# Creating a Different Kind of Innovator: Using health communication theory in entrepreneurship education to foster behavior change among entrepreneurship students in sub-Saharan Africa

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*There is a broad scholarly consensus that entrepreneurship can be taught and that entrepreneurship education benefits societies (Charney & Libecap, 2003). However, technical entrepreneurship education interventions are still the norm in the West (Alberti & Poli, 2005), and especially in sub-Saharan Africa (North, 2002; Ladzani & van Vuuren, 2002). In this study, we argue that entrepreneurship education in sub-Saharan Africa follows a special pattern, and that health communication theory can inform improvements in enterprise training in the African context because of its particular effectiveness in inducing behavior change where environmental norms would normally constrain the development of such new behavior. The overall goal of the present paper is threefold; to contribute to the understudied domain of entrepreneurship education theory for economic development, to inform more effective enterprise training interventions in sub-Saharan Africa, and to foster the generation of more entrepreneurs capable of contributing to wealth generation in this region.*

**Key words:** *Entrepreneurship, Education, International Development, Africa*

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## I. Introduction

Small and medium enterprises (SMEs) are the main drivers for job creation everywhere around the globe (Birch, 1987; Bruederl et al., 1992; Mead & Liedholm, 1998), and "unleashing the power of local entrepreneurs to reduce poverty in their communities and nations" is one of the highest priorities in international development (UNDP, 2004, p.5). The main objective of entrepreneurship education is to foster the creation of new entrepreneurs who start new formal economic ventures (Ronstadt, 1985). This is an especially critical goal for Sub-Saharan Africa, considered the exception among developing regions, because, unlike all other developing zones recently, sub-Saharan African nations have not significantly advanced in key areas of poverty reduction, health care improvements, and food security, and have trailed behind other regions in developing an entrepreneurship culture (Kates & Dasgupta, 2007).

However, in the developed world alone, the domain of entrepreneurship education suffers from insufficient comprehensive theories and extreme fragmentation (Alberti & Poli, 2005; Pittaway & Cope, 2007). Moreover, the existing pool of entrepreneurship studies, largely originating in the West, is unlikely to apply directly to developing nations such as those in sub-Saharan Africa (Mitchell, 2004), and entrepreneurship scholars are calling for improved entrepreneurship education theories and programs (e.g., Co & Mitchell, 2006; Sriram & Mersha, 2006; Ladzani & van Vuuren, 2002; North, 2002).

It is the contention of this paper that the analytical framework of health communication can usefully provide the basis for informing entrepreneurship education theory for development regions such as sub-Saharan Africa. This is because the behavior change theories underlying health communications have been shown to be effective in enrolling and motivating their audiences to engage in new behaviors and habits in Africa (Elmendorf, Cabanero-Verzosa, Lioy, & LaRusso, 2005), e.g., in the area of HIV prevention (Singhal & Rogers, 2003), and becoming an entrepreneur, to a large extent, involves changing one's behavior and way of life. Additionally, the existing published literature related to entrepreneurship education in sub- Saharan African contexts consistently recommends moving away from technical entrepreneurship education, towards more action-oriented, experiential entrepreneurship training programs (see Table 1 for a detailed discussion). This is conceptually consistent with reviewers of western entrepreneurship education programs who suggest a similar shift towards more "relevant" (Edelman, Manolova, & Brush, 2008) and "synergistic" (Collins, Smith, & Hannon, 2006) education approaches in entrepreneurship education. Finally, entrepreneurship, as a field of study, is action-oriented, pragmatic in its focus, and multi-disciplinary, hence relevant literature can be found in diverse journals, from management, business administration, to organizational studies, and psychology (Rauch & Frese, 2000). This means that cross- fertilization between subject areas may usefully contribute to a deeper understanding of this domain for researchers and practitioners alike.

Our paper seeks to contribute to the debate surrounding entrepreneurship education for international development by proposing a new theoretical framework for evaluating and improving higher education programs geared at stimulating entrepreneurship in sub-Saharan Africa. This is also relevant to Western citizens because poverty reduction in less-developed countries ultimately contributes to increased stability and security everywhere (e.g., Sachs, 2005; Collier & Gunning, 1999).

The present study is organized as follows: We first outline the theoretical concepts in entrepreneurship education referenced in this article; then we describe the special kind of entrepreneurship education that seems most appropriate in the sub-Saharan context. In the section that follows, we look to theories that can inform Africa-specific entrepreneurship education, and describe the tenets of health communication in their applicability to enterprise training. We then evaluate the existing literature on entrepreneurship education in sub-Saharan Africa, especially from a health communication lens, and conclude our paper with a discussion of the limitations of this study as well as suggestions for researchers and practitioners to develop the concepts outlined in this document further.

## I. Theoretical background

*Entrepreneurship and entrepreneurship education*

Although there is no single definition of entrepreneurship or of entrepreneurship education, we follow Gartner's (1990) definition of entrepreneurship as the process of starting and running a new venture. In defining entrepreneurship education, we use the definition of Ladzani & van Vuuren who see entrepreneurship education as "a three-legged pot" (Ladzani & van Vuuren, 2002, p. 155) of motivational, entrepreneurial, and business skills training. Entrepreneurship is concerned with "hard" skills related to financial and business management, as well as "soft" skills related to the intention of venture creation, such as evaluating opportunities, going with or against trends in business and society, taking calculated risks, and maintaining self-confidence in the face of various obstacles on the way towards founding a business (Krueger & Carsrud, 1993, in Fayolle, 2005).

*Entrepreneurial intention*

Venture creation is an intentional (Fayolle, 2005) and action-focused (Rauch & Frese, 2000) behavior. According to Krueger and Carsrud (1993), beyond a person's beliefs, attitudes, or other person-related or environmental factors, entrepreneurial intention seems to be most reliably predicting entrepreneurial behavior. Entrepreneurial intention is most likely to be enhanced if a person has high entrepreneurial self-efficacy (Chen et al., 1998). Entrepreneurial self-efficacy, in turn, is a variable derived from the social learning concept self-efficacy (Bandura, 1977), and refers to a person's belief of being able to effectively perform entrepreneurial tasks and duties in the areas of innovation, marketing, management, financial control, and risk-taking (Chen et al., 1998). It is a moderately stable and task-specific personality characteristic that is instrumental for the intention to create a new business (Boyd & Vozikis, 1994; Chen et al., 1998), and that can be changed with training (Shaver, 2007).

*Entrepreneurial orientation and attitude*

Consistent with the general conceptual fragmentation of the entrepreneurship domain, there are several operational definitions of "soft" skills and attitudes that are measured in the context of entrepreneurship education. We outline two of these in this paper, as these were referenced in the relevant empirical literature we review below. First, a person's entrepreneurial attitude consists of self-esteem, control, innovation, and achievement (Robinson, Stimpson, Huefner, & Hunt, 1991), and an entrepreneurial orientation are conceptualized as innovation, proactiveness, autonomy, risk-taking, and competitive aggressiveness (Lumpkin & Dess, 1996). According to Lumpkin & Dess, a person's entrepreneurial orientation may change in relation to his or her social context. This points towards another important element predictive of the efficacy of entrepreneurship education: the environment in which that budding entrepreneurs live.

*Entrepreneurial behavior: innovative, culture-bound*

What is entrepreneurial behavior? In the words of seminal social psychologist Kurt Lewin, any behavior is a function of the person and his or her environment (Lewin, 1943). If entrepreneurship education is to be successful, it needs to take into account the social and cultural norms that affect the entrepreneurial potential of any given group of entrepreneurship students. In the context of entrepreneurship education for sub-Saharan development, two distinctions are particularly relevant.

First, an entrepreneur creates value through innovation (Schumpeter, 1951), and second, entrepreneurship is inextricably linked to the local culture within which it is undertaken (Audretsch & Keilbach, 2007). Despite the lack of scholarly consensus over what makes an entrepreneur, entrepreneurs are frequently defined in how they differ from other business actors. For example, Hisrich, Peters, and Shepherd (2005) stress that the development of particular skills, namely inner control, risk taking, innovativeness, being change oriented, and having persistence and visionary leadership, differentiates an entrepreneur from a manager. Given this distinction, it would make sense that traditional business or management training techniques would be comparatively less appropriate to produce new entrepreneurs, in any cultural context.

The second important component of entrepreneurial behavior relates to a budding entrepreneur's local context. According to Venkataraman (2002B), the "reality, context, cultural beliefs, and frameworks" critically affect the potential for an entrepreneur's success. The habits and communal attitudes towards enterprise in any given cultural context are important for entrepreneurship potential. Audretsch & Keilbach, (2007) have called this the entrepreneurship capital of a region or community, e.g., the sets of economic opportunities and human capital as well as cultural traditions and values associated with entrepreneurship. Culture affects entrepreneurship in a moderating role, interacting with other variables that predict entrepreneurial success (Tung et al., 2007; Rauch & Frese, 2000). However, few studies have examined the interaction of culture with personality variables such as self-confidence, although there is exploratory evidence that environments supportive of traits associated with entrepreneurism are positively related to higher entrepreneurial potential (Mueller & Thomas, 2001).

## A. The kind of entrepreneurship education needed for sub-Saharan Africa

The main argument of the present paper is that it is useful to look beyond business theory to inform effective entrepreneurship education to nurture the development of a different kind of innovator, because entrepreneurs in development contexts can be considered social *avantgardists*, dwelling in comparatively less enterprise-friendly environments. In contexts such as Eastern Europe, budding entrepreneurs face few incentives to engage in enterprise creation (Harmeling, Oberman, & Venkataraman, 2008). By the same token, educated elites in Sub- Saharan Africa prefer public sector employment to starting new businesses (Sriram & Mersha,

2006). Hence enterprise agents in a society in development need to have developed the motivation, resilience and self-confidence to engage in behaviors that run counter to the prevailing culture, and sustain these behaviors in the face of normative resistance from their environment.

*The entrepreneur in Africa: a different kind of innovator*

In a development context, the meaning of the term "innovation" is not necessarily focused on breakthrough and avant-garde technologies. Rather, social entrepreneurship scholars Alvord, Brown, and Letts (2003) maintain that innovation for development revolves around capacity-building through empowering underprivileged and marginalized groups, distributing resources to areas where these do not exist yet, as well as building a momentum to challenge existing power structures and cultural norms in society.

When a person believes that he or she can start a new business, then this person is five times more likely to actually start the process of founding a company (Orford et al., 2003). In contrast to entrepreneurship education in the developed world where the goal of entrepreneurship education is not necessarily for all participants to launch businesses in the short-term (Fayolle & Gailly, 2005), the direct purpose of entrepreneurship education in Africa is on stimulation of creation of entrepreneurs within a culture that may show little or no support and appreciation of budding entrepreneurship (Dhliwayo 2008).

*The type of learning that fosters such skills*

In recent years, an increasing consensus has emerged among development practitioners concerning the type of learning that brings with it the potential for positive change and sustainable restructuring in transition societies. Botkin et al. (1979) term this innovative learning, e.g., the learning of new competencies and attitudes that enable individuals to break through existing paradigms and limits to growth. This is especially relevant for nations in pursuit of economic and social development.

In this context of learning and skills development, the World Bank, in a recent review of global health initiatives in Africa (Elmendorf, Cabanero-Verzosa, Lioy, & LaRusso, 2005), reported on a growing focus to base capacity-building interventions on behavior change communications and on the social science that underlies such strategic communication efforts. This is out of a recognition that an exclusive focus on increasing levels of knowledge in a particular domain has shown to be insufficient in bringing about healthier, more productive behaviors. According to this report, development practitioners need to entice individuals to move from assimilating information to being motivated to experiment with new behaviors in order to be able to internalize and adopt changes in habitual behaviors.

This speaks directly to the study of entrepreneurship education for development and the applicability of health communications theory to enterprise training, in that by teaching students about entrepreneurship in a development society, the foremost goal is to induce behavior change amongst these students of entrepreneurship, and motivate each of them throughout the trainings to become an entrepreneur him- or herself upon course completion. The underlying behavior

change focus of health communication theory, then, may usefully be applied to inform effective entrepreneurship education programs.

## B. How health communication applies to entrepreneurship education for sub-Saharan Africa

Health communication is a distinctive area within communication theory that formally developed in the 1970s, focused on health, and on promoting healthier behaviors within a given audience (Rogers, 1996). Heath communication is based on social learning theory (Bandura, 1977), social marketing theory (Kotler & Roberto, 1989), and on the theory of diffusion of innovations (Rogers, 1995). All of these theories integrate social and environmental variables with individual factors that contribute to a person's propensity to change their attitude or behavior towards a given stimulus. In this way, communications are imbedded within their target's culture, which allows them to be contextually dynamic and applicable to any particular global context (Fishbein, 2000). This is also why a health communications framework is pertinent beyond the world of global health, and transposable to inform entrepreneurship education.

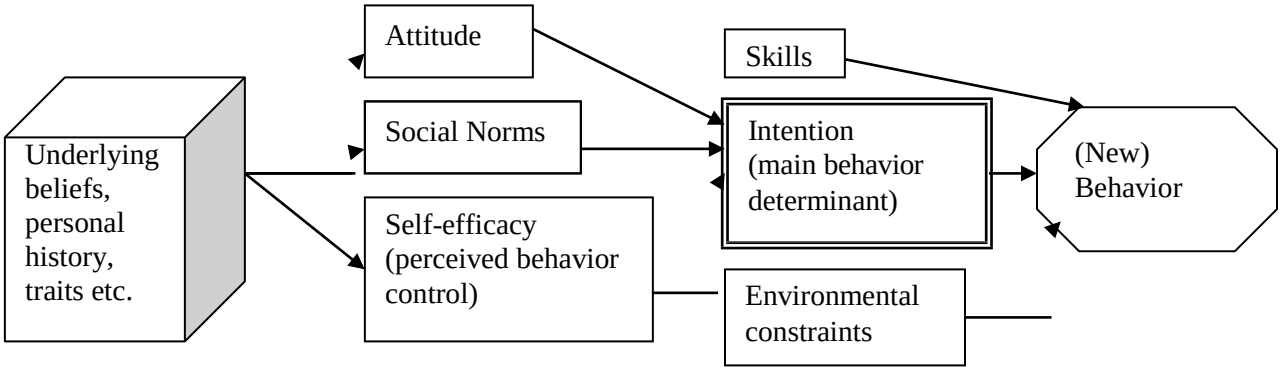
*Health communication incorporates behavior change theories*

In the international development context, the domain of communication for global health has been embracing behavior science theory to inform effective interventions since the 1980s (for an early overview of public health communication theory, see Clift, 1989). In particular, Fishbein's (2000) integrative model of behavior has incorporated the leading theories of behavioral prediction and behavior change, including his prior collaborative work with Ajzen, most notably the theory of reasoned action (Ajzen & Fishbein, 1980), and Ajzen's (1982) theory of planned behavior.

*An integrated model*

All of these psychological behavior models were distilled into Fishbein's (2000) integrated model, depicted in Figure 1, in order to design persuasive communications to support and encourage healthy behaviors, for example to promote HIV prevention (Fishbein & Capella, 2006). The model stipulates that a person is likely to engage in a new behavior if he or she has the necessary skills to perform the behavior, if there are no environmental constraints preventing the behavior, and if the person has the intention to perform the new behavior. Intentions, in turn, are composed of attitudes, societal norms, and the person's self-efficacy perception, or their perceived behavior control, e.g., to what extent the person believes she or he can actually manage to perform the behavior. Effective global HIV prevention communications are embedded in an understanding that behaviors related to HIV contraction are socially and culturally constructed, which means that multi-level, culturally contextualized health communications are required (Singhal & Rogers, 2003). By the same token, the social and contextual variables related to a person's behavioral intention in Fishbein's (2000) model are particularly relevant to the development of the appropriate "soft" skills related to a more entrepreneurial attitude or self- belief, thus predicting a behavior change towards entrepreneurship.

**Figure 1: Simplified, slightly adapted version of Fishbein's (2000) integrated model of predicting healthy behaviors**




*Integrating entrepreneurship training into health communication theory*

Below, we outline how Fishbein's (2000) model can be applied to evaluate the efficacy of entrepreneurship education initiatives in a development context, and how such a framework can inform the development of effective enterprise training programs for poverty alleviation. Please note that rather than providing actual suggestions for the content of entrepreneurship trainings, the purpose of this overview is to stimulate new ideas, and a consideration that incorporating components of health communication theory may improve the design or analysis of enterprise training programs.

In Fishbein's model, the variable *skills development* relates to the classic topic of study for entrepreneurship education, e.g., the hard skills traditionally covered in entrepreneurship education courses. The concept of environmental constraints from the model corresponds to public policies that would make it easy or hard to start a new company in an entrepreneurship education context. Especially in contexts where entrepreneurship is not comprehensively integrated in the formal economic structure, and officially registering a new business is a complex and time-consuming task, this variable importantly affects a person's likely entrepreneurial behavior. In addition, the concept *environmental constraint* inevitably affects budding entrepreneurial behavior. Especially if the local environment presents disincentives for the creation of new enterprises, entrepreneurship training will be comparatively less effective. In this case, adding an external stakeholder analysis during the design phase would be prudent. If feasible, practitioners should complement training efforts with advocacy in order to help generate the conditions that would enable future entrepreneurs to succeed. Finally, three psychosocial variables constitute a person's behavioral intention, e.g., *attitude*, *norms*, and *self- efficacy*. These depend on the target population's context, and vary alongside the behavior in question, which means that a communication initiative targeting behavior change (such as entrepreneurship education for development) need to be couched within the social structure of the target population. Researchers and practitioners typically complain about the weak attitude- behavior link amongst people in general ("*they never do what they say they will do"*), because in addition to a person's attitude, additional factors contribute to the actual behavior that a person

engages in. The model can help pinpoint this dynamic interaction of factors contributing to behavior, or behavior change.

For example, a practitioner who sets out to create a new enterprise education course should assess what the particular prevailing attitudes and beliefs are concerning entrepreneurship among the targeted audience. With this information in hand, tailored interventions can be designed (e.g., games, exercises, case study reviews) whose specific goal is to positively affect participants' attitudes and perceived self-confidence concerning their future entrepreneurial success. This is most usefully done in an action research/action learning context, e.g., facilitators should combine information gathering with intervention design and adaptation, and (as a rule of thumb) spend at least as much time on supporting participants in their own learning journey as time spent communicating new concepts.

Applying behavior change theories to the study of entrepreneurship education is not new. As outlined above, this is because behavior change frameworks deal with explaining and predicting behavioral intentions. Several enterprise theorists have integrated behavior change theory into the study of entrepreneurship since Krueger and Carsrud integrated Ajzen's (1991) model into existing entrepreneurship frameworks, in particular concerning the extent to which entrepreneurship training programs can influence entrepreneurial attitudes and intentions among training participants (for a review, see Fayolle & Gailly, 2005).

However, to the best of our knowledge, theory building in entrepreneurship education for economic capacity building in Sub-Saharan Africa is virtually non-existent, despite the urgent need to make entrepreneurship education in this region more effective.

The focus within health communication theory on behavioral intentions is also effective when evaluating entrepreneurship trainings in development contexts because health communication experts agree that merely promoting logical arguments to an audience is unlikely to remove the emotionally held attitudinal barriers and beliefs that prevent new behaviors to take hold, and behavior change is often based on emotional assessments, not on rational, logical thought (Singhal & Rogers, 2003). Yet it is health communication's focus on behavior change that has arguably made health communication based interventions in development contexts effective, precisely because it allows for targeting interventions at those elements within an audience that are considered most adverse towards engaging in the new, desired behavior, such as a cultural norm that is not supportive of condom use.

For us human beings, engaging in new, unknown behaviors is inherently risky, and hence we shy away from such new behaviors (Kahneman, Knetsch, & Thaler, 1991). Entrepreneurial behavior, and starting a new business venture, is particularly risky in a development context, which is why the entrepreneurship education initiatives targeting social learning or affective variables, as outlined in the section below, may have been deemed productive in these societies. Let us now review the current status of entrepreneurship education in sub-Saharan Africa, and provide a summary of the evidence base on recent entrepreneurship trainings by referring to the principles of health communication theory.

### C. Evaluating entrepreneurship education in sub-Saharan Africa

Little empirical work has been done to date to measure the overall effectiveness of different entrepreneurship education programs in any regional context (Harmeling et al., 2008; Pittaway & Cope, 2007). Literature reviews of entrepreneurship education in the West (e.g., Edelman et al., 2008; Pittaway & Cope, 2007; Alberti & Poli, 2005) leave out any discussion of entrepreneurship education for a development context, let alone entrepreneurship education for wealth-generation in sub-Saharan Africa.

*Trends in systematic entrepreneurship education evaluations in sub-Saharan Africa*

Very few published studies could be identified that provide overall assessments of entrepreneurship in Africa (Kiggundu, 2002), or that discuss how African entrepreneurship should be facilitated through international linkages and entrepreneurial and institutional capacity- building (Sriram & Mersha, 2006). In our literature search, we found fewer than a handful of peer-reviewed articles that provided entrepreneurship education evaluations in the southern African context, all of which used diverging approaches and data collection methods. However, the broad consensus among these publications' authors is that education policy-makers should move away from teaching entrepreneurship using a theory-based emphasis, and towards incorporating more dynamic entrepreneurship teaching styles (North, 2002). In South Africa, where most of the published work on entrepreneurship education has originated, several authors express grief over the fact that universities in that country tend to teach entrepreneurship using traditional classroom-style teaching methods, and invest little time outside the classroom to coach students in enterprise-relevant skills (Co & Mitchell, 2006; North, 2002).

Only one published study could be found that proposes a new, yet untested, theoretical framework for entrepreneurship education, also by a South African researcher. The model is conceptually similar to the changes to entrepreneurship education in South Africa proposed above, by basing the entrepreneurship education model on experiential learning principles (Dhliwayo, 2008), e.g., generating knowledge by transforming experiences into action (Kolb, 1984), as well as promoting problem solving and creativity, in order to promote the development of skills and knowledge through experiencing new activities, reflective thinking, and by trying out novel behaviors.

In the next section, we provide an illustrative overview of the recent evidence base on entrepreneurship trainings that support the reported scholarly consensus among southern African education researchers, and our proposed redirection of efforts towards conceptual models in entrepreneurship education that incorporate health communication and behavior change principles.

## II. Methodology

*Existing evidence of entrepreneurship education in sub-Saharan Africa linked to Health Communication*

Below, the published data-driven literature on entrepreneurship education initiatives in sub-Saharan Africa since the year 2000 is reviewed. Our literature search was mainly guided by reviewing the PsychInfo database, because this research database spans across psychology,

sociology, business and management. In our literature review, we have used an adapted version of the methodology used in Pittaway & Cope's (2007) systematic entrepreneurship education literature review. Our sample is heterogeneous in nature, due to the scarcity of reporting actual entrepreneurship education interventions in sub-Saharan Africa. Since the domain of entrepreneurship research is referenced in diverse academic databases (Rauch & Frese, 2000), this review is illustrative rather than exhaustive, and we may have overlooked some relevant references. It is unlikely, however, that a large body of research is missing from this literature analysis because entrepreneurship in sub-Saharan Africa is still a largely understudied phenomenon (Robson et al., 2009), and the reviewed articles largely contain overlapping citations. We outline to what extent recent enterprise trainings relate to health communication principles, alongside the reported results of the interventions. The particular health communications framework used in this review is Fishbein's (2000) integrated model, since this model is the most comprehensive and integrative published health communication framework available to date.

The goal of this illustration is to draw attention to entrepreneurship training elements beyond traditional "hard" skills training, in order to foster a further shift in entrepreneurship education for sub-Saharan Africa towards promoting entrepreneurial intentions among students.

**Table 1: Summary literature review of evidence-based entrepreneurship education initiatives in sub-Saharan Africa**

| ***Authors and Publication Year*** | ***Data used in study*** | ***Location of study*** | ***Summary (and link to health communications theory)*** |
|---|---|---|---|
| Botha, Nieman, & van Vuuren, 2006. | Experimental test of the effect of entrepreneurial training on 116 female entrepreneurs. | South Africa. | Entrepreneurial characteristics and entrepreneurial orientation showed a significant improvement through entrepreneurial education.<br><br>*The experimental results suggest that training in entrepreneurial attitude and self-efficacy improves success of entrepreneurial ventures.* |
| Frese, Brantjes, & Hoorn, 2002. | Survey of 87 small-scale business owners. | Namibia. | Beyond an entrepreneurial orientation (e.g., being autonomous, innovative, and managing risk and competitiveness constructively), a proactive stance is linked both to the decision to become an entrepreneur and to enjoying success in such a career.<br><br>*This attitudinal variable would affect entrepreneurial intention in training efforts.* |
| Frese, Krauss, Keith, Escher, Grabarkiewicz, Luneng, Heers, Unger, & Friedrich, 2007. | Structured interviews of 408 micro and small-scale business owners. | South Africa, Zimbabwe, and Namibia. | Business growth was significantly correlated with detailed and proactive planning and motivational resources. The most important motivational resources were internal locus of control, self-efficacy and achievement motivation.<br><br>*Training of motivational resources can have a significant impact on entrepreneurial skills. Motivation training sets entrepreneurial intentions, which promote entrepreneurial behavior.* |
| Glaub, Frese, Gramberg, Friedrich, and | Experimental test of the effect of personal initiative training on 57 | South Africa. | Behavior-based exercises raised self-efficacy and resulted in better levels of innovation, goal planning, and, ultimately, business improvement. |

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|---|---|---|---|
| Solomon, 2005. | business owners. | | *Entrepreneurial skills can be improved using experiential learning. Levels of self-efficacy and entrepreneurial attitude are raised.* |
| Krauss, Frese, Friedrich, and Unger, 2005. | Structured interviews of 248 southern African business owners. | Namibia, South Africa and Zimbabwe. | Data showed evidence of a positive relationship between entrepreneurial orientation and business performance. The correlation was particularly strong for achievement orientation and personal initiative.<br><br>*Achievement orientation and personal initiative relate to self-efficacy, and predict entrepreneurial behavior (via entrepreneurial intention).* |
| Kropp, Lindsay, & Shoham. 2006. | Survey of 396 entrepreneurs and 143 managers. | South Africa. | Results suggest that innovativeness, market orientation, and a learning orientation are linked to venture performance and success. Authors suggest that entrepreneurs are more likely to succeed if they focus on entrepreneurial creativity.<br><br>*Learning orientation, an attitudinal concept, is predictive of entrepreneurial success by setting a positive intention.* |
| Ladzani & van Vuuren, 2002. | Case study comparison of three out of 11 SME service providers through questionnaire and group discussions. | South Africa. | Only the surveyed three SME service providers offered entrepreneurship-related training, and all of these had a strong focus on business skills. According to the authors, "Entrepreneurial skills" training (creativity, innovation, opportunity and risk management) should become more prominent in services offered to SMEs in order to more effectively promote their success.<br><br>*The skills discussed here relate to entrepreneurial intention, rather than "hard" business skills.* |
| Mitchell, 2004. | Survey of 101 | South Africa. | The motivation for starting a business was assessed using |

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|---|---|---|---|
| | entrepreneurs. | | quantitative and qualitative methods for male and female entrepreneurs. Independence and achievement-orientation were strong motives behind starting a business. The author suggests that a greater focus on "culture sensitive" entrepreneurship training programs is needed, addressing trainees' values and perceptions of their social surroundings, in order to promote entrepreneurial success.<br><br>*Suggests that social norms need to be incorporated in training efforts.* |
| Robson, Haugh, & Obeng, 2009. | Quantitative study of 496 entrepreneurs. | Ghana. | Firm size and exporting activities correlated with innovativeness of entrepreneur, and innovativeness was linked to the entrepreneur's level of education. Although the study's authors did not detect a link between investment in training and innovativeness, they suggest that this was because training followed a traditional model, not conducive to fostering innovation.<br><br>*The paper suggests that innovativeness can be promoted through specific "soft" entrepreneurship training.* |

## IV. Conclusion

In the previous section, we have attempted to illustrate and annotate a more or less implicit shift among entrepreneurship scholars reporting on enterprise training initiatives in sub-Saharan Africa towards focusing on behavior change techniques that health communication theory has integrated into a comprehensive framework. This shift maps to entrepreneurship education scholars in the West, who argue that more emphasis in enterprise training should be granted to fostering innovativeness (e.g.,, DeTienne & Chandler (2004) and self-efficacy for entrepreneurship (e.g., Cooper & Lucas, 2006), among other "soft" entrepreneurship skills. If traditional entrepreneurship trainings generally concentrate on "hard," technical, or business-related skills, and if these training programs are considered less than adequate in reaching their goal of promoting more entrepreneurship, then it stands to reason that a larger focus on developing "soft" entrepreneurship-relevant variables may be productive. As mentioned above, examples of such "soft" enterprise-related variables are an entrepreneurial attitude or orientation, and the perceived belief that one is capable of controlling one's environment for entrepreneurship success. The published literature in the sub-Saharan African entrepreneurship context that we have reviewed supports this view.

However, focusing on soft skills in entrepreneurship education alone would not be effective, because of the complex interaction of a budding entrepreneur's skills and attitudes with their environment. The sub-Saharan African context, as outlined in previous sections, has a strong potential dampening impact on generating entrepreneurial potential within educational settings. Hence we proposed that entrepreneurship education scholars and practitioners use health communication theory during design and evaluation of entrepreneurship education, precisely because it can account for and help set behavioral intentions, and ultimately behavior change. While there is much need for pilot studies on effective integration of health communication techniques into entrepreneurship education, we have argued that such a program should include the following:

(1) Action research, to gain a detailed understanding of the particular environmental constraints that budding entrepreneurs operate in;

(2) Behavior based exercises, to practice actions that may run counter to the prevailing culture, and to build participants' belief that entrepreneurial intent is a critical factor driving their success; and

(3) Reflective learning, to help participants generate techniques that enable them to succeed in their specific context.

As Fishbein's (2000) model suggests, beyond a person's skills and environmental constraints, the main determinant of behavior (or behavior change, the main goal of transformation from an entrepreneurship *student* to an entrepreneurship *practitioner*) is a person's intention, or motivation, to engage in this behavior. Intention, in turn, is affected by attitude, social norms and the person's sense of personal agency or self-efficacy. Underlying all of this are evaluative judgments or beliefs (corresponding to the affective element outlined in the section on intergroup prejudice above), as well as idiosyncratic elements such as personal experience, or personality, the latter of which of course are more difficult to touch via group training.

In this paper, we have referred the reader to health communication theory in an attempt to drive forward the development of effective entrepreneurship education for sub-Saharan Africa. This we did for the following reasons: The underlying social science for this framework spans over three decades (Fishbein & Ajzen, 1975; Bandura, 1977; Ajzen, 1985; Bandura, 1986; Fishbein & Capella, 2006) and is the culmination of an interdisciplinary research effort on understanding behavior (domain of psychology) and efforts to produce behavior change (domain of

communication). Health communication is also appealing for entrepreneurship education because of its ability to predict behavior change across different cultural contexts (Fishbein, 2000), and, as we discussed above, entrepreneurship is always embedded in a particular cultural environment (Audretsch & Keilbach, 2007), and culture is a critical determinant of entrepreneurship in sub-Saharan Africa. This is also why we have refrained from suggesting actual entrepreneurship training content, and instead promoted the use of the health communications theory base, so that practitioners who do know the cultural context of entrepreneurship education initiatives may include all components that support the development of effective and contextually appropriate trainings.

Finally, we have followed a recent "call to action" for psychologists from eminent global management professor Robert Hisrich and his colleagues, to apply psychological science to enterprise scholarship in order to fill some of the various gaps that currently exist in entrepreneurship research (Hisrich, Langan-Fox, & Sharon, 2007). In this way, a greater understanding can be formed across scientific disciplines of evidence-based frameworks fostering effective entrepreneurship education for sub-Saharan African development.

## I. Bibliography


Ajzen, I. (1985). *From Intentions to Actions: A Theory of Planned Behavior*. Heidelberg: Springer.

Ajzen, I. (1982). On behaving in accordance with one's attitudes. In Zanna, M.P., Higgins, E.T., & Herman, C.P. (Eds.), *Consistency in social behavior: The Ontario Symposium 2,* 3-15. Hillsdale, NJ: Erlbaum.

Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior.* Englewood Cliffs, N.J.: Prentice Hall.

Alberti, F. G., Sciascia, S., & Poli, (2005). The domain of entrepreneurship education: key issues. *International Journal of Entrepreneurship Education, 2,* 453-482.

Alvord, S.H., Brown, L.D., & Letts, C.W. (2003). Social entrepreneurship and societal transformation: An exploratory study. Hauser Center Working Paper No. 15. Retrieved September 30, 2009, from http://www.ksg.harvard.edu/hauser/active_backup/PDF_XLS/workingpaper_15.pdf.

Audretsch, D.B., & Keilbach, M. (2007). The localization of entrepreneurial capital. *The Jena Economic Papers,* 1-19.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 191-215.

Bandura, A. (1986). *Social Foundations of Thought & Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall.

Birch, D.L. (1987). *Job Creation in America.* New York: Free Press.

Botha, M., Nieman, G., & van Vuuren, J. (2006). Enhancing female entrepreneurship by enabling access to skills. *International Entrepreneurship and Management Journal, 2,* 479-493.

Botkin, J.W., Elmandjra, M., & Malitza, M. (1979). *No Limits to Learning: Bridging the Human Gap. A Report to the Club of Rome.* Exeter, UK: A. Wheaton and Co. Ltd.

Boyd, N.G., & Vozikis, G.S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship: Theory and Practice, 18,* 63-77.

Bruederl, J., Preisendoerfer, P., & Ziegler, R. (1992). Survival chances of newly founded business organizations. *American Sociological Review,* 57, 227–242.

Charney, A.H., & Libecap, G.D. (2003). The contribution of entrepreneurship education: an analysis of the Berger program. *International Journal of Entrepreneurship Education, 1,* 385-417.

Chen, C.C., Greene, P.G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing, 13,* 295-316.

Clift, E. (1989). Social marketing and communication: Changing health behavior in the Third

World. *American Journal of Health Promotion, 3,* No. 4, 17-24.

Co, J.M., & Mitchell, B. (2006). Entrepreneurship education in South Africa: a nationwide study.
*Education and Training, 48,* No. 5, 348-359.

Collier, P., & Gunning, J.W. (1999). Why has Africa grown slowly? *Journal of Economic Perspectives,* 13, 3–22.

Collins, L.A., Smith, A.J., & Hannon, P.D. (2006). Applying a synergistic learning approach in entrepreneurship education. *Management Learning, 37,* 335-354.

Cooper, S.Y., & Lucas, W.A. (2006). Developing self-efficacy for innovation and entrepreneurship: An educational approach. *International Journal of Entrepreneurship Education, 4,* 141-162.

DeTienne, D.R., & Chandler, G. (2004). Opportunity identification and its role in the entrepreneurial classroom: A pedagogical approach and empirical test. *Academy of Management Learning & Education, 3* 242-257.

Dhliwayo, S. (2008). Experiential Learning in entrepreneurship education. A prospective model for South African tertiary institutions. *Education and Training,* 50, 4, 329-340.

Edelman, L.F., Manolova, T.S., & Brush, C.G. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management, Learning & Education, 7,* 56-70.

Elmendorf, A.E., Cabanero-Verzosa, C., Lioy, M., & LaRusso, K. (2005). Behavior change communication for better health outcomes in Africa. *Human Development Sector, Africa Region, The World Bank.* Retrieved September 30, 2009, from *http://siteresources.worldbank.org/EXTDEVCOMMENG/Resources/behaviorchange.pdf.*

Escher, S., Grabarkiewicz, R., Frese, M., van Steekelenburg, G., Lauw, M., & Friedrich, C. (2002). The moderator effect of cognitive ability on the relationship between planning strategies and business success of small scale business owners in South Africa: A longitudinal study. *Journal of Developmental Entrepreneurship, 7,* No. 3, 305-318.

Fayolle, A., & Gailly, B. (2005). Using the theory of Planned Behavior to assess entrepreneurship teaching programs. *Center for Research in Change, Innovation and Strategy, 5,* 1-25.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* MA: Addison-Wesley.

Fishbein, M., & Cappella, J.N. (2006). The role of theory in developing effective health communications. *Journal of Communication, 56,* S1-S17.

Fishbein, M. (2000). The role of theory in HIV prevention. *AIDS Care, 12,* 273-278.

Frese, M., Brantjes, A., & Hoorn, R. (2002). Psychological success factors of small-scale businesses in Namibia: The role of strategy process, entrepreneurial orientation, and the environment. *Journal of Development Education 7,* No. 3, 259-282.

Frese, M., Krauss, K.I., Keith, N., Escher, S., Grabarkiewicz, R., Luneng, S.T., Heers, C., Unger, J.M., & Friedrich, C. (2007). Business owners' action planning and its relationship to business success in three African countries. *Journal of Applied Psychology*, 92, 1481- 1498.

Gartner, W. B. (1990). What are we talking about when we talk about entrepreneurship? *Journal of Business Venturing, 5*, 15-28.

Glaub, M., Frese, M., Gramberg, K., Friedrich, C., & Solomon, G. (2005). Personal initiative training for business owners in South Africa (unpublished manuscript).

Harmeling, S.S., Oberman, S., Stevenson, H.H., & Venkataraman, S. (2008). That my neighbor's cow might live: Effectuation, entrepreneurship education, and economic development in Croatia. *International Journal of Entrepreneurship Education, 6*, 1.

Hisrich, R.D., Langan-Fox, J., & Grant, S.L. (2007). Entrepreneurship research and practice: A call to action for psychology. *American Psychologist, 62*, 575-589.

Hisrich, R.D., Peters, M.P., & Shepherd, D.A. (2005). *Entrepreneurship*. McGraw-Hill College**.**

Juma, C., & Timmer, V. (2003). *Social learning and entrepreneurship: A framework for analyzing the Equator Initiative and the 2002 Equator Prize finalists*. Science, Environment and Development Group website, Kennedy School of Government, Harvard University. Retrieved September 30, 2009, from *www.ksg.harvard.edu/sed.*

Kahneman, D., Knetsch, J.L., & Thaler, R.H. (1991). The endowment effect, loss aversion, and status quo bias: anomalies. *Journal of Economic Perspectives*, 5, 193-206.

Kates, R.W. & Dasgupta, P. (2007). African poverty: A grand challenge for sustainability science. *Proceedings of the National Academy of Sciences, 104*, 16747-16750.

Kiggundu, M.N. (2002). Entrepreneurs and entrepreneurship in Africa: What is known and what needs to be done. *Journal of Developmental Entrepreneurship, 7*, 239-258.

Kotler, P., & Roberto, E. L. (1989). *Social Marketing: Strategies for Changing Public Behavior*.
New York, NY: The Free Press.

Krauss, S.I., Frese, M., Friedrich, C., & Unger, J.M. (2005). Entrepreneurial orientation: A psychological model of success among Southern African small business owners.
*Entrepreneurship Theory and Practice, 14*, 315-344.

Kropp, F., Lindsay, N.J., & Shoham, A. (2006). Entrepreneurial, market and learning orientations and international entrepreneurial business venture performance in South African firms. *International Marketing Review, 23* No. 5, 504-523.

Krueger, N.F., & Casrud, A.L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship and Regional Development, 5*, 315-330.

Ladzani, W.M., & van Vuuren, J.J. (2002). Entrepreneurship training for emerging SMEs in

South Africa. *Journal of Small Business Management, 40,* 154-161.

Lewin, K. (1943). Defining the "Field at a Given Time." *Psychological Review, 50,* pp. 292-310.

Lumpkin, G.T., & Dess, G.D. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. Academy of Management Review, 21, 135-172.

Mead, D.C., & Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. World Development, 26, 61-64.

Mitchell, B.C. (2004). Motives of entrepreneurs: A case study of South Africa. Journal of Entrepreneurship, 13, 167-183.

Mueller, S.L., & Thomas, A.S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. Journal of Business Venturing, 16, 51-75.

North, E. (2002). A decade of entrepreneurship education in South Africa. South African Journal of Education, 22, 24-27.

Orford et al. (2003). *Community Psychology: Challenges, Controversies and Emerging Consensus*. John Wiley and Sons Ltd.

Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal, 25,* 479-510.

Rauch, A., & Frese, M. (2000). Psychological approaches to entrepreneurial success: A general model and an overview of findings. In Cooper, C.L., & Robertson, I.T. (Eds.). *International Review of Industrial and Organizational Psychology,* 101-142. Chichester, Wiley.

Rauch, A., & Frese, M. (2000). Psychology approaches to entrepreneurial success: A general model and an overview of findings. *International Review of Industrial and Organizational Psychology*, 101-142.

Robinson, P.B., Stimpson, D.V., Huefner, J.C., & Hunt, H.K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice, 2,* 13-31.

Robson, P.J.A., Haugh, H.M., & Obeng, B.A. (2009). Entrepreneurship and innovation in Ghana: Enterprising Africa. *Small Business Economics, 32,* 331-350.

Rogers, E.M. (1996). Up-to-Date Report. *Journal of Health Communication, 1*, 15-23.

Ronstadt, R. (1985.) The educated entrepreneurs: A new era of entrepreneurial education is beginning. *American Journal of Small Business, 10*, 7-23.

Sachs, J. (2005). *The End of Poverty: Economic Possibilities for our Time,* Penguin.

Schumpeter, J.A. (1951). Economic theory and entrepreneurial history, in Clemence, R.V.

(Ed.).

*Essays on Economic Topics of Joseph Schumpeter.* Port Washington, NY: Kennikat Press.

Shaver, K.G. (2007). C2D2 Psychological methods in entrepreneurship research. In Baum, J.R., Frese, M., & Baron, R. (Eds.). *The Psychology of Entrepreneurship, 1,* 335-346.

Singhal, A., & Rogers, E.M, (Eds.). (2003). *Combating AIDS: Communication Strategies in Action*. Thousand Oaks, CA: Sage Publications.

Sriram, V., & Mersha, T. (2006). Facilitating entrepreneurship in Sub-Saharan Africa: what governments can do. *Journal of International Business and Entrepreneurship Development, 3,* 136-151.

Tung, R.L, Walls, J., & Frese, M. (2007). Cross-cultural entrepreneurship: The case of China. In Baum, J.R., Frese. M., & Baron, R. (Eds.). *The Psychology of Entrepreneurship, 1*, 265- 286.

UNDP. (2004). *Unleashing entrepreneurship: Making business work for the poor*. Retrieved September 30, 2009, from http://www.undp.org/cpsd/report/index.html.

Venkataraman, S. (2002B). Ten Principles of Entrepreneurial Creation. *Batten Briefings, 1*, No. 1.