
Assessment of entrepreneurship education: A pilot study

Marius Pretorius

Department of Business Management, University of Pretoria, South Africa
marius.pretorius@up.ac.za

Abstract

Many institutions embark on entrepreneurship education, as ultimately start-ups benefit economic growth; but institutions unfortunately lack tools and benchmarks for assessing the quality of their programmes. The uniqueness of different programmes, however, does not allow meaningful comparative assessment between them, so this study applies an assessment model that gives feedback on a case study.

An in-depth case-study application of the assessment model indicated the following: Programme context; Entrepreneurial knowledge and skills; Business knowledge and skills; Approaches; Business plan utilisation; and the Facilitator, as key constructs for evaluation. The assessment identified major shortcomings and strengths of the case under investigation. The article concludes that the assessment tool accurately measured outcomes of the programme despite its specific context, and that the programme covers the basic requirements for entrepreneurial education that are required by the literature. The assessment tool has general application value.

Organisations like the Qualifications Authority could use the Entrepreneurship Education Assessment Model (EEAM) to ensure that service providers offer quality programmes. Assessors and educators would benefit from better understanding of how various constructs contribute to the successful delivery of entrepreneurship education.

Key words and phrases: entrepreneurial education, assessment, economic impact.

Introduction

Learning institutions at all levels are under increasing pressure from government agencies, the public and even students to show that graduates are achieving the desired learning goals (Sullivan & Thomas, 2007:321). Gibb (2006:4) states that there is a dominant need to develop a model of entrepreneurship/enterprise education that has wide appeal from primary, through secondary and further to higher education, that fits with broad educational goals, can be imbedded in curricula, and will be accepted by educators and allow for notions of progression. Assessment duly forms part of this model.

In South Africa, the national strategy for the development and promotion of small business identifies small business development and the empowerment of entrepreneurs as the most important avenues for economic growth (Nieman 2001:445; RSA, 1996). Gorman, Hanlon and King (1997:56) confirm that there is widespread recognition that entrepreneurship is the engine that drives the economy of most nations. Timmons, (1999:4) also refers to entrepreneurship as “America’s secret weapon”, and argues its value as the main contributor to the superior position that the United States holds as part of the global economy. Timmons and Spinelli (2004) confirm entrepreneurship to be the fundamental differentiating factor in the United States culture, where 37 percent of the population is somehow involved in their own ventures apart from their regular jobs. The Global Entrepreneurship Monitor reports that South Africa ranks in the lowest quartile for “total entrepreneurial activity” (TEA) of all the participating developing countries, with only six out of every hundred adults reported as being entrepreneurial (Foxcroft, Wood, Kew, Herrington & Segal, 2002:4). The key factor in improving the low entrepreneurial activity, according to the latest GEM report, is education (Orford, Herrington & Wood 2004:34).

This low TEA underscores the need for a large pool of entrepreneurs to sustain a successful economy, as pointed out by Sunter as early as 1994. However, four years later, Sunter (1998:2) still called 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". Today, the use of the phrase *entrepreneurial development* has become a political buzzword in the speeches from almost every public platform, while Sunter's (1998:2) call is still unanswered 13 years later.

Entrepreneurial education acts as a launch pad for entrepreneurial activities, with its main focus being the stimulation of entrepreneurial activity and performance. This fact is fundamental to ensuring that the necessary research conducive to economic growth is in fact conducted in this field. Education within this perspective is supported by the work of Fayolle (1998:1), who defines education as an intentional effort to teach the specific knowledge-bearing abilities necessary to better completing a project.

Hirsowitz (1992:25) argues that education creates new opportunities and possibilities, as well as a consciousness of how to attempt and complete certain tasks in a different way. The trainability of entrepreneurs is accepted as a given in this study and is supported by Antonites (2003:55), Hisrich and Peters (1998:19), Kuratko and Hodgetts (1998:10), Le Roux and Steyn, (2007:330), Rosa and McAlpine (1992:64), and Welsch (1993:14).

This paper focuses on applying the assessment model to a case study and evaluates the outcome and applicability of the model. It reports firstly the relevant literature and secondly the methodology and application of the model. Thirdly it describes findings after application. Finally the conclusions are presented with discussion, as well as limitations of the study.

Problem statement

The problem of this study is concerned with assessment methodology of an entrepreneurial education programme.

One proposition is set to guide the study:

P1: The proposed measurement instrument (EEAM) can assess the programme in terms of covering the basic requirements for entrepreneurship education. In fact it challenges the claims of Pretorius (2001) to that effect.

Literature review and background to entrepreneurial education in Southern Africa

Given that entrepreneurship and its manifestations in the business environment are very complex constructs, the education of entrepreneurs and business managers and trainers cannot be less complex. It is argued that the subject and the associated issues, its content and the level taught vary significantly depending on the objectives of the programme, the compiler of the material, and the knowledge, experience and even motivational level of the facilitators. Suffice it to say at this point that the success of education methodologies for developing small business entrepreneurs depends on making sufficient provision for complex situations, and incorporating multi-dimensional elements, as will be proposed in this study.

It is critical at this juncture to state the working definition for this study of *education* as the process whereby knowledge or training is provided, especially through formal teaching and instruction of (mainly) the theory of a specific concept. It also encompasses *training*, which means to make proficient through specialised instruction and practice to enable successful execution (thus it includes inculcating skills).

The original purpose of the EEAM was primarily to explain the minimum requirements for entrepreneurial education programmes and, secondly, to determine the constructs which should be included in the successful education of small business entrepreneurs, in order to ensure optimum learning and resultant start-ups (Pretorius, 2001:133). The assessment constructs of the model are:

- Entrepreneurial success themes
- Business knowledge and skills
- Approaches to business learning
- The business plan, and
- The facilitator (also see Figure 1)

While the constructs are well described in Pretorius, Nieman and Van Vuuren (2005:413), each is explained briefly here for clarity and for meaningful use in the assessment.

The programme context

Using instructional materials that are matched to a student's level of academic skill is a critical strategy for improving performance (Power, 2006:340). Research (Mendenhall, Wu, Buhanan, Suhaka, & Mills, 2006:84) has demonstrated that when learners acquire knowledge in the context of real-world tasks, they are more motivated to learn. The context of every education programme is therefore different, based on the philosophy, paradigms and experience of the programme developers (Mitra, 2002:197) and needs to be addressed. This article therefore refrains from comparing programmes and rather assesses the case programme against the achievement of a standard as proposed by the EEAM.

Assessment of the context firstly requires insight into the overall learning programme (Gibb, Singer & Korynski, 2006). The context contains several elements as proposed by the EEAM, and is the main force that determines the programme's assemblage. The elements pertaining to the programme context should be considered for a learning programme in the field of small business entrepreneurship. The following apply: previous experience levels of the learner at the inception of the education intervention; prior educational levels; critical outcomes to be achieved on completion of the education (e.g. practical start-up vs. knowledge about start-up processes); reason for participation in the education; and needs of the target group undergoing the education (necessity vs. opportunity reasons) as suggested by Mitchie, Glachan and Bray (2001:455). Within this context, the five assessment constructs are now described based on Pretorius (2001:245).

Entrepreneurial success themes – Construct 1

Timmons and Spinelli (2004:249) describe the key elements that contribute to entrepreneurial success as broad themes (topics). Each of the themes is made up of several elements. The origin of their research data is mainly the opinions and personal evaluations of successful entrepreneurs. The six main themes that they list include: commitment; leadership;

opportunity obsession; tolerance of risk, ambiguity and uncertainty; self-reliance and the ability to adapt; and the motivation to excel. Gibb (2006:32) supports such characteristics. It is clear that each of these themes contains sub-elements. The EEAM accepts these six success themes as crucial elements that will require much attention during the development and education of entrepreneurs for start-ups. Overlooking these themes during education will probably contribute to the failure of the programme and the learner and resultant outcomes.

Timmons (1999:3) confirms the complexity of entrepreneurial success and agrees with the earlier conclusion of Kaufman and Dant (1998:5) that consensus about the construct of entrepreneurship remains elusive. It is acknowledged that the different elements may differ in level of relevance and importance, depending on the specific situation or course that is evaluated.

Business knowledge and skills – Construct 2

Nieman (2000:1) suggests that most entrepreneurial programmes focus on aspects of management that are standard items in most other programmes. The business knowledge and skills construct deals with the theory that supports and underlies the functioning of a venture in its environment. The range of subject knowledge elements required, and the complexity level of the presentation, would be determined by the context of the education programme. Basic subjects such as finance and costing, marketing and sales, operations, management, human resources and strategy should be covered.

For nascent (considering starting) and novice (first-time) entrepreneurs there are several theoretical subjects that should be covered as a minimum requirement. These typically include: customer needs and target markets, product offering and marketing, operations, strategy and environment, finance and administration, basic economic laws, management concepts and more. Most of these topics are found in material for education at any level. Normally there is sufficient focus on entrepreneurial education programmes in this construct of the model.

Currently the problems of entrepreneurial education centre on the poor consensus regarding the content of courses and curricula. Solomon, Duffy and Tarabishy (2002:1) support this statement by pointing out the lack of substantial standardised components within the entrepreneurial education programme. Morris and Hooper (1996:14) strongly argue that no single theory is being developed as the “content estimator” of entrepreneurial education. Research in this field tends to be explorative and descriptive, as well as “cross-sectioned”, and more dependent on *post facto* statistical testing than on *a priori* hypothetical testing. Testing in general tends to be small and non-representative.

Rosa and McAlpine (1992:73) further point out that more educational emphasis should be placed on the complex and multi-disciplinary aspects of entrepreneurship. Programmes that are regarded as successful may vary between being exceptionally simplistic and being mostly abstract.

Approaches to business learning - Construct 3

Delivery modes should fit learning styles (Coutis, 2007:508). The techniques or methodologies that influence the success of entrepreneurship education are numerous, but

could be categorised according to their apparent learning effectiveness. The key learning techniques with their associated learning effectiveness levels range from formal, one-way lecturing of theory, case studies, projects, simulations, exposure and visits to businesses, to practical establishment of ventures, or may include several combinations of the above.

Van Vuuren (1997:1) quotes several authors in an assessment of existing entrepreneurship programmes as:

- confirming an over-emphasis on theoretical & quantitative instruments;
- having too few relevant qualitative factors;
- placing too much emphasis on instruments, concepts and models;
- focusing on bureaucratic management only;
- placing too little emphasis on entrepreneurial activity; and
- using facilitators that concentrate more on virtual than on real problems.

Van Vuuren (1997:1), pointing out that the approach of current education systems is very pragmatic, suggests the following desirable factors: active involvement in entrepreneurial activities; an understanding of the dynamic characteristics of the entrepreneurial environment; and the introduction of existing aspects of reality into the practice situation.

Curriculum development in this case study was imbedded in the 1993 and still relevant theorem of Gibb (1993:11), who distinguished between normal didactic methods of education and a more entrepreneurial approach (see Table 1).

Table 1: Differentiation between “didactic” and “entrepreneurial” education approaches

Didactic method	Enterprising method
Learning from teacher only	Learning from each other
Passive role as listener	Learning by doing
Learning from written text	Learning from personal exchange and debate
Learning from “expert” frameworks of teacher	Learning by discovering (under guidance)
Learning from feedback from one key person (the teacher)	Learning from the reactions of many people
Learning in a well-organised, timetabled environment	Learning in flexible, informal environment
Learning without pressure of immediate goals	Learning under pressure to achieve goals
Copying from others discouraged	Learning by borrowing from others
Mistakes feared	Mistakes learned from
Learning by notes	Learning through problem solving

Source: Adapted from Gibb (1993:13)

This “enterprising” model can be applied directly and is also endorsed by the fundamental characteristics of action learning, although a certain level of theoretical intervention takes place within the framework of creativity, innovation and opportunity finding in an entrepreneurial context. Entrepreneurship as a subject is globally seen as an applied science, and therefore requires a delivery mode that supports a more practical education approach.

In general, the more the learner is involved in and responsible for the learning that takes place, the better the learning approach. It is for this reason that case studies, simulations and business plan executions are such important approaches. There is a strong interaction between the facilitator and the approach selected.

The business plan – Construct 4

The business plan forms an integral part of any education programme for business entrepreneurship and especially start-ups (Mitra, 2002:195). Financiers and venture capitalists often use it as a sole selection tool of the profit potential. The reason for this is the fact that the business plan is the *integration* of all the required elements that determine the projected success of the business, although it is no guarantee of success during the implementation of the plan.

Timmons and Spinelli (2004:368) argue that a business plan is obsolete as soon as it leaves the printer. This is absolutely true, as the value of the business plan is found in the *process* of its creation. Being able to compile a proper business plan indicates a complete understanding and sufficient homework, proper integration and research to show that the opportunity, resources and the entrepreneurial team can be integrated successfully. Any experienced person who evaluates business plans will know how easy it is to determine flaws in understanding and assumptions.

The process of developing the plan forces the potential entrepreneur to consider all aspects, and thereby it acts as a tool in reducing risk. Not only is the creation of the business plan very important to the learning process, but also presenting and defending the plan publicly before peers and lecturers; this is an even higher level of learning as it opens the “defendant” to questions, criticism and new perspectives. This process is also beneficial to the peers and exposes each to a wide variety of industries and circumstances that are crucial to their own learning. No meaningful business education can result without involvement in the creation of a business plan, at the least (Timmons & Spinelli, 2004).

The business plan has to describe complex issues in a meaningful way. It further requires a basic knowledge of all the key concepts (obtained from the business knowledge and skills construct) relevant to a successful business operation. These concepts should be mastered before one can participate in the business planning process. Pretorius (2000a:12) suggests that an entrepreneurial education programme that does not make provision for a business plan cannot be considered at all acceptable where the creation of start-ups is a required outcome.

The facilitator – Construct 5

The tutor (facilitator) has always been a critical part of the learner support system (Kelly & Mills, 2007:153). It is questionable whether a lecturer without experience and exposure to the business environment and its accompanying intricacies can facilitate learning the real issues of starting and managing a business. To facilitate someone else’s learning is probably much more difficult than to teach subject knowledge to a student. Wilkenson (1988:5) and Holtzhausen (2005:98) suggest that when the teacher assumes the responsibility for causing the student to learn, he changes the approach away from solely lecturing content to involvement and *passion* for his subject in order to ensure that learning takes place.

Nonis and Hudson (1998:4) suggest five general dimensions of effective teaching that include enthusiasm, clarity, rapport, classroom interaction and learning. The facilitator is responsible for creating the learning environment rather than being only responsible for teaching. One could ask how many teachers of entrepreneurship and business courses are really equipped with the knowledge and skills required to meaningfully train entrepreneurs, especially given the complexity of the subject.

Although the facilitator is one construct of the model, he or she also *controls* the manner in which the other constructs are combined to result in the best learning during the programme. The facilitator uses reinforced thinking processes, altering the method of participation and apprenticeships and uses a multi-disciplinary approach to achieve the correct combination of the constructs (Pretorius *et al.*, 2005).

Research methodology

Pretorius (2001:264) describes the assessment instrument based on the entrepreneurial education assessment model containing the constructs as described above. The EEAM was applied by an assessor to the course brochures, course design and materials, curriculum content, tests, memorandums, application forms and interviews held with the different facilitators and learners of the programme. A second round of interviews was also held to clarify and confirm trends from the initial assessment results. The study was an in-depth case-study analysis of a qualitative nature. The “judgements” made by the assessors are in response to questionnaire statements. Statements were grouped together to form the constructs and the results are shown by radar diagrams (see figures 1 to 7).

Because of their inherent complexity and multi-disciplinary content, it would hardly be possible to quantitatively measure and assess entrepreneurship education programmes. Respondents were therefore asked to qualitatively evaluate the programme based on their *opinions and perceptions* of the elements, and their coverage within the proposed guidelines in the questionnaire. Study matter, inclusive of a study guide, readers, time schedules, programmes, notes and facilitator guidelines, was made available to the assessor as additional information that could improve the assessment. Most of the elements (of the model constructs) were assessed on face value, and this resulted in largely subjective assessment (opinion) of the content, due to the broad and sometimes vague set of factors under consideration. Therefore, the assessor had to be knowledgeable and experienced in small business and entrepreneurship as subjects. After the initial assessment, any deviations from the midpoint were further investigated during second-round interviews, in order to find causes for such deviations and to improve understanding.

The questionnaire (available on request from the authors) used a seven-point Likert scale, where 7 is the highest score and 1 is the lowest score. The relevant elements of each model construct are evaluated individually, with an average value for the category determined thereafter. During the interviews, respondents were requested to determine the most appropriate score for each specific element under consideration. Interviews were held with the designers (2 persons), core lecturing personnel (5 persons) and learners who had completed the course (5 persons), and their results were pooled to find the average appraisal for the respondents for each questionnaire item. It was necessary for the assessor to conduct an extensive and in-depth study of the programme before the assessment was done. At this point it is important to state that the contributions from the learners were assessed as weak (and

subsequently discarded), because they did not give any additional information above that already obtained from the other interviewees.

Results

The case description

The assessment was applied to the M Phil in Entrepreneurship programme offered at the University of Pretoria. The design of this programme was based on the underlying philosophy and model of Van Vuuren and Nieman (1999:6), which states that entrepreneurial performance is a function of the individual's motivational level, the entrepreneurial skills and the business skills, expressed as follows:

$EP = aM f[bE/S \times cB/S]$ where

M = Motivation

E/P = Entrepreneurial performance

B/S = Business skills

a,b,c = constants of existing skills

All the units covered during the course are focused and developed to support the elements described in the above formula. The broad unit modules include: entrepreneurship theory and history, the need for entrepreneurship, achievement motivation, creativity and innovation, window of opportunity, ethics, failure in business, enabling environment, managing growth, small business management, small business counselling and mentoring, development economics, international entrepreneurship, corporate entrepreneurship (intrapreneurship), legal environment and issues, research methodology, colloquiums and a dissertation.

The Chair in Entrepreneurship at the University of Pretoria offers three programmes:

The B Com in Entrepreneurship aims to equip the learner with all the necessary skills to start and manage a business independently. The course takes three years to complete, and on completion the candidates should preferably have started their own businesses. It is an educational programme with a large "action learning" content and is evaluated based on start-up outcomes. **The M Phil in Entrepreneurship** aims to influence the South African enabling environment through assisting learners (mostly working in the enabling environment) to gain improved understanding of entrepreneurial issues. (A detailed and in-depth analysis of this programme is the aim of this study). The third programme is **the PhD in Entrepreneurship**, which aims to generate and impact on the entrepreneurial research body of knowledge, with special reference to the South African and African contexts.

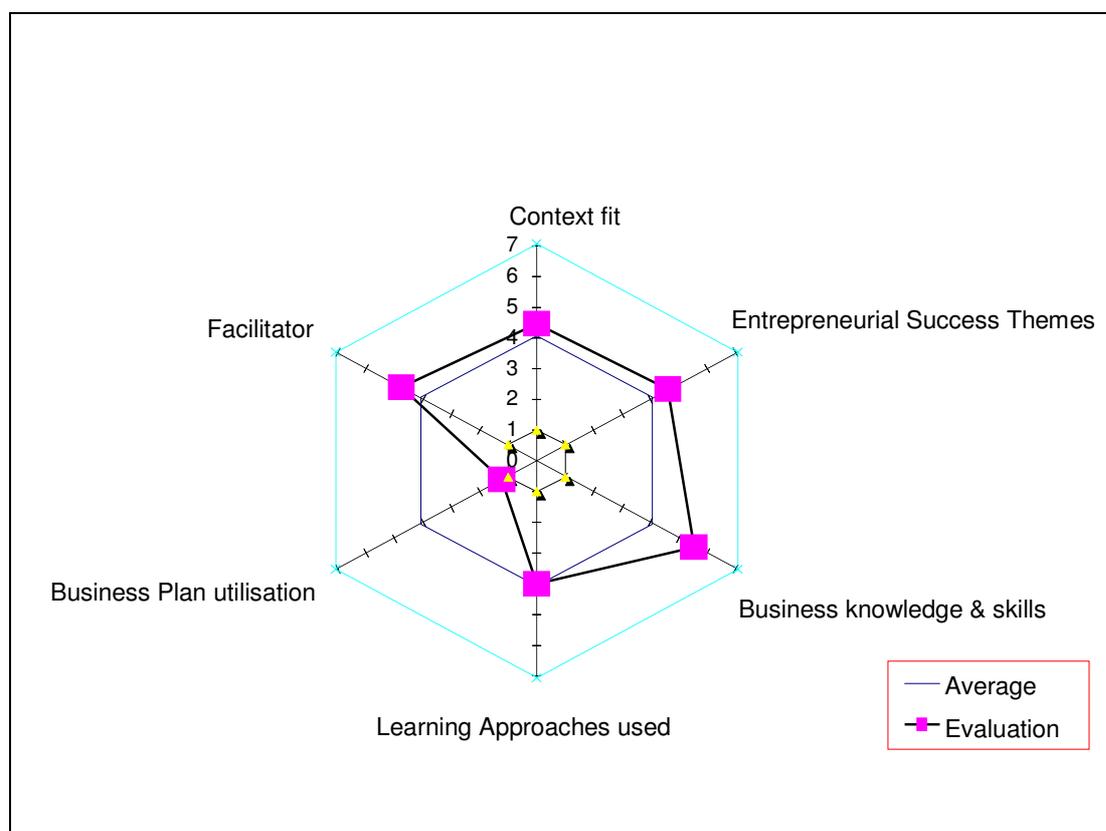
Each programme has different goals in terms of context and outcome. Since the programmes do not constitute the focus of this paper, they will not be explored beyond this reference to their differences. Van Vuuren and Nieman (1999:1) report that they have experienced success in utilising the model as the foundation for their educational programmes. The content of 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 assessment process is modelled on the assessment model proposed by Pretorius (2000b:1). This Entrepreneurship Education Assessment Model (EEAM) considers five key constructs, as postulated by Pretorius (2001:177). These constructs are composites of many factors and related issues of entrepreneurial education.

Assessment of results

Figure 1 shows the outcome of the assessment as a radar screen graph that enables comparison of the different constructs with relative ease. Comparison of the constructs shows that the construct for the business plan utilisation was rated below the scale midpoint value of four, and that of learning approaches rated just above the midpoint. These constructs can therefore be identified as the weaker constructs of the programme, and this was explored further by investigating their individual graphs as shown in subsequent figures. Business knowledge and skills were assessed as the strongest construct in the mix. Figure 1 gives an overview of the programme constructs that are explored in figures 2 to 7.

Figure 1: Assessment results for the programme constructs



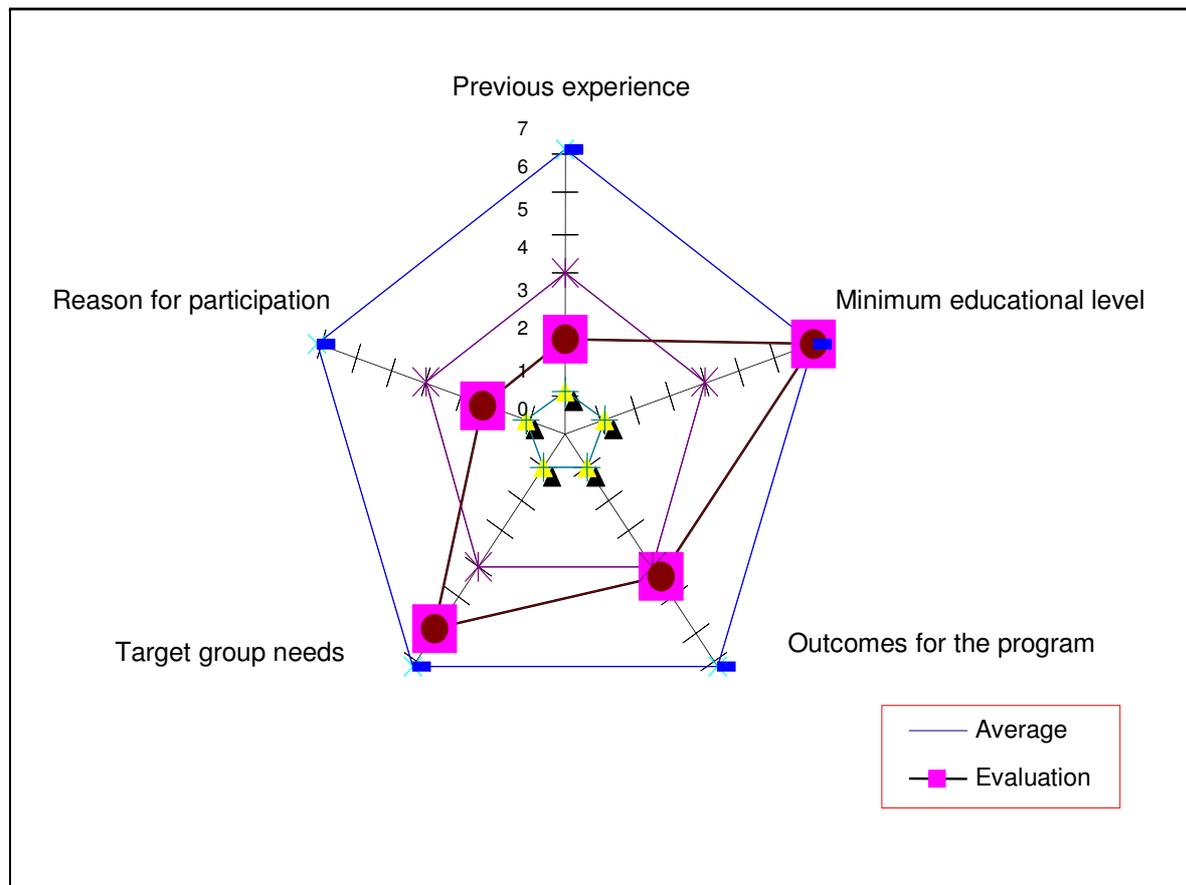
Context of the education programme – assessment outcome

Figure 2 shows the clarity of definition concerning the context for the programme. The programme seeks, as its core outcome, to achieve an advanced level of knowledge and competencies in all areas related to entrepreneurship and small business management. Its target market includes entrepreneurs, consultants, managers and especially service providers in the small business-enabling environment and development sector. A salient envisaged outcome of the course is to build capacity in entrepreneurship among those who influence entrepreneurial performance within their working environments – especially government and quasi-government.

Being a master level programme determines the educational entry requirements, as participants have a basic degree or higher diploma as prerequisite. There is no prerequisite for

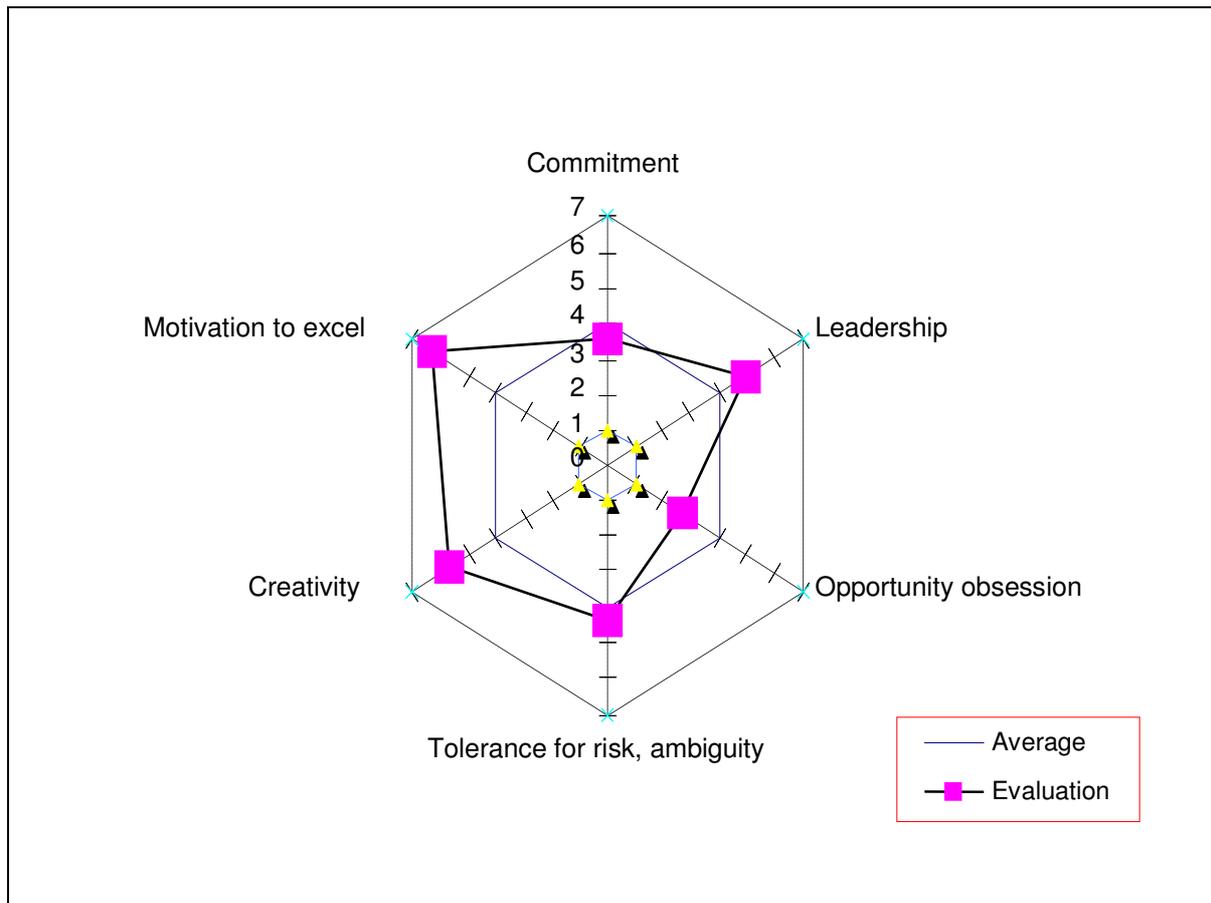
experience in the field of entrepreneurship, but it is used during the selection process to determine “more suitable” candidates. Reason for participation rated low, as learners did not participate with the view of starting their own venture but rather to gain a qualification. There is no specific reference to why participants enrolled for the programme, which creates a platform for further research. Programme designs are therefore subject to specific contexts, which should be considered during programme development.

Figure 2: Assessment results for the context construct



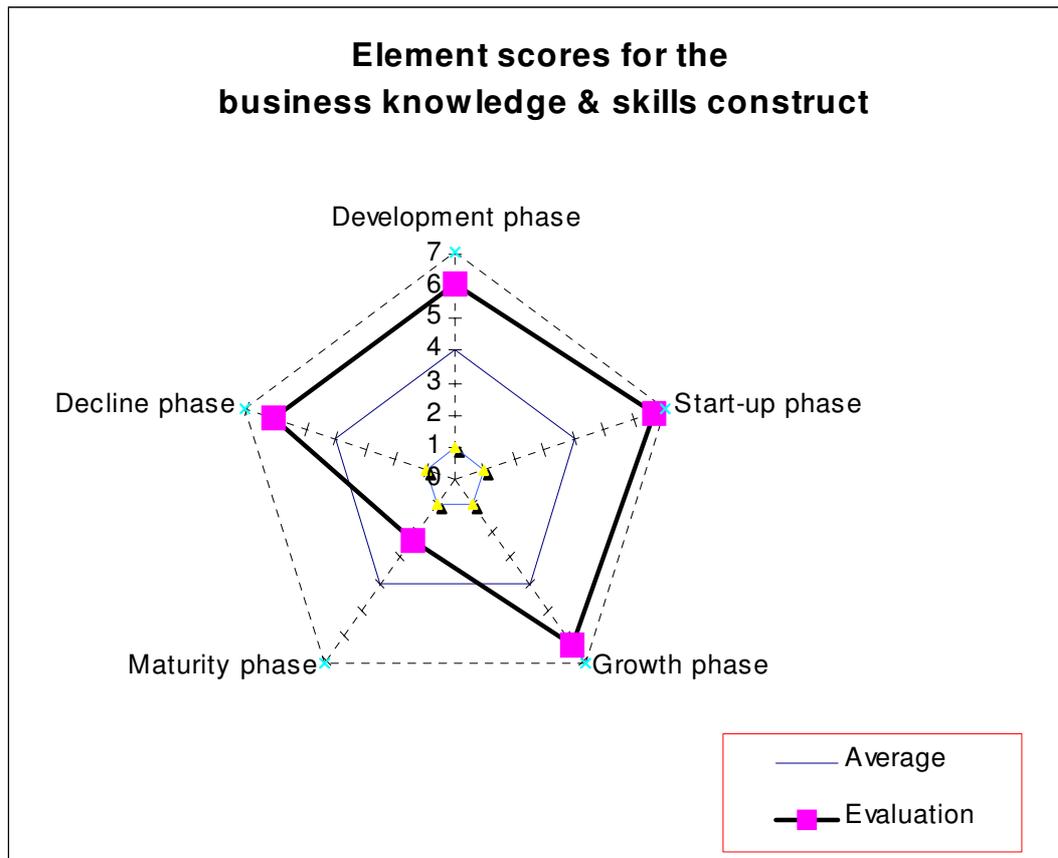
Entrepreneurial success themes - assessment outcome

Figure 3 shows the ratings for elements supporting the entrepreneurial success theme of the programme. The development of commitment and opportunity obsession are rated lower than midpoint, with tolerance for risk and ambiguity rated just above the midpoint. This may be ascribed to the programme not having start-up *per se* as an outcome. Therefore, there seems to be a relationship between this element and the “reason for participation” element from the context construct. Tolerance of risk, ambiguity and uncertainty are inculcated through cases, exposure to a wide range of guest lecturers, and practical assignments within the business environment.

Figure 3: Assessment results for the entrepreneurial success themes construct

Business knowledge and skills – assessment outcome

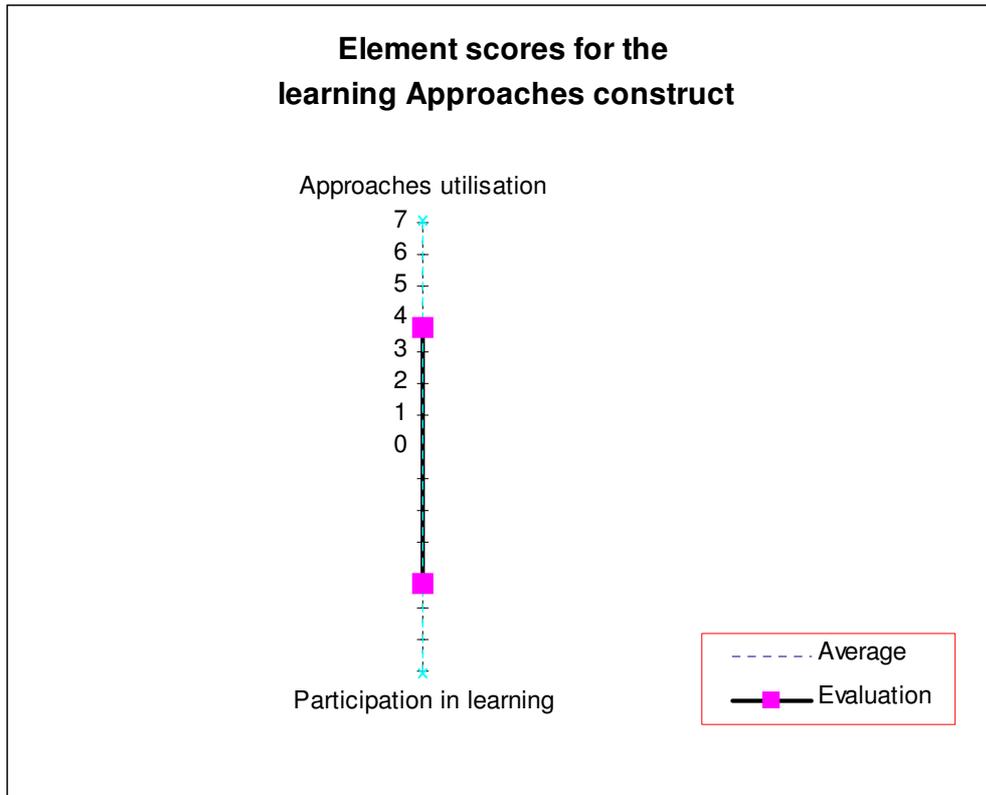
Figure 4 shows that all the phases of the venture life cycle are well covered in the curriculum, except for the maturity phase, where competitive strategies and efficiency issues are highlighted. Second-round investigation into why the maturity phase was assessed as weak led back towards the context of the programme, and specifically the outcomes of the course. Traditionally the content and focus of the maturity phase would be associated with the typical MBA course, which usually focuses on aspects like competitor intelligence, competitive strategies, distribution, communications and efficiency. The M Phil in Entrepreneurship tends to focus more on the incubation, start-up and growth phases, since its aim is to contribute to the number of start-ups, albeit achieving this through an indirect route.

Figure 4: Assessment results for the business knowledge and skills construct

The fact that there is a high measurement for the decline phase was also interesting, using the same reasoning relevant for the maturity phase. The M Phil contains content that is unique, *viz.* declining ventures, failure, turnaround and harvesting from the venture. The content is notably significant, given the high failure rate of small businesses and its crucial impact, such that full comprehension thereof is imperative for any entrepreneurship programme. Typically, previously tested entrepreneurship programmes tested weak for this aspect (Pretorius 2001). New spin-off ventures may also be sought during the decline phase that emphasises the “new” entrepreneurial phase.

Learning approaches – assessment outcome

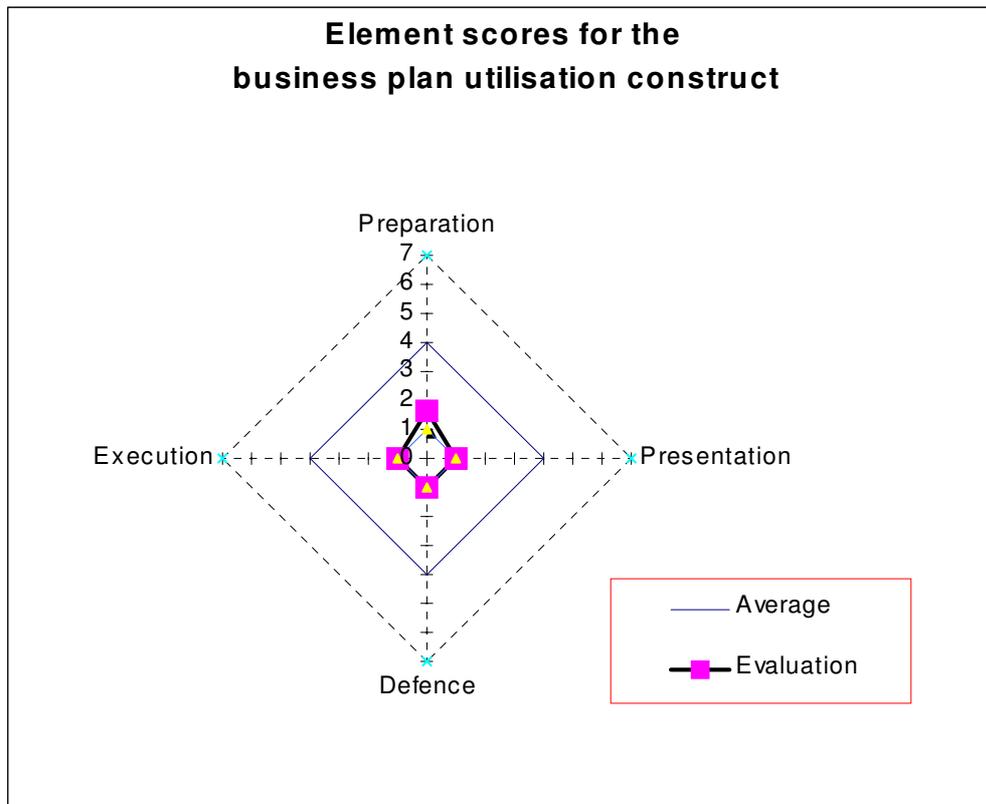
Both learning approaches used and participation in the learning process are rated on the midpoint four as shown in Figure 5. Second-round interviews identified the use of case studies and self-study through assignments, while simulation was absent as a component of the approaches used.

Figure 5: Assessment results for the learning approaches construct

In terms of the approaches used, one aspect that stood out was the colloquium paper that participants have to complete every six months (three times). Participants are required to present an academic research paper, based on a selected hypothesis, proven secondary data utilisation and meaningful conclusions, to an audience (facilitators and peers), where they are publicly criticised and exposed. Reports by participants indicate that this experience is dreaded but is also very gratifying once it is mastered.

Business plan utilisation – assessment outcome

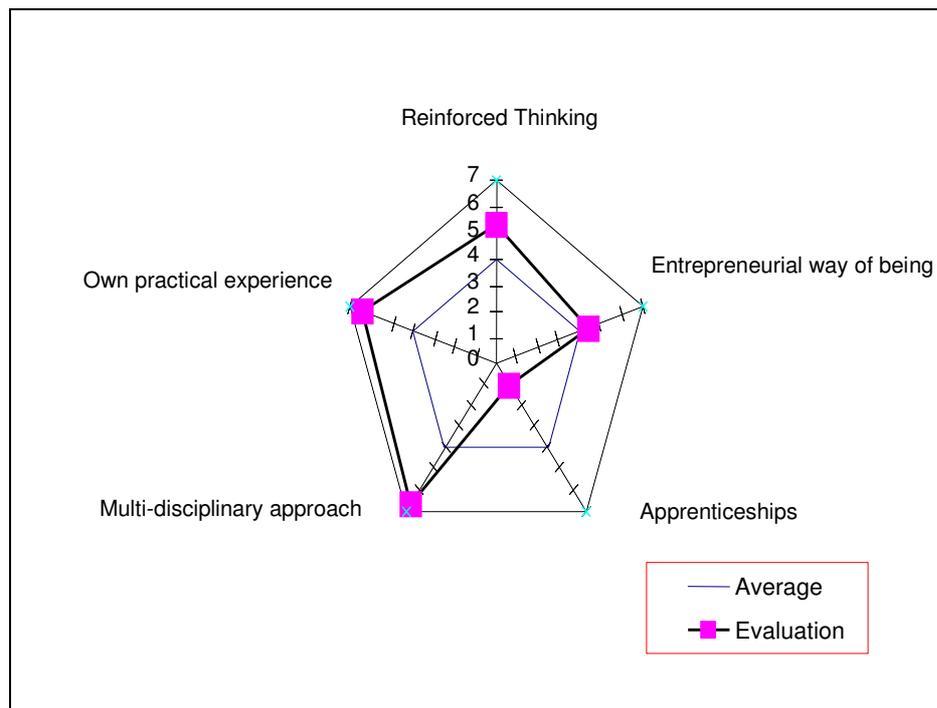
Although business planning is part of the course, there was no provision for practical preparation of a plan and therefore no presentation, defence and execution of a plan, as shown by Figure 6. Second-round interviews, however, indicate that several elements of a business plan are covered but not as a complete or integrated plan. Within the initial courses, where start-up and growth are covered, content includes elements normally associated with a business plan. Several of the participants are involved in compiling or evaluating business plans as part of their jobs.

Figure 6: Assessment results for the business plan construct

Although some elements are covered during lectures and assignments, there is no official use of the business plan, whether in preparation, presentation, defence or execution. During the failure and turnaround module, learners are sent to businesses to determine the level of distress the business may be experiencing. A full opportunity analysis and evaluation are required, similar to that undertaken for the start-up of a new venture, and core to the components of a business plan. Similarly, elements such as the economic model, sales prediction and cash flow are also covered during the turnaround plan that is compiled for a relevant business. Nevertheless, the business plan as an integrated whole was absent.

The facilitator – assessment outcome

Figure 7 shows that the score is significantly below midpoint for the utilisation of apprenticeships in the course. However, second-round interviews show that some element of apprenticeship is covered when learners conduct research and investigations in real businesses for assignments in the different subjects. The facilitator construct of the M Phil programme also attained an average score (close to the midpoint) with regard to the manner of enhancing the entrepreneurial way of being. The practical start-up of new ventures is not paramount in this course and this may be the reason for its being low.

Figure 7: Assessment results for the facilitator construct

To enhance the programme, one could further develop the reinforced thinking process element and apprenticeship opportunities, try different learning approaches or adapt the course. It is not easy to improve this construct. Personal and practical experience of business is probably the *ultimate requirement* for the facilitator. The level of concern for what is learnt is of the utmost importance. There is no easy way to achieve an optimal situation for entrepreneurial learning, as those who can really contribute to learning (business people) are generally not involved in education.

Discussion

The assessment typically focused on identifying the weaknesses of the programme. These weaknesses included the business plan construct and several elements of the other constructs such as opportunity obsession, maturity phase, approaches utilisation and apprenticeships. On the other hand, there are several elements that were assessed as programme strengths, including motivation to excel, knowledge during all phases except maturity, the multi-disciplinary approach and facilitator practical experience.

The case programme contains the relevant elements as based on the formula of Van Vuuren and Nieman (1999:6), namely motivation, entrepreneurial skills and business skills. The assessment indicated certain weaknesses in some areas of their model. Despite the EEAM being designed to evaluate programmes that have the creation of venture start-ups as their primary focus, it appeared useful in assessment of the M Phil programme. Given this perspective, it should however be acknowledged that the case programme has a definite difference in context. Being a postgraduate programme, and specifically aimed at influencing the enabling environment to influence entrepreneurial development in general, it requires a previous first degree from participants. This requirement indicates that participants are

already on a so-called “career path”. Starting a business is not an original outcome of the programme.

The facilitators are key to more start-ups and knowledge transfer. Their responsibility is not only to use the programme optimally with the correct construct mix. Marlow (2007:376) suggests that the key issue that seems to differentiate the more successful learning programme for business start-up from an average programme is whether there is *attitudinal modification* in the participant after attending the programme. This modified attitude will lead to activities associated with business start-up. If the facilitator can impact on the participants in such a way that their attitude and behaviour are modified, the programme will probably lead to more venture start-ups.

One specific weakness of the programme investigated is its lack of using the business plan. Again, the context does not require start-up and therefore the business plan component was considered of lower relative priority. Although several elements of a business plan are covered during other modules of the programme, one reason for not utilising the business plan component as such, mentioned during second-round interviews, is the fact that business plans could be obtained from many sources and be presented by participants as their own work. This has happened before and participants have had to be expelled for dishonesty.

A second weakness is the absence of a specific course that covers the maturity phase of the life cycle. Although there is some inclusion of the relevant issues spread across the different modules, there is not enough financial, marketing, general management and competitive strategy content. Recommendations to improve individual elements and thus the overall construct will be followed by further investigation of the elements identified with negative deviations from the midpoint. Once these elements have been rectified, attention should also be paid to the improvement of the constructs in general. Since the assessment, several alterations have been effected to the programme to overcome the weaknesses identified.

The usefulness of the EEAM’s application is that it identified shortcomings of the programme under investigation – aspects that were lacking or might limit its overall performance.

The M Phil programme seems to fill a specific niche in the market. During 2004 the applications for 2005 exceeded 400, which is a significant oversubscription. Despite its being offered in Pretoria, several applications are received from across South Africa and neighbouring countries.

Some of the specific strengths of the programme as identified by the assessment include its focus on creativity, declining ventures and turnaround and the facilitator experience of business.

Limitations of the study

Several limitations of the study were identified. Firstly, the assessment depends heavily on the perceptions and opinions of the assessors as well as participating respondents. High numbers of respondents were not available to overcome this dilemma. The validation of the instrument therefore depends to a certain extent on the support obtained from the role-players for the assessment results. The second-round interviews assisted to some extent with the face validity of the findings. Responsive changes to the programme post assessment suggest further validity of the outcome.

Secondly, the arbitrary use of the scale midpoint as the distinguishing factor may be criticised. However, there is no common measurement to use as standard for the assessed constructs and elements. Despite this shortcoming, the academic staff responsible for this programme confirmed the assessed weaknesses during second-round interviews.

Thirdly, the number of respondents remains challenging. However, research is under way which will incorporate learners who completed the programme in order to seek confirmation of the findings.

Finally, the EEAM used for assessment of the programme does not test motivation as a construct, but only as an element within the entrepreneurial skills construct. Adaptation of the model was therefore required, and Pretorius *et al.* (2005:413) pay attention to this element. Despite the shortcomings, this paper paves the way for generic assessment of entrepreneurial programmes.

Implications for management

Pedagogical insight is crucial for assessment (Whittingham, 2006:175). Implications for business educators and education policy makers are that the EEAM can be successfully applied to assess start-up programmes used for the development of entrepreneurs in South Africa. The complex nature of entrepreneurship training is systematically assessed to determine weaknesses. Organisations like the Qualification Authority could use the EEAM to ensure that service providers offer quality programmes. Assessors and educators benefit from better understanding of how various constructs contribute to the successful delivery of entrepreneurship education. Those in charge of training entrepreneurs need to be aware of the multiple factors involved if they are to raise their level of sophistication and ability to deliver entrepreneurial education.

Conclusion

Facilitators are ultimately the key construct that impacts on the learner's attitude, thinking and willingness to take the plunge of new venture creation. Facilitators plan how to combine the construct mix, organise the learning, lead the participant through the self-learning process and control the learning process. Much is expected from a facilitator and it is often said that a poor programme with a good facilitator does better than the best programme with a poor facilitator. In this assessment it was clear that the facilitators (designers and lecturers) were able to select a construct mix that supported the specific context of the programme.

The learners on the programme are mostly involved in the enabling environment, whether or not this environment includes education, support institutions and government. It is therefore highly relevant to instil the values of entrepreneurial motivation, attitude and thinking and to successfully transfer these skills to the learners to apply and utilise in their work situations. This probably confirms the "mentorship" role of the facilitator in entrepreneurship programmes. As those subscribing to the programme are influential in government support agencies, they will impact on economic participation of new entrants.

It appears from the assessment results that the EEAM could be successfully applied to the case programme, despite the fact that the context of the programme differs significantly from that of normal start-up programmes. The assessment led to in-depth understanding of the

relevant issues, strengths and weaknesses of the programme. Support for the proposition that the EEAM can assess the programme in terms of covering the basic requirements for entrepreneurship education was therefore found.

The EEAM assists those who need to assess entrepreneurial education programmes, whether for improvement only or to stimulate programme outcomes that would result in more venture start-ups. Application, however, requires that the assessor must be knowledgeable about the field of entrepreneurship and have experience in business and education of entrepreneurship.

References

- Antonites, A.J. 2003. *An action learning approach to entrepreneurial creativity, innovation and opportunity finding*. Unpublished D Com thesis. Pretoria: Department of Business Management, University of Pretoria.
- Coutis, P.F. 2007. Responsive curriculum design in a statistics service unit. *International Journal of Mathematical Education*, 38(4):501–515.
- Fayolle. A. 1998. *Teaching of entrepreneurship: outcomes from an innovative experience*. Paper presented at the 44th World Conference of the International Council for Small Business, Stockholm, 16–19 June:1–24.
- Foxcroft, M.L., Wood, E., Kew, J., Herrington, M. & Segal, N. 2002. *Global Entrepreneurship Monitor: South African Executive Report*. Cape Town: School of Business Management, University of Cape Town.
- Gibb, A.A. 1993. The enterprise culture and education: understanding enterprise education and its links with small business, entrepreneurship, and wider educational goals. *International Small Business Journal*, 11(3):11–34.
- Gibb, A.A. 2006. *Enterprise education in schools and colleges. are we really growing the onion?* Paper presented at the 51st World Conference of the International Council for Small Business, Melbourne, Australia, 18–21 June:1–41.
- Gibb, A.A., Singer, S. & Korynski, P. 2006. *Back to the future: evaluation as an instrument for development of entrepreneurship in a transition economy*. Paper presented at the 51st World Conference of the International Council for Small Business, Melbourne, Australia, 18–21 June:1–26.
- Gorman, G., Hanlon, D. & King, W. 1997. Some research perspectives on entrepreneurship education, enterprise education and education for small business management. *International Small Business Journal*, 15(3):56–77.
- Hisrich, R.D. & Peters, M.P. 1998. *Entrepreneurship*. 5th ed. Boston: Irwin/McGraw-Hill.
- Hirsowitz, R. 1992. Myths and facts: types of assistance needed for the informal sector to flourish. *Finance Week*, April 30, 53(5):25.
- Holtzhausen, S.M. 2005. The supervisor's accountability versus postgraduates' responsibility within the academic arena. *South African Journal of Higher Education*, 19(1):89–100.
- Kaufman, P. J. & Dant, R.P. 1998. Franchising and the domain of entrepreneurship research. *Journal of Business Venturing*, 14(1):5–16.
- Kelly, P. & Mills, R. 2007. The ethical dimension of learner support. *Open Learning*, 22(2):149–157.
- Kuratko, D. F. & Hodgets, C. 1998. *Entrepreneurship: a contemporary approach*. Boston: Dryden Press.
- Le Roux, I. & Steyn, B. 2007. Experiential learning and critical reflection as a tool for transfer of business knowledge: an empirical case study of a start-up simulation intervention for nascent entrepreneurs. *South African Journal of Economic and Management*. 10(3):330–347.

- Marlow, E. 2007. Balance in Curriculum. *College Student Journal*, 41(2):376–378.
- Mendenhall, A., Wu Buhanan, C. Suhaka, M. & Mills, G. 2006. A task-centred approach to entrepreneurship. *TechTrends*, 50(4):84–89.
- Mitchie, F., Glachan, M. & Bray, D. 2001. An evaluation of factors influencing the academic self-concept, self-esteem and academic stress for direct re-entry students in higher education. *Educational Psychology*, 21(4):455–472.
- Mitra, J. 2002. Consider Velasques: reflections on the development of entrepreneurship programmes. *Industry & Higher Education*, 16(3):191–202.
- Morris, R. & Hooper, V.A. 1996. Contemporary issues in entrepreneurship: research perspectives from within South Africa. *South African Journal for Entrepreneurship and Small Business*, 8(2):14–15.
- Nieman, G. 2000. *Training entrepreneurs and small business enterprises in South Africa: a situational analysis*. Paper presented at the 46th World Conference of the International Council for Small Business, Brisbane, Australia, 7–10 June:1–17.
- Nieman, G. 2001. Training entrepreneurs and small business enterprises in South Africa: a situational analysis. *Education and Training*, 43(8/9):445–450.
- Nonis, S.A. & Hudson, G. I. 1998. *Measuring student perceptions of teaching effectiveness*. Paper presented at the 7th South Western Marketing Association, Dallas, Texas, 17–19 September:1–7.
- Orford, J, Herrington, M. & Wood, E. 2004. *Global Entrepreneurship Monitor: South African report*. Cape Town: School of Business Management, University of Cape Town.
- Power, T.J. 2006. Editorial note: improving academic competence for all students. *School Psychology Review*, 35(3):339–340.
- Pretorius, M. 2000a. A proposed training method for the transfer of skills to enhance micro and small business start-ups in South Africa. Paper presented at the 2nd International Vocational Education Training Association Annual Conference, Mauritius, 21–22 June:1–20.
- Pretorius, M. 2000b. *Evaluation of a proposed training methodology to enhance micro and small business start-ups in South Africa*. Paper presented at the 46th World Conference of the International Council for Small Business, Brisbane, Australia, 7–10 June:1–22.
- Pretorius, M. 2001. *A training model to enhance micro and small business start-ups in South Africa*. Unpublished D Tech thesis. Pretoria: Tshwane University of Technology.
- Pretorius, M., Nieman, G.H. & Van Vuuren, J.J. 2005. Critical evaluation of two models for entrepreneurship education: an improved model through integration. *International Journal of Educational Management*, 19(5):413–427.
- Rosa, P. & McAlpine, A. 1992. *A career orientation towards enterprise*. Paper presented at the 3rd Internationalisation Entrepreneurship Conference, London, 9–11 March:1–18.
- RSA. 1996. National Small Business Act, No. 102 of 1996. *Government Gazette*, 17612(1901). [Online available from: http://search.sabinet.co.za/WebZ/FETCH?sessionid=01-35271-1034779195&recno=2&resultset=2&format=F&next=law/law_nffull.html&bad=law/law_badfetch.html&&entitytoprecno=2&entitycurrecno=2.html [Accessed: 2007-11-27].
- Solomon, T., Duffy, S. & Tarabishy, A. 2002. The state of entrepreneurship education in the United States: a nationwide survey and analysis. *International Journal of Entrepreneurship Education*, 1(1):1–22.
- Sullivan, B.F. & Thomas, S.L. 2007. Documenting student learning outcomes through a research intensive senior capstone experience: bringing the data together to demonstrate progress. *North American Journal of Psychology*, 9(2):13121–13130.

Sunter, C. 1994. *The casino model*. Cape Town: Tafelberg.

Sunter, C. 1998. We need to focus on creating an entrepreneurial class. *Entrepreneurship Update*, 2 (November):2–3.

Timmons, J.A. 1999. *New venture creation: entrepreneurship for the 21st century*. Boston: Irwin McGraw-Hill.

Timmons, J.A. & Spinelli, S. 2004. *New venture creation: entrepreneurship for the 21st century*. Boston: Irwin McGraw-Hill.

Van Vuuren, J.J. 1997. *Entrepreneurship education and training: a prospective content model*. Unpublished report. Pretoria: University of Pretoria.

Van Vuuren, J.J. & Nieman, G.H. 1999. *Entrepreneurial education and training: a model for syllabi/curriculum development*. Paper presented at the 45th World Conference of the International Conference for Small Business, Naples, Italy, 6–9 June:1–17.

Welsch, P.H. 1993. *Entrepreneurship education and training infrastructure: external interventions in the classroom*. Paper presented at the 4th Internationalisation Entrepreneurship Conference, Vienna, 5–8 July:1–18.

Whittingham, K.L. 2006. Impact of personality on academic performance of MBA students: qualitative versus quantitative courses. *Decision Sciences Journal of Innovative Education*, 4(2):175–190.

Wilkenson, B. 1988. *The seven laws of the learners: how to teach almost anything to practically anyone*. Course notebook. New York: Ministries Publishing.