.e., no revenue functions or cost functions are given) or, even more interesting, when the market for the product/service does not yet exist (i.e., there is no demand function)?” (Sarasvathy 2001, p. 244).

While the traditional approach (“causation”) focuses on selecting means to create the desired effects, the “effectuation” approach takes means as given and focuses on effects that can be created within the constraints of available means (Sarasvathy 2001). This difference in emphasis determines different priorities. Causation seeks to predict aspects of the future, in order to control it. This is achieved through sound planning. Effectuation, on the other hand, focuses on identifying controllable aspects of a future that is deemed unpredictable. This is achieved

through learning and experimentation --thus making planning almost irrelevant (J Mullins 2006; John Mullins and Komisar 2010; Sarasvathy 2001).

Despite the widespread use of the business plan to date, since the early 2000s an emerging literature within the field of entrepreneurial learning began to challenge its theoretical basis and usefulness as a learning tool (Bridge and Hegarty 2013; Daxhelet and Witmeur 2011). As Honig explains, “neither the teaching of business plans, nor the plans themselves, are sufficiently justified on the basis of theoretical or empirical literature” (Honig 2004, p. 258). The business plan came to be criticized because it lacked the flexibility needed in the inherent uncertainty of new venture creation (Bridge and Hegarty 2013; Watson et al. 2014). Moreover, under uncertainty, planning may actually constrain the ability of organizations to adapt (Honig 2004). In short, a tectonic movement displaced causation from center stage to the periphery of entrepreneurial training, in favor of effectuation. Jones et al. described the process as follow: “the wonder of effectual logic (...) has descended upon the domain of entrepreneurship [education] to seemingly endless effect” (2013, p. 493).

The debate has wider reverberations, and echoes the positions of the planning and learning schools of strategic management, respectively. The former argues that formal planning enables the definition of long-term goals, the selection of alternatives, and the implementation of action plans (Andrews 1971; Ansoff 1965; Armstrong 1982; Porter 1985), reducing bias and opening up new avenues of action (Dean Jr. and Sharfman 1996; Delmar and Shane 2003). On the other hand, the learning school advocates an adaptive approach to strategy development (Mintzberg 1990, 1991, 1994; Mintzberg and Lampel 1999; Mintzberg and Waters 1985). Effective strategies do not stem from good planning, it is claimed, but from the capacity to adapt effectively to the environment, and to learn from the process (Hough and White 2003). The previous arguments set the stage for the following hypotheses.

- **Hypothesis 6:** Entrepreneurial training based on the business plan will enhance participants’ goal attainment perceptions over entrepreneurial training based on business canvas in the short-term.
- **Hypothesis 7:** Entrepreneurial training based on the business canvas will enhance participants’ goal attainment perceptions over entrepreneurial training based on business planning in the long-term.

## **Complements or substitutes?**

In their original formulations, there was no direct opposition between the business plan and the business canvas; rather, the latter was considered a stepping stone towards the implementation of the former (Osterwalder and Pigneur 2005). However, overtime that view evolved and changed. For example, Osterwalder –widely considered the “father” of the business canvas-- describes both as substitutes. In a piece that describes “A *better* way to think about your business model,” he explains that “The business model canvas — *as opposed to* the traditional, intricate business plan — helps organizations conduct structured (...) conversations around new businesses or existing ones” (2013, p. 1). Blank also sees the business model as a superior alternative to the business plan, as suggested by the title of a recent post: “business model versus business plan” (2013b).

Perhaps more importantly, the canvas is increasingly perceived among practitioners and educators as a direct alternative to the business plan, one that offers advantages when it comes to new venture creation: “we conceive the business model (canvas) as a learning tool that allowed us to overcome some shortcomings that we found in the business plan” (Aldana Fariñas et al. 2011, p. 197). Similarly, in recent years Stanford and Harvard began “championing alternative approaches to business plans” (C. Jones et al. 2013, p. 494), namely the business canvas (Blank and Dorf 2012; Osterwalder and Pigneur 2010), and the lean start-up approach (Ries 2011). A recent article by Hanshaw and Osterwalder (2016) tracked how the business canvas has progressively *replaced* the business plan in managerial practice. Multilateral agencies, such as the Inter-American Development Bank’s Multilateral Investment Fund, and global development organizations, are considering discontinuing the business plan as the cornerstone or their “guided assistance” programs, and having it replaced by the business canvas.

As described before, there is a robust literature that has explained the epistemological differences between the business plan and business canvas methodologies. However, there has been scant research on the way in which these activities are experienced by the targeted learners. To our knowledge, no empirical study has attempted to understand the association between the tools mostly used in entrepreneurship training and the participants’ levels of hope and perceived goal attainment. Given the centrality of the business plan and the business canvas in the training –both formal and non-formal—aimed at entrepreneurs, such void is somehow surprising.

It could be argued that both pedagogical tools aim at different dimensions of hope. As explained above, the business plan is based on the logic of causation, which assumes a causal

link between the present (planning exercise) and the future (performance and results). The plan itself is that bridge, which assures consistency across time between means and ends. Causation empowers the individual, as it puts in her hands the power to shape the future –provided that the right information is gathered (costs, customers, competitors), and the right analysis is carried out (willingness to pay, competitive dynamics, industry structure, etc.), results will follow. If this were true, one would expect entrepreneurs that go through a business plan-based training to see their levels of hope agency rise substantially.

- **Hypothesis 8:** Entrepreneurial training based on the business plan will enhance entrepreneurs' hope agency over entrepreneurial training based on business canvas in the a) short-term, and b) long-term.

On the other hand, the business canvas has different philosophical underpinnings –the logic of effectuation (Sarasvathy 2001). It depicts the individual as fundamentally incapable of shaping future events, thus making planning futile – in this view, ultimately “no plan survives first contact with customers” (Blank 2010). But in the logic of effectuation, that really does not matter much, because that is not the way in which entrepreneurs act anyway. What really matters is figuring out what to do with the resources at hand through ongoing experimentation --available means determine ends. Thus, one might expect a pedagogical approach that focuses entirely on learning through trial and error –that is, on “failing quickly to learn fast” (Sims 2011)—to boost entrepreneurs' hope pathways. Considering the previous findings in literature and the highlighted gaps, a final hypothesis emerges:

- **Hypothesis 9:** Entrepreneurial training based on the business canvas will enhance entrepreneurs' hope pathways over entrepreneurial training based on business plan in the a) short-term, and b) long-term.

## THE PROGRAM STUDIED

This study was developed in collaboration with Technoserve, an international non-profit organization whose mission is to reduce poverty by promoting entrepreneurship and economic activities. Technoserve developed the *Impulsa Tu Empresa* (“Boost your business”) program, to promote development of local small growing businesses via business training and advisory to subsistence entrepreneurs in three Central American countries: Nicaragua, Honduras, and Guatemala. Traditional (“transformational”) entrepreneurs aim to create large and vibrant

businesses, to generate wealth, jobs and income for many; on the other hand, subsistence entrepreneurs launch new ventures as a means of providing subsistence income for themselves, which constitute the most frequent case the emerging world (Schoar 2010). In the context of subsistence, the essence of entrepreneurship is survival (Viswanathan et al. 2010). The skills required for opportunity evaluation and exploitation are particularly scarce in this type of entrepreneur (Viswanathan 2007), which only underscores the importance of providing adequate training to this population.

The second cohort of the program began in the first quarter of 2014 with an online call to participate in the program.<sup>1</sup> Entrepreneurs had to present a proposal of their business and fit in two categories: business ideas or established businesses. The former category encompassed entrepreneurs who had a business project in mind or had been in business for less than 2 years, with sales between \$0 and \$19,999 per year. The latter targeted entrepreneurs with established businesses, with a market presence of at least two years and sales of between \$20,000 to \$2,000,000 per year. A total of 710 entrepreneurs applied in the three countries. Once the call finished, Technoserve evaluated the proposals based on their feasibility and impact upon their local communities, and selected a group of 420 proposals (140 per country: 70 business ideas and 70 established businesses).

The selected participants received entrepreneurial training and follow-up mentorship to start or develop their business. During three months, 44 hours of training in either business plan or business model were delivered. Four groups of 35 participants on each country were established, and participants were randomly distributed among those groups (see below for a more detailed, step-by-step explanation). Once the training finished, Technoserve provided a one-year follow-up and individual advice to entrepreneurs. Such follow-up included visiting the business, as well as remote support (email, Skype, and others). At the same time, Technoserve maintained contact with those entrepreneurs that were not selected and conducted the same data collection exercised upon those who received training.

## **METHODOLOGY**

The *Impulsa Tu Empresa* program offered a valuable opportunity to develop a longitudinal study to establish the short and long run effects of receiving entrepreneurial training or not, and between the two types of training, over individuals' levels of hope and perceived goal attainment. A quasi-experimental design was deemed as the most appropriate methodological

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<sup>1</sup> A dedicated webpage (<http://impulsatuempresa.org>) was used to that end.

approach, in which goal attainment and hope are the dependent variables to be explained by entrepreneurial training and type of training, among other control variables available from the follow-up exercise. Thanks to Technoserve's follow-up, the statistical analysis assessed the short and long term effects of the experimental treatment.

## Measurements

The encompassing model to unveil the evolution of hope, agency and pathways, along with goal attainment in an environment of entrepreneurial training is the one proposed in Feldman, Rand, and Kahle-Wroblewski (2009). This is a hope theory model which links goal attainment to hope pathways and agency of individuals to their evolution over time. A modified version of that model, as shown in [Figure 1](#), guided the empirical approach undertaken in this study. The model was adapted to the scenario and data related with the Technoserve *Impulsa tu Empresa* program.

-----Place Figure 1 about here-----

In line with Feldman, Rand, and Kahle-Wroblewski (2009), participants were asked to mention 5 business-related goals they wanted to pursue while in the program, or after it. For each of these objectives a set of three variables were measured:

**Training and type of training.** This variable classifies the type of training the participant received, and is measured as two discrete variables. For the whole sample training takes the value of 1 when the participant received any type of training, and zero otherwise. Then, just for participants who received training, the type of training variable takes the value of 1 for business canvas and 0 for business plan.

**Goal-Specific Hope Scale.** This variable developed by Feldman, Rand, and Kahle-Wroblewski (2009) measures hope for a particular goal at a particular time. The scale contains 6 items: 3 tapping pathways and 3 tapping agency. Respondents rate each item on a 1 (definitely false) to 8 (definitely true) scale.

**Goal Attainment.** This variable, also developed by Feldman, Rand, and Kahle-Wroblewski (2009), was measured in a scale from 0 to 100% by a single question in which participants were asked to indicate the percent of progress they had made toward achieving a particular goal.

## Tasks and Procedures

A 24-month longitudinal study was carried out along the Technoserve program. The data for this study was collected in three stages ( $t = 0,1,2$ ), during the 24 months that Tecnoserve ran the program. It has been indicated that this type of studies may suffer from subject attrition, as individual respondents may be lost in subsequent rounds of data collection, resulting in a biased sample or lack of external validity (Goodman and Blum 1996). Although the sample decreased between stage 0 and 1, it stabilized between stages 1 and 2, reducing the negative consequences of data attrition.

Stage 0 occurred between January and June, 2014; at this point a base-line was set for the study. Before being exposed to any training, 235 individuals who had registered to the program accepted to participate in the study. These participants filled a questionnaire where they identified and ranked the five most important business-related goals they wanted to pursue through the entrepreneurship program, and the specific hope to attain each of them.

Stage 1 occurred between June and December, 2014. At this point, the first measurement of entrepreneurial training and individual's hope and goal attainment was collected. Individuals who accepted to participate on Stage 0 were divided in three groups: a) those who were not selected into the program, and therefore received no entrepreneurial training (control group); b) participants selected into the program, who received entrepreneurial training based on the business plan; and c) participants selected into the program who received training based on the business canvas.

After completing 44 hours of entrepreneurial training, participants from all groups were asked to fill a questionnaire with the five goals they nominated at stage 0 accompanied by a questionnaire to assess the corresponding level of attainment, and the hope level for each goal. Sixty two (62) participants responded the questionnaire: 9 who did not received any training, 29 who received training based on the business plan, and 24 who received training based on the business canvas. Data attrition from stage 0 to stage 1 can be explained by two reasons: participants selected for training quit the program or quit the study, and participants non-selected for training quit their entrepreneurship initiative and affiliation with the program.

Stage 2 took place between January and December, 2015, while participants were receiving individual advisory by the program. The inclusion of this stage was meant to measure a longer-term effect of entrepreneurial training. At this point, participants who filled the questionnaires at stage 1 were asked again to assess the level of goal attainment upon the five

goals stated at stage 0; and also to state their hope level for each goal. Forty-nine (49) participants responded the questionnaire: 8 who had not received any training, 25 who had received training based on the business plan, and 16 who had received training based on the business canvas. [Table 1](#) summarizes the characteristics of the resulting participants' sample.

---TABLE 1 ABOUT HERE---

## RESULTS

The hypotheses proposed above requires estimating six equations to measure the association between (1) entrepreneurial training goal accomplishment, (2) entrepreneurial training and hope, and (3) hope and goal accomplishment. A multivariate regression approach was employed. Although a regression analysis is constrained to a linear relationship between variables and neglects a variety of interactions, as proposed in the hope model (Figure 1), this approach reduces the proposed relationship to a single equation that enables narrowing the variables association. The estimation method employed was ordinary least squares with clustered standard errors at entrepreneur level, which recognizes that goals are not independent within entrepreneurs and performs the necessary adjustment for such phenomena.

For all linear regressions, variables such as participants' gender and country of origin, as well as if they have a business idea or established businesses were included as control variables. These regressions characterize as short-term results those produced 6 months after the entrepreneurial training, and as long-term results those registered 18 months after the training program. Regressions analysis were undertaken to discriminate the association upon the dependent variables between having been exposed to entrepreneurial training, or not, and between having been exposed to business canvas or business plan based training.

Initially, to estimate the effect of training (Hypothesis 1) and type of training (Hypotheses 6 and 7) over participants' perception of their business goal attainment a first set of equations were estimated. These linear equations analyze if training had an effect upon goal accomplishment in the short and long term, considering participants' business characteristics. The regression analysis estimation results are presented in Table 2.

Equation 1

$$\text{Goal Attainment}_{t=1,2} = f(\text{Training}, \text{Characteristics})$$

Equation 2

$$\text{Goal attainment}_{t=1,2} = f(\text{Type of training}, \text{Characteristics})$$

-----TABLE 2 ABOUT HERE-----

The coefficients for Equation 1 show that training positively influence participants' goal attainment perceptions in the short and long term (supporting Hypotheses 1a and 1b). On average participants who were involved in some sort of training rated their goal attainment as 25% above those who did not received any training in the short term. This percentage increases in the long term: participants who received training have on average goal attainment perceptions 32% higher than the ones who did not. However, the coefficients for the variable Type of Training in Equation 2 were not statistically significant, showing no evidence on the influence of a particular type of training over participants' goal accomplishment perceptions, both in the short and long term (not supporting hypotheses 6 and 7). Control variables results for both equations show there is no significant difference according to participants and businesses' characteristics.

To estimate the effect of training (Hypotheses 2 and 3) and type of training (Hypotheses 8 and 9) to participants' hope levels evolution, a second set of linear regressions was estimated. These equations' regression analysis results are presented in Table 3.

Equation 3

$$\Delta \text{ Hope Pathways, Agency} = f(\text{Training, Characteristics})$$

Equation 4

$$\Delta \text{ Hope Pathways / Agency} = f(\text{Type of training, Characteristics})$$

-----TABLE 3 ABOUT HERE-----

The coefficients in Table 3 show that training has a significant positive impact on participants' hope agency and pathway evolution over time. In those participants who did receive training, hope pathways level increased 23% in the short term, and 22% in the long-term (supporting Hypotheses 2a and 2b). Something similar happened with hope agency. Participants who received training increased their hope pathway level in 22% in the short-term, and 21% in the long term (supporting Hypotheses 3a and 3b). With regards to the control variables, the business status variable had a negative and statistically significant coefficient, suggesting that participants with projects qualified as established businesses had lower levels of hope than those classified as business ideas.

Regarding the effect of the type of entrepreneurial training over participants' hope levels, coefficients in Table 3 do not show evidence to support that the use of entrepreneurial training

based on the business plan enhanced participants' hope agency over the use of entrepreneurial training based on business canvas, neither in the short nor the long term (not supporting Hypotheses 8a and 8b). Results differ when looking at the effect of training based on the business canvas, where participants' show hope pathways levels 13% higher in the short-term, and 19% higher in the long-term, over the use of entrepreneurial training based on business planning (supporting Hypotheses 9a and 9b). With regards to our control variables, the business status variable has a negative and statistically significant coefficient for the hope pathway effect, suggesting that those projects in the program qualified as established businesses had lower levels of hope pathways than those classified as business ideas.

Finally, to measure the effect of hope, pathways and agency, over participants' goal attainment perceptions (Hypothesis 4 and 5), Equation 5 was estimated. The regression analysis results are presented in Table 4.

Equation 5

$$Goal\ attainment_{t=1,2} = f(\Delta\ Hope\ Pathways, \Delta\ Hope\ Agency, Characteristics)$$

----TABLE 4 ABOUT HERE---

The coefficients in Table 4 show that hope pathways and agency have a small but significant effect over participants' goal accomplishment. While hope pathways has an effect in the long-term (0.23%) supporting H4, hope agency has a significant effect over goal accomplishment in the short-term (0.34%) supporting H5. Control variables results show there is no significant difference according to participants' characteristics.

## DISCUSSION

This study sought to analyze the short and long effects of entrepreneurial training over trainee's perceived goal attainment. To that end, we analyzed the entrepreneurship and psychology literatures and developed a model that involved the two most popular entrepreneurial training tools, and their effect on hope and goal attainment, both in the short and long term. We empirically tested that model in a group of subsistence entrepreneurs in Central America. A summary of the model results is shown in Table 5. These results put together a thorough narrative about the different and positive effects of entrepreneurial training with implications for both theory and practice.

----TABLE 5 ABOUT HERE---

First, our analysis confirms extant theory on the positive outcomes of entrepreneurial training (Galloway, 2002; Martin, et al., 2013; DeTienne, & Chandler, 2004). We extend that body of theory by providing empirical evidence about training's positive influence on a particular variable: goal-attainment perceptions. Results show that entrepreneurial training does enhance participants' business goal-attainment perception levels, not only by the time the training is received (H1a), but also in the long term (H1b).

Our study also makes an original contribution to the entrepreneurial training literature. Extant theory had limited its focus to the promotion of knowledge and skills (Elmuti et al. 2012; Martin et al. 2013). We show that entrepreneurial training also provides participants with an "emotional equipment" in the form of enhancing their levels of hope pathways (H2) and agency (H3), which in turn has a positive influence on participants' goal accomplishment in the long-term (H4) and the short-term (H5) respectively.

Together, these findings are of particular relevance to the literature on entrepreneurial education. A meta-analysis of the wide universe of entrepreneurship education, concludes that the empirical literature on training programs effectiveness makes a clear difference between the 'art' and the 'science' of entrepreneurship: "where the science refers to what is teachable, and the arts refers mainly to what is not" (Henry et al. 2005a, p. 165). Our research drives a wedge between the domains of *science* and *art*, inserting the component of *self*. Some innate skills may lay beyond the limits of what is teachable, but some attributes of the self that are relevant for entrepreneurial success may be developed through the right training. While the Applied Psychology and Organizational Behavior literatures had long established the importance of "psycap" on entrepreneurs' and organizations' performance (F.a Luthans et al. 2007; F. Luthans and Jensen 2002; Magaletta and Oliver 1999), the literature on entrepreneurial education (Carter et al. 2003; Davidsson and Honig 2003) had barely taken notice. Paraphrasing Prof. Datar, it may be said that while the entrepreneurial education literature kept its focus limited to the "knowing" (conceptual tools) and "doing" of education (skill development), this study posits the relevance of the "being" component in entrepreneurial training (Datar et al. 2011).

Extant literature had established that "'Who I am' is every bit as important as 'what I know' and 'who I know'" (Fred Luthans et al. 2004, p. 45); in other words, psycap will have a direct effect on how well I can use the acquired conceptual tools and my social capital. This study takes this thinking one step further, highlighting that "Who I am" will impact directly

“What I can do” with my venture: entrepreneurial skills do not operate in a vacuum, and assume minimum levels of psycap (in general) and of hope (in particular) to be effective. This finding carries with it substantial implications for policy. If psycap matters, entrepreneurial training programs should be designed with the goal of promoting it. Effectiveness assessment should measure not only knowledge and skills acquired, but also training’s impact on trainees’ hope levels. If hope is a reliable predictor of goal attainment, hope should be measured as part of trainees’ baseline situation, and after program’s completion, to measure short-term outcome and predict long-term effects.

Second, our study also sheds light on a highly important topic which to the best of our knowledge, had never been hitherto researched: the relative strengths of the two most popular entrepreneurial training tools (business plan and business canvas), widely seen as substitutes in the eyes of both scholars and practitioners. Can each type of training have a different effect on individuals’ levels of hope? This is a question of the utmost relevance for practitioners who seek to improve social conditions through “guided assistance” programs targeted at entrepreneurs. “The policy issue is not simply whether such [business] education is beneficial. Much debate also exists in the policy community regarding the optimal method of introducing such interventions” (Karlan and Valdivia 2011, p. 511). Of particular interest to our study were the claims about the alleged superiority of the business canvas over the traditional business plan. Despite the increasingly popularity of the canvas, when it comes to venture creation, the claims made on its advantages over the business plan are based on anecdotal evidence. As Eppler and Hoffmann state, referring to Osterwalder and Pigneur’s business canvas: “despite evidence that the template is [increasingly] applied in practice, its effectiveness has not yet been scientifically investigated” (2012, p. 389). If we consider the practical implications of such a research gap, its relevance becomes evident. As Honig puts it: “a significant portion of contemporary entrepreneurship education appears to be (...) largely unsupported by empirical evidence of its practical effects” (2004, p. 270).

Results show that while hope agency remained immune to the type of training received, training based on the business canvas has a greater positive effect on hope pathways than the business plan --both in the short and long term (H9a and H9B). This is consistent with the predictions of effectuation theory (Sarasvathy 2001). Having hope in one’s capacity to find the right pathway appears logical for an approach that puts a premium on experimentation, on “failing quickly to learn fast” (Sims, 2011). The entrepreneur does not know —could never know

— what they future has in store for her, but she can be sure that when problems arise, she will be able to find the right solution.

These results cast an interesting light on the debate between proponents of the business canvas and business plan entrepreneurial training tools (Aldana Fariñas et al. 2011; Blank 2010), and particularly when applied to subsistence entrepreneurs. For this target population, experimentation (the essence of the business canvas) is simply natural to their daily experience; they are “resilient and creative entrepreneurs” (Prahalad 2005, p. 1), making do with whatever resources they have at hand, constantly challenged to do more with less. As Collins ask, “how do you manage your money if there is so little of it?” (2009, p. 2). Subsistence entrepreneurs, as Viswanathan et al. explain, “focus the business *on a possessed skill or resource* with little regard to whether their business options really represented competitive differentiation in the marketplace (2014, p. 2). Entrepreneurial bricolage – or “making do with what is at hand” (Baker and Nelson 2005)– is simply the natural order of things of subsistence entrepreneurs.

By contrast, making projections into the future (the essence of the business plan) does not come naturally to a population for whom the challenges of navigating the short-term cannot be discounted. The context of scarcity can weigh so heavily that they may not prioritize long-term planning, “because the short-term needs are so great and the long-term gains so implausible” (Thompson 2013). Finally, planning requires a fair degree of abstraction and rationalization. It seems fair to assume that those skills will not come naturally to entrepreneurs in general, and to low-income entrepreneurs in particular. If rationalization can impair business planning in well-established organizations (Lenz and Lyles 1985), it seems only logical that it will not come natural for low-income entrepreneurs.

It seems clear that the business plan tool assumes capabilities (in data gathering and analysis) that can be difficult to find among entrepreneurs and startups. That explains why entrepreneurs with nascent ventures engage less in strategic planning than mature organizations (Delmar and Shane 2003). Ultimately, the business plan found its way into entrepreneurial education (and into the entrepreneurship literature in general) from the strategic planning literature, which was conceived for large organizations. This observation is in line with Shepherd and Douglas (1997), who criticized the use of traditional teaching methods in entrepreneurial training, arguing that they promote logical thinking rather than creative / entrepreneurial thinking. Similarly, Gibb (1997) pointed out that the focus on the business plan in entrepreneurial

training programs may inhibit entrepreneurial response to subsequent changes in the environment. Our findings provide empirical support to those theoretical observations.

In sum, given the a priori limited means of gathering data and making reliable projections that most entrepreneurs endure, the business canvas' contribution to entrepreneurs' "emotional equipment" will be more valuable in most situations for most entrepreneurs –and particularly for low-income entrepreneurs, who by definition are more challenged by resource scarcity. This finding appears to lend support to the migration away from the business plan and towards the business canvas currently underway by development organizations working in emerging countries.

## **LIMITATIONS**

This study refrains from making any claims on the objective impact of the business plan and the business canvas on venture performance, as we limited our query to subjective dimensions, such as hope and perceived goal attainment. Further studies can focus on objective dimensions such as the evolution of a set of performance indicators before and after the entrepreneurial training. Second, entrepreneurial training effects rely not only on the cognitive tool (i.e. business plan or business canvas) employed. Further studies can assess the performance of both professor and students, and evaluate their impact over entrepreneurs' goal accomplishment. Finally, the study relies on non-random assignment of participation in the program and training, this limits the ability to claim any causal effect in this study. Further studies should rely either on randomization of training or matching methods between trained and non-trained to extend any claim of causal effect.

## **CONCLUSIONS**

This study has looked into a relatively unexplored dimension of entrepreneurial training: how guided preparation can improve subsistence trainee's emotional equipment —hope in particular. Since hope is among the most reliable predictors of entrepreneurial success, that question warranted investigation. We found that entrepreneurial training can shape not only knowledge and skills, but also aspects of trainees' self. While some personality traits or innate skills may not be affected by training, other attributes of the self that are relevant for entrepreneurial success may be developed through the right training. In that regards, we found

the business canvas to be more effective in generating hope among subsistence entrepreneurs than the business plan.

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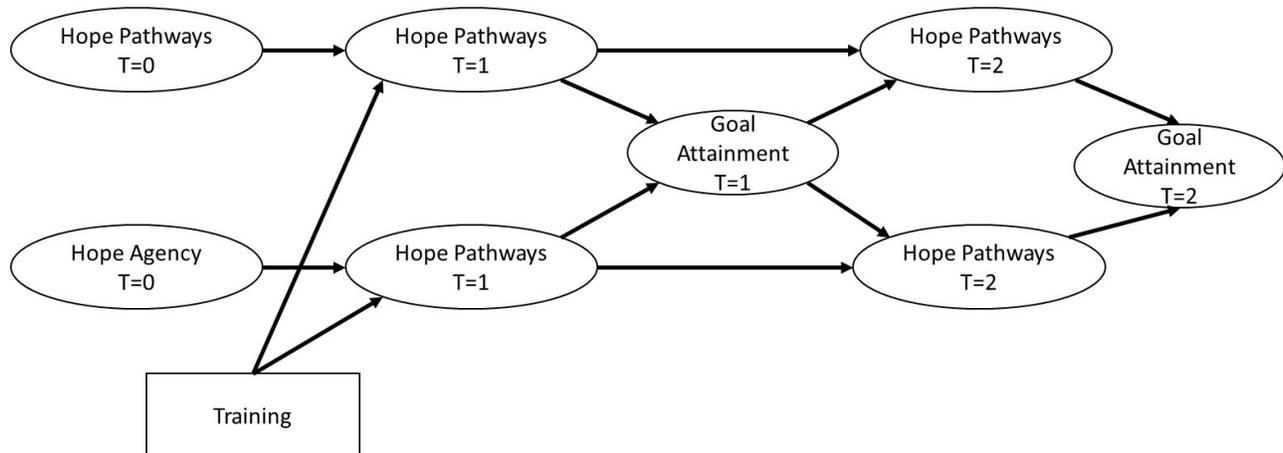


TABLE 1  
Entrepreneurs' Characteristics

Type	Frequency	Percentage
1. Gender		
Male	25	51.1%
Female	24	48.9%
2. Country		
Guatemala	21	42.80%
Nicaragua	17	34.70%
Honduras	11	22.45%
3. Type of training		
Business Panning	25	51.02%
Business Canvas	16	32.65%
None	8	16.33%
4. Business Status		
Idea	34	69.39%
Functioning	15	30.61%

VARIABLES	Attainment t=1	Attainment t=2
Training		
Training (Yes/No) = 1, Yes	25.96*** (5.066)	32.56*** (5.405)
Control		
Entrepreneur (Gender) = 1	-5.736 (5.002)	-2.962 (4.000)
Country (num) = 2, Honduras	0.457 (5.796)	-0.120 (5.157)
Country (num) = 3, Nicaragua	-1.036 (5.856)	-0.661 (4.693)
Status(Idea=0, Firm=1) = 1	3.351 (6.018)	2.092 (4.369)
Constant	24.82*** (6.835)	39.16*** (6.668)
Observations	245	245
R-squared	0.164	0.246
R2-adj	0.147	0.231
F-stat	9.587	11.46
S.E. Clustered entrepreneur	Yes	Yes

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

TABLE 2

Effect of Training over Goal Attainment

TABLE 3

## Effect Training and Type of Training Over Hope

VARIABLES	Pathways % t=0 to t=1	Pathways % t=0 to t=2	Agency % t=0 to t=1	Agency % t=0 to t=2	Pathways % t=0 to t=1	Pathways % t=0 to t=2	Agency % t=0 to t=1	Agency % t=0 to t=2
<b>Training</b>								
1.training	22.66*** (6.745)	21.84** (9.598)	21.70*** (6.683)	20.61** (7.904)				
1.training_model_plan					13.41*** (4.452)	18.71*** (6.304)	-6.081 (3.739)	-5.262 (4.816)
<b>Control</b>								
1.id_gen_num	-3.180 (4.702)	-3.136 (6.165)	-4.019 (4.186)	-5.151 (5.171)	0.926 (4.703)	2.309 (5.770)	-1.101 (4.122)	-2.335 (5.396)
2.id_country_num	-5.444 (5.823)	-4.374 (7.906)	4.592 (4.314)	4.752 (5.521)	-3.083 (4.607)	-0.293 (7.038)	1.598 (4.229)	1.951 (5.393)
3.id_country_num	-6.222 (6.508)	-3.830 (9.054)	6.727 (4.493)	5.868 (5.617)	-4.046 (6.109)	0.835 (8.475)	4.641 (4.687)	5.043 (5.956)
1.id_status_num	-8.409* (4.595)	-13.74** (6.126)	-4.644 (4.318)	-9.064* (5.401)	-8.962* (4.476)	-15.32** (5.991)	-2.450 (4.317)	-7.162 (5.370)
Constant	-3.734 (9.136)	8.969 (12.06)	-12.13 (7.766)	1.435 (8.592)	10.17* (5.918)	18.07** (8.274)	11.68** (5.319)	23.42*** (6.995)
Observations	245	245	245	245	205	205	205	205
R-squared	0.129	0.087	0.125	0.088	0.098	0.119	0.037	0.040
R2-adj	0.111	0.0676	0.106	0.0687	0.0757	0.0973	0.0124	0.0155
F-stat	3.645	2.150	2.954	2.466	2.525	2.819	1.047	1.153
S.E. Clustered entrepreneur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

TABLE 4  
The Effect of Hope over Goal Accomplishment

VARIABLES	Accomp t=1	Accomp t=2
Hope		
Pathways (% $\Delta$ T=0 to T=1)	0.116 (0.0986)	
Pathways (% $\Delta$ T=0 to T=2)		0.229*** (0.0599)
Agency (% $\Delta$ T=0 to T=1)	0.338*** (0.0753)	
Agency (% $\Delta$ T=0 to T=2)		0.127* (0.0641)
Control		
Entrepreneur (Gender) = 1	-5.230 (4.641)	-3.489 (4.187)
Country (num) = 2, Honduras	-0.847 (6.112)	-0.315 (5.730)
Country (num) = 3, Nicaragua	-4.540 (5.564)	-3.568 (4.912)
Status (Idea=0, Firm=1) = 1	7.468 (5.316)	8.846* (4.410)
Constant	43.85*** (4.947)	59.51*** (4.961)
Observations	245	245
R-squared	0.186	0.203
R2-adj	0.166	0.183
F-stat	7.280	6.001
S.E. Clustered entrepreneur	Yes	Yes

Standard errors in parentheses,  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

TABLE 5

## Summary of Hypotheses Results

Hyp.	Description	Support	Effect (%)
H1a	Entrepreneurial training positively influences participants' goal attainment perceptions in the short-term	Yes	25.96%
H1b	Entrepreneurial training positively influences participants' goal attainment perceptions in the long-term.	Yes	32.56%
H2a	Entrepreneurial training enhances participants' levels of hope pathways in the short-term	Yes	22.66%
H2b	Entrepreneurial training enhances participants' levels of hope pathways in the long-term.	Yes	21.84%
H3a	Entrepreneurial training enhances participants' levels of hope agency in the short term	Yes	21.70%
H3b	Entrepreneurial training enhances participants' levels of hope agency in the long-term.	Yes	20.61%
H4	Participants' level of hope pathways positively influences their goal attainment perceptions in the long-term.	Yes	0.23%
H5	Participants' level of hope agency positively influences their goal attainment perceptions in the short-term.	Yes	0.34%
H6	Entrepreneurial training based on the business planning will enhance participants' goal attainment perceptions over entrepreneurial training based on business canvas in the short-term.	No	
H7	Entrepreneurial training based on the business canvas will enhance participants' goal attainment perceptions over entrepreneurial training based on business planning in the long-term.	No	
H8a	Entrepreneurial training based on the business plan will enhance entrepreneurs' hope agency over entrepreneurial training based on business canvas in the short-term,	No	
H8b	Entrepreneurial training based on the business plan will enhance entrepreneurs' hope agency over entrepreneurial training based on business canvas in the long-term.	No	
H9a	Entrepreneurial training based on the business canvas will enhance entrepreneurs' hope pathways over entrepreneurial training based on business plan in the short-term.	Yes	13.41%
H9b	Entrepreneurial training based on the business canvas will enhance entrepreneurs' hope pathways over entrepreneurial training based on business plan in the long-term.	Yes	18.71%