Critical evaluation of two models for entrepreneurial education

An improved model through integration

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Abstract

Purpose - This paper focuses on the comparison of two models for entrepreneurial education with the aim of potential integration. At this juncture when entrepreneurial development is seen as the core contributor to enhance start-ups of new ventures and hence facilitate economic growth and development, the best possible education model is required. The creation of more entrepreneurs is at least partially dependent on the creation and advancement of efficient educational models.

Design/methodology/approach - First, this paper briefly describes the two independently developed models for entrepreneurial education. Second, an in-depth qualitative analysis of the individual model constructs is presented to evaluate the contributions and limitations of each. Third, this paper proposes an integrated model that identifies certain weaknesses of each of its building-blocks, which are eliminated by the integration.

Findings - The paper concludes that the integrated model for entrepreneurial education enhances the body of knowledge and highlights the key role of facilitators of entrepreneurial education programmes.

Originality/value - Suggests that research should be conducted into the facilitation skills, entrepreneurial and business experience of existing facilitators and potentially those of business advisers that act as mentors.

Keywords Entrepreneurialism, Educational development, Training **Paper type** Research paper

Introduction

In a desperate attempt to stimulate entrepreneurial activity, policy makers often rely on success stories, anecdotes and cases to demonstrate the Utopia that will result when entrepreneurial activities take off. This will create economic growth that will curb massive unemployment, they say.

Unfortunately, the history proves that in practice, this has not happened during the past decade - and there is little indication that it would in the immediate future. Today, the use of the phrase entrepreneurial development has become a buzzword in the speeches delivered from almost every public platform, media and publication but the question could rightly be asked; what has happened in entrepreneurship, small business development and economic growth?

The assistance of the originators of the two models is hereby acknowledged. Opinions expressed in this paper and conclusions arrived at, are those of the authors and are not necessarily to be attributed to the institutions and programmes investigated.

Gorman *et al.* (1997, p. 56) postulate that there is widespread recognition that entrepreneurship is the engine that drives the economy of most nations. Timmons (1999, p. 4) also refers to entrepreneurship as America's secret weapon and argues its value as the main contributor to the superior position that the USA holds as part of the global economy. He suggests entrepreneurship to be the fundamental difference in the American culture where 37 per cent of the population are somehow involved in their own ventures apart from their regular jobs. It seems that, in developing countries, the ' need for entrepreneurial development is emphasised by the extremely high levels of unemployment that are reported. Foxcroft *et al.* (2002, p. 20) confirm the specific requirements and expectations for entrepreneurial development in the South African situation.

Most opinions underscore the need for large numbers of entrepreneurs for a successful economy as described by Sunter (1994, p. 4). However, four years later, Sunter (1998, p. 2) still calls for entrepreneurial development and again highlights its importance when he states, "It is only through the creation of millions of enterprises that millions of jobs will be created". Reynolds *etal.* (2002, p. 40), however, suggest that education is a key element (prerequisite) in the framework conditions that enhances economic growth through entrepreneurship.

Driver *et al.* (2001) in their annual Global Entrepreneurship Monitor (GEM) reports an overall lack of entrepreneurial elements from the education system in South Africa. Factors such as: attitude towards entrepreneurship, entrepreneurial role models, negative mindsets towards confidence, initiative and creativity, negative perception towards entrepreneurship as a career choice and negative attitude towards failure are all cited to contribute towards the South African entrepreneurial culture. Many of these elements could be impacted upon by education but are absent from the general education system. They also confirm the general low levels of business skills and the absence of entrepreneurial education in general.

In South Africa, as in many other countries, the national strategy for the development and promotion of small business also identifies small business development and the empowerment of entrepreneurs as the most important avenue for economic growth (President's Office, 1996, p. 10). All this led to an explosion in the training industry where many organisations including fly-by-nights produce and present entrepreneurial training programmes. Often, in their dire need to escape poverty and unemployment, people attend these courses and are dismally disappointed with the outcome as there is no behavioural change afterwards. Pretorius and van Vuuren (2003, p. 523) further suggest that the culture within a society can either support entrepreneurial orientation or be detrimental to its visible outcomes in the society. They propose that entrepreneurial development should be a feature of school programmes.

The focus of this paper, thus, centres on a critical evaluation of two models for entrepreneurial education. Two existing models that were independently developed for entrepreneurship programmes in South Africa are evaluated. Each programme was developed for its own and different contextual outcomes.

Models are used as frameworks or paradigms of the thinking within the subject matter. Therefore, they serve as a guideline for the compilation of entrepreneurship education programmes. Understanding the elements and their influences on the development of entrepreneurial potential is crucial to the internalisation of

entrepreneurship theory and the development and implementation of policy initiatives to enhance entrepreneurship education. Mayfield and Weaver (1997, p. 1) refer to the paradigm as the underlying philosophy that dictates the methodology used in the training of entrepreneurs because it guides the relevant thinking, content, pedagogy and ultimately the outcomes.

Entrepreneurship education

Entrepreneurship defined

The construct of entrepreneurship is both complex and controversial as there is no agreement on its definition. Kaufmann and Dant (1998, p. 7) categorize entrepreneurship based on different contemporary representative definitions found in the literature. They conclude that three perspectives can be determined by the definition focuses, namely:

- Definitions stressing the characteristic traits or qualities supposedly possessed by entrepreneurs including risk taking, leadership, motivation, ability to resolve crises, creativity, low level of risk aversion, decision making ability and more.
- Definitions stressing the process of entrepreneurship and it's result including the creation of new enterprise, introduction of new combinations of production factors and new, unique and valuable combinations of resources in an uncertain and ambiguous environment.
- Definitions focusing on the activities entrepreneurs perform including connecting to new markets, overcoming market deficiencies, creating and managing contractual arrangements and input transforming structures, supplying resources lacking in the marketplace, activities to initiate, maintain and develop profit oriented business, to fill currently unsatisfied needs and to take operational control of the organization.

The study of Kaufmann and Dant (1998), however, concludes that consensus about the construct of entrepreneurship remains elusive. Morris (1997, p. 17) defines entrepreneurship as the process through which individuals and/or teams create value by bringing together unique packages of resource inputs to exploit opportunities in the environment. It can occur in any organizational context and results in a variety of possible outcomes, including new ventures, products, services, processes, markets and technology. Given this broad definition of entrepreneurship, its applicability is much broader than merely limiting it to the discipline of business only.

This paper, however, is concerned with models that are used to govern the thinking about entrepreneurial education. While education programmes are aimed at different target markets and levels of education they all have as their core the concept of stimulating entrepreneurial activity in some or other way. Solomon *et al.* (2002, p. 5) confirm the positive role of teaching entrepreneurial and small business management skills for new venture creation and success.

The two relevant models are described briefly.

Entrepreneurial performance education model (E/P *model)*

The E/P model is concerned with the elements that drive entrepreneurial performance and was developed to guide syllabi and curriculum development (van Vuuren and

Nieman, 1999). The direct linear model suggests that entrepreneurial performance is a function of motivation, entrepreneurial and business skills and can be depicted as:

$$E/P = f[\mathrm{a}M(\mathrm{b}E/S \times \mathrm{c}B/S)],$$

where: *E/P* is the entrepreneurial performance; *M* is the motivation; *E/S* is the entrepreneurial skills; *B/S* is the business skills; and a to c are constants.

Based on the *E/P* model, educational programmes are planned to cover the three key constructs of the model. Within the context of any planned programme, different quantities and qualities of skills and knowledge are included. Without repeating their work, the three elements are shortly described:

- *Motivation.* The development of performance motivation of the entrepreneur is advised for incorporation in all programmes. It is suggested by the authors that it contributes towards qualities like inner control, persistence, leadership, decisiveness, determination and shear guts. The associated skills include specifically the development of achievement imagery.
- *Entrepreneurial skills.* Included in this category are various creativity, risk taking and opportunity identification.
- *Business skills.* This category covers skills such as financial, marketing, operational, human resource, legal, communication, management and business plan compiling skills (see also Table I).

Being an education model, the *E/P* model forms the philosophy that drives the three formal educational programmes of the Chair in Entrepreneurship at the University of Pretoria, i.e.:

(1) A BCom in entrepreneurship, which has as its aim to give the learner all that is necessary to start and manage a business independently. The course takes three years to complete and on completion the candidates should preferably start their own businesses.

(2) A MPhil in entrepreneurship, which has as its aim to influence the South African enabling environment through assisting students (mostly working in the enabling environment) to gain improved understanding of entrepreneurial issues. A detailed and in-depth analysis of this programme was reported by Pretorius and Nieman (2002) where they applied the entrepreneurial education instrument designed by Pretorius (2001) to evaluate this programme.

(3) A PhD in Entrepreneurship, which has as its aim to generate and impact the entrepreneurial research body of knowledge with special reference to the South African and African contexts.

Each programme has different goals in terms of context as well as outcome and as the programmes are not part of this paper's focus, they will not be explored but to refer to these differences. The model authors report that they have success in utilizing the model as the foundation for their educational programmes. Content for each of the programmes is adapted to support the specific outcomes of the programme and considers the level at which the programme is offered. The BCom and MPhil

Construct element	Entrepreneurial performance model according to van Vuuren and Nieman (1999)	Entrepreneurial education model according to Pretorius (2001)
Entrepreneurial performance	Considers the performance of the individual as entrepreneur (or venture) and not as manager (where entrepreneur refers to utilising an opportunity to start a venture)	The requirements of the context determine the programme content. One required outcome is the start-up of a venture
Motivation (*M*)	Motivation as seen as the level of nAch (need for achievement) of the individual including: desire to be successful and to do well; urge to improve; motive to achieve excellence for its own sake	Absent as a separate construct but considered partially as an element of *E/S* under motivation to excel
Entrepreneurial skills (*E/S*)	Considers: creativity and innovation; identification of opportunities; risk taking; interpretation of role models	Considers: commitment; personal leadership; opportunity obsession; tolerance for risk and ambiguity; creativity; motivation to excel
Business skills (*B/S*)	Covers both skills and knowledge associated with the: general functions; life cycle stages of a venture; business plan	Similar except that the business plan is a separate construct
Approaches used to transfer knowledge and skills (*A*)	Absent as it assumes that a motivated person would find a way to master the skills once knowledge has been gained	Considers both: the involvement of the learner in the learning process; and the variety of learning approaches used
Facilitator (*F*)	Absent	Considers: own practical experience; how reinforced thinking is used; entrepreneurial way of being; use of apprenticeships; multidisciplinary approach and thinking
Business plan utilisation (*B/P*)	Absent as a separate construct but stated under the *B/S* construct	Coverage of how the business plan is utilised by: preparation; presentation; defence; execution
Contextual description	Absent but implied	Considers: previous experience; minimum education level; outcomes of the programme; needs of the target group; reason for participation

Table I.
Comparison of the education models of van Vuuren and Nieman (1999) and Pretorius (2001)

programmes delivered its first graduates at the end of 2002 while the first PhD candidates will submit during 2003.

Being a mathematical model and as the constructs are multiplicative, there is an indication that the absence of any one of the elements such as motivation,

entrepreneurial skills or business skills will lead to zero or extremely low levels of entrepreneurial performance as measured by the involvement and execution of start-up activities by the student. This is observed by some students that completed their BCom degrees and chose to go into employment rather than work for themselves in a small business, apparently lacking the motivation element to do so. Those with the motivation started their own businesses.

Entrepreneurial education model (E/E *model)*
This model considers not only the content of entrepreneurial education programmes but also the context wherein such programmes are operated by the facilitators and the approaches that they use (Pretorius, 2000a, b). The model identifies five constructs relevant for entrepreneurial education to increase start-ups and also indicates the relevance of the programme context. Its focus during development was specifically to increase "start-ups" as outcome requirement (Pretorius, 2001) through education. The *E/E* model constructs include:

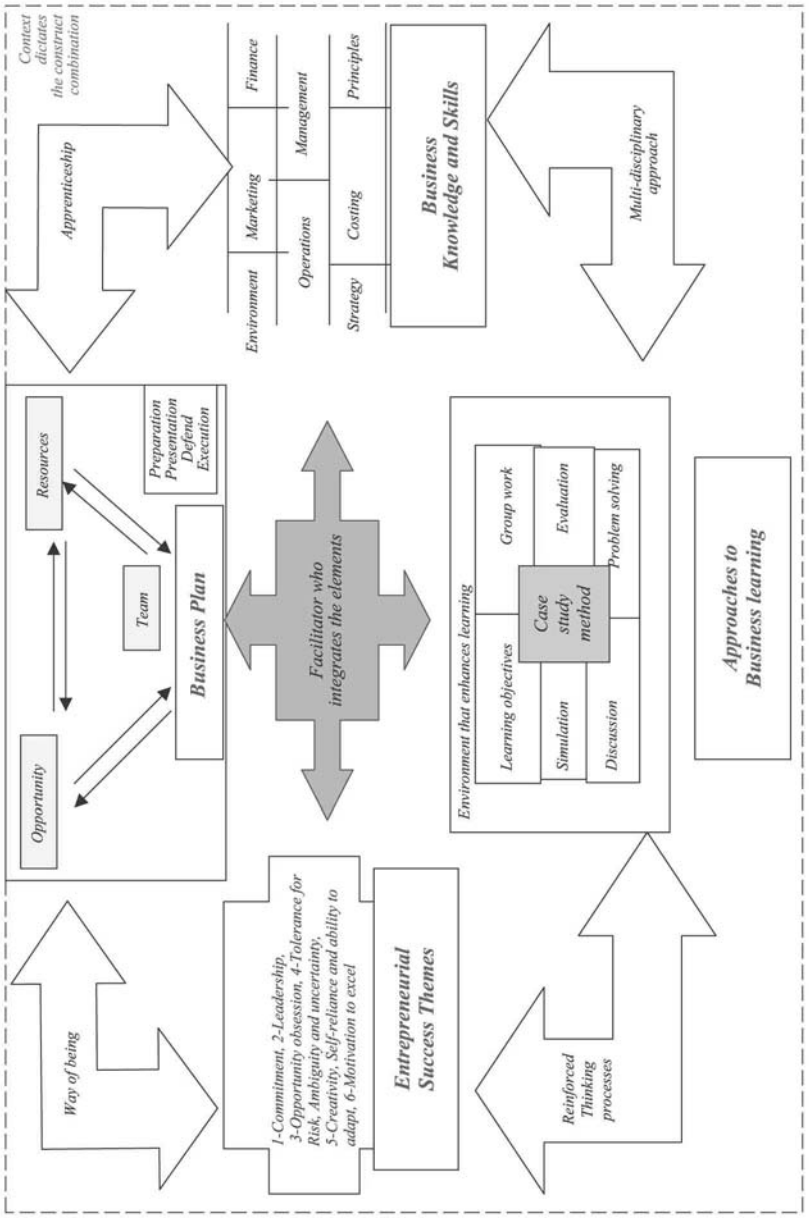
- entrepreneurial success themes (Gartner *et al*, 1999, p. 225; Timmons, 1999, P. 221);
- business knowledge and skills (Gartner *et al*, 1999, p. 219; Harris, 1994, p. 29);
- business plan utilisation (Brush *et al*, 1995, p. 3; Timmons, 1999, p. 368);
- learning approaches (Mayfield and Weaver, 1997, p. 1; Ulrich and Holman, 2000, P-i);
- the facilitator (McMinn, 2000, p. 24; Nonis and Hudson, 1998, p. 4); and
- the programme context.

Each of the constructs is described in more detail to have a set of sub-elements (concepts) contributing to the construct and is explored in Table I while the original visual model is described shown in Figure 1.

The author suggests that the facilitator is the key construct and based on his skills, knowledge, experience and methodology application should govern the constructs into a mix (similar to the well known marketing mix). The facilitator as a variable is not only a construct but also governs the variable mix and changes it according to varying demands during the programme.

The *E/E* model also has an associated measurement instrument to evaluate existing entrepreneurial programmes. The *E/E* model led to the development of one-year certificate in small business and entrepreneurship programme at the Polokwane campus of Technikon of Pretoria. The programme delivered its third group of graduates at the end of 2002.

Arguing that entrepreneurship and its incorporation into the education domain are complex, the holistic understanding of the relationships cannot be less complex. Mueller and Thomas (2000, p. 52) indicate that education is only one of many contextual factors that contribute to the rate of venture creation and was confirmed by Reynolds *et al.* (2002, p. 40) in their conceptual model. It is argued that the components of entrepreneurial education are often vague and depend on perceptions, intention and even the motivational level of the researcher.



Source: Pretorius (2001, p. 145)

Figure 1.
Entrepreneurial learning model and constructs

Methodology and propositions

Research objectives

It is proposed that while there are several models available to enhance entrepreneurial education outcomes, two of the most recently developed are those suggested by van Vuuren and Nieman (1999) and Pretorius (2001) as has already been described. Both models give guidelines for the development of new entrepreneurship education programmes as well as to evaluate existing programmes for completeness. Both were used in the development of existing programmes in higher education.

The objective of this research is therefore firstly to determine if the models are similar and secondly to establish an improved model if necessary.

Propositions

Being South African developed models and despite being developed recently and independently it is reasoned that both are based on the existing theory within the global entrepreneurship body of knowledge. Therefore the two models should contain the same key elements. The first proposition is therefore that:

Plo: The two models have the same focuses and therefore add the same constructs to the thinking on entrepreneurial education

PI a: The two models have different focuses and therefore add different constructs to the thinking on entrepreneurial education

Depending on the acceptance of the alternative proposition (if *Plo* is rejected), the second proposition is proposed namely:

P2o: Integration eliminates the weaknesses of the individual models.

P2a: Integration does not eliminate weaknesses of the individual models.

If the integration process eliminates the weaknesses of the individual models, the third proposition is proposed as:

P3o: The integrated model enhances the parameters for entrepreneurial education programmes.

P3a: The integrated model does not enhance the parameters for entrepreneurial education programmes.

Design

The research was designed as a formal study using secondary data on entrepreneurial education. Firstly, a qualitative in-depth comparative analysis of the two models was done. Each construct within each model was explored for extent, level of detail, strength of focus and intent. The comparative contributions, strengths and weaknesses were identified and listed. The result of the comparison is shown in Table I.

Secondly, the entrepreneurial education model of Pretorius (2001) was converted to a linear format as used for the entrepreneurial performance model according to van Vuuren and Nieman (1999) for improved and meaningful comparison. Each construct was investigated and compared for the elements included within each construct.

Thirdly, after the similarities and differences of the constructs were identified, a new model was proposed to include all the elements based on the results of the

comparative analysis. The aim was to "cover-up" all "deficiencies" in the individual models.

Fourthly, the constructs of the new model were explored for support from the literature.

Findings

Converting the *E/E* model of Pretorius to a linear model was done to attempt a meaningful comparison of the constructs as well as to prepare the way for integrating the two models.

The outcome of the conversion process led to the following linear function for the entrepreneurial education model:

$$E/E = f[\mathrm{a}F(\mathrm{b}A \times \mathrm{c}B/P) \times (\mathrm{d}E/S \times \mathrm{e}B/S)],$$

where: *E/E* is the entrepreneurial education for start-ups; *F* is the facilitator skills, knowledge and motivation; *A* is the approaches used by facilitator(s); *B/P* is the business plan utilisation; *E/S* is the entrepreneurial success themes and knowledge; *B/S* is the business skills and knowledge; and a to e are constants.

Table I depicts the comparison of the two models showing their individual strengths, weaknesses and differences. It is obvious that there are several similarities and differences between the two models as expected. Concerning the core constructs of each model, it is clear that motivation is much stronger in the entrepreneurial model while the facilitator and approaches (pedagogy) constructs are much stronger in the entrepreneurial education model and therefore identifying weaknesses for both models.

The context description by Pretorius (2001, p. 124) does not change the model significantly but contribute to clarity and focus during the programme development. The context also makes up part of the evaluation system as it partially sets the goals of the programme as determined by the context. From the programmes that have been developed from the entrepreneurial performance model it becomes apparent that the context was well considered for the different programmes. The same was observed for the programme developed with the entrepreneurial education model.

Compared to the importance that van Vuuren and Nieman attach to the motivation construct in their *E/P* model, the *E/E* model of Pretorius is markedly weak for this construct despite being implied within entrepreneurial skills construct. Reasoning that performance is dependant on the individual's motivation and adding the motivation construct to the model, will therefore improve it significantly.

Table I shows the detail elements that make up the core constructs for each of the models.

From the Table, the following observations should be noted:

- The nature of the *E/P* model doesn't require reference to approaches and the facilitator as constructs as its focus is on performance of the entrepreneur rather than the success of the training course.
- The business plan construct is implied as part of the business skills required for the *E/P* model while in the *E/E* model it is regarded as an important tool for training especially to assist in the conceptualisation of the holistic picture of the venture and its future operations.

- The business plan construct can also be regarded as part of the approaches construct as it forms part of the pedagogy used to develop insight into the holistic business. The value of the business plan itself is probably less than the value of the creation process and opinions vary widely between academics, financiers and entrepreneurs.

Integration of the two models

Although motivation to excel is mentioned as part of the entrepreneurial *(E/S)* skills construct according to Pretorius, it is considered as key to the *E/P* model. Both *E/S* and *B/S* are common to both models and therefore the following integrated model is proposed to educate for entrepreneurial performance:

$$E \text{ for } E/P = f[\mathrm{a}F \times \mathrm{b}M(\mathrm{c}E/S \times \mathrm{d}B/S) \times (\mathrm{e}A + \mathrm{f}B/P)],$$

where: *E* for *E/P* is the education for improved entrepreneurial performance; *F* is the facilitators ability, skills and experience *(E/E* model); *M* is the motivation *(E/P* model); *E/S* is the entrepreneurial skills (both models); *B/S* business skills and knowledge (both models); *A* is the approaches of learning used *(E/E* model); *B/P* is the business plan utilisation as an approach (both models); and a to f are constants (0 > constant < 1).

Education for *E/P*, therefore, is a linear function of the facilitator's ability and skills (aF) to enhance motivation (bM), entrepreneurial skills *(cE/S)* and business skills (cLB/S) through the creative use of different approaches (values of e^L) and specifically the business plan *(iB/P).* It is important to realise that the constants will have a value ranging between zero and one. For example, a facilitator could have very low skills and abilities that he would apply but it is above absolute zero. The same would be true for the constants of the other constructs that have to do with the learner mainly.

The constants in the equation intend to depict a value above zero and one. Theoretically if all the constant values are equal to one, the optimal number of successes will be achieved through the educational programme followed. Rationally this is probably not possible, as some elements will be more successfully achieved and transferred than others. The constants are influenced by the context.

The context is always relevant during programme development as would be evident by comparing the focus of post-graduate courses to basic start-up courses. Typical factors considered as part of the context includes previous experience of participants, their educational level, required outcomes, reason for participation and the needs of the target group as described by Pretorius (2001, p. 138). Although not included in the model, it is a basic assumption to guide the programme development.

Discussion of findings

The two models have different origins. While the *E/P* model focuses on an improvement of entrepreneurial performance and "what" to do to achieve this, the *E/E* focuses on education as its point of departure. "How" to achieve the results is, therefore, also of importance for the design of the education model. Solomon *et al.* (2002, p. 6) would refer to the *E/P* model as more focused on the content compared to the *E/E* model that is more focused on the pedagogy.

The multiplicative nature of the new model points to minimum requirements that any programme that aims to contribute to venture start-ups should have. Any construct, that when evaluated, is completely absent will result in zero success levels

while weakness in a particular construct will decrease effectiveness in overall outcome of the programme.

The learning approaches and business plan utilisation constructs are proposed to be additive because using the business plan will improve the approaches construct in the new model.

Obviously, the measurement instrument (Pretorius, 2001, p. 200) will also have to be adapted to measure the effectiveness of entrepreneurial education programmes based on the new model.

The first proposition - that the two models have the same focuses - can be rejected based on the outcome of the analysis as shown in Table I. The greater importance that the *E/P* model attaches to motivation makes the model different. Similarly, the absence of acknowledgement of the facilitator's role and the approaches used during knowledge and skills transfer points to another difference. The alternative proposition, i.e. that the two models have different focuses and therefore add different constructs to the thinking on entrepreneurial education is, therefore, accepted.

The second proposition - that integration of the two models eliminates the weaknesses of the individual models - can be accepted based on the combination being achieved by adding shortcomings of one model to the other. Logic determines that two models/systems with different weaknesses will complement each other during combination unless there are elements with opposing effects. In this combination there are no opposing complications due to the integration.

The third proposition - that the integrated model enhances the parameters for entrepreneurial education programmes - is accepted based on the improvement that the integrated model demonstrates over both its building blocks. This is clear from the addition of constructs that are absent from the original models, thus resulting in the improved model. The integrated model is developed to eliminate the weaknesses of the individual models by adding the elements that were absent.

Conclusions

The proposed integrated model is much more complex than any one of its building blocks. Care should however be taken not to prescribe too much detail to govern the development of an entrepreneurial course as the context will dictate most of the content as well as the level it should be offered to the specific target group.

The impact and role of the facilitator on the entrepreneurial education process and success of the programme outcome is underscored - again. How dependent, is however not clear.

The key issue that seems to differentiate a more successful learning programme for opportunity identification and business start-up from an average programme is therefore whether there is attitudinal and behavioural modification by the participant after having attended the programme. This modified attitude will lead to activities associated with business start-up. If the facilitator can impact on the participant in such a way that the attitude and behaviour are modified, the programme will most probably lead to more venture start-ups. Fiet (2000, p. 108) also highlights and supports the unique and critical role of the "teacher" in the pedagogy of entrepreneurship training.

Thus, even if a learning programme includes the best knowledge and skills (content) about venture start-ups as its output, there is no guarantee that participants will act

entrepreneurial unless their mindset, willingness to take risks, confidence, attitude, and behaviour have been influenced as well. Bruyat and Julien (2000, p. 174) support both elements with their model of entrepreneurship that include both the individual and the new value that is created. The one cannot exist without the other.

The transfer of the requisite knowledge and skills is, therefore, the easiest part of training and is incorporated in most training programmes. Changing the behaviour to engage in the start-up process is what really matters and which lacks as a pronounced outcome of most programmes.

All the constructs of the proposed model contribute through a certain synergy to enhance the outcome of entrepreneurial training programmes. If one construct is overlooked or under developed, the programme outcome would suffer. The proverbial concept of the chain that is as strong as its weakest link is relevant to the training programme and its constructs. The educational programme is, therefore, only as good as its weakest construct. This is specifically relevant because of the high level relationships between the model constructs.

The integrated model is in line with Solomon *et al.* (2002, p. 6) who suggest that entrepreneurial activities are a function of human, venture and environmental conditions. Typically motivation and entrepreneurial skills would be elements of the human skills while business skills and the business plan utilisation are elements of the venture skills. Except for the normal environmental factors governing a strategy and operation of the venture, the approaches used and the facilitator will contribute as elements of the learning environment.

The ability of the facilitator, however, can match the constructs in the model mix to its context by applying the environmental imperatives, the way of being, apprenticeship, reinforced thinking, and a multidisciplinary approach to achieve the behavioural changes required. Using different approaches, the facilitator must blend motivation, entrepreneurial and business skills differently depending on the contextual requirements.

Thinking about motivation and the problems that it poses within the working environment in general, emphasises that motivation of the learner is probably the toughest challenge to the facilitator to achieve compared to business skills and reading the environment.

To summarise the findings, it could be stated that the success of entrepreneurial and small business learning overwhelmingly depends on the facilitator construct of the programme despite having the same value as the other constructs in the model. A good facilitator or group of facilitators could, therefore, achieve more with poor programme content than poor facilitators could do with good programme content. Throughout this study, the important role of the facilitator in the learning process has been constantly emphasised. It thus seems that the facilitator is the key construct of the proposed model while the other constructs serve as the tools with which to achieve the desired outcome.

The proposed model now raises several questions that are significant to the overall success rate of entrepreneurial training. The new model demands above average human abilities from the facilitators of entrepreneurial education and their capabilities to lead learning in this field. Learning to start a business requires different and creative approaches of which the utilisation business plan is the most important approach. This raises questions about facilitation and some that come to mind are:

- Can people without business experience facilitate entrepreneurial education successfully?
- What are the entrepreneurial and business experience levels of the average facilitators of entrepreneurial education programmes?
- What roles do experience, personal skills and knowledge play in the ability of the facilitator to transfer motivation, entrepreneurial and business skills?
- What is the role of the facilitators own achievement motivation on the -programme outcome?
- Can average schoolteachers be entrepreneurial facilitators?
- Can train-the-trainer programmes work for entrepreneurship development?
- Are there substitutes for "learn as you go" as far as entrepreneurial education approaches are concerned?

The learning approaches for entrepreneurship development that contribute significantly and enjoy the widest use as reported in the literature are mainly own venture start-up programmes, business plan creation, simulation, case studies and, to a lesser extent, class discussions and projects. The case study method, nonetheless, has established itself as the most suitable approach used in the education of students at all levels of entrepreneurial training. One possible reason for this is that the case study method is easy to use within the conventional classroom situation and with large classes. However, it may also be possible that the use of case studies demands less effort from the traditional lecturer.

In addition, Pretorius (2001) has reported that the element usually associated with more successful approaches relates to the involvement and participation of the learner in the learning process. The highest level of learning success is achieved when the participant changes his attitude and willingness to assume responsibility for his own learning, thereby modifying his own behaviour. With small business entrepreneurial training, the learner will often start a venture indicating towards a behavioural change rendering a successful outcome of the educational programme.

Shortcomings of this paper

One of the shortcomings of the model as proposed in this paper is that its provision for incorporation of the context of the programme is insufficient. However, the context would normally be considered as was done to differentiate between the BCom, MPhil and PhD in Entrepreneurship degrees for example. The BCom has as outcome to increase start-ups through the participants that start their own ventures. The MPhil, on the other hand, has as its outcome to impact on the enabling environment for entrepreneurs by influencing the people that work in these environments while the outcome of the PhD is to contribute to the body of knowledge for South African entrepreneurship.

It is suggested that a longitudinal study be executed where participants of the three programmes are monitored for entrepreneurial activity.

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