

Full Length Research Paper

South African university entrepreneurship education

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The aim of this article is to shed light on the entrepreneurship education currently offered at higher education institutions in South Africa (SA). The major questions addressed are: What is the state of entrepreneurship education in SA universities? And how should entrepreneurship be taught? The entrepreneurship programs offered at South African universities, both in terms of content and methods, do not appear to achieve the desired outcomes. Results indicated that South African universities are adhering to the old, traditional teacher-centered way of teaching this program. Research recommends use of interactive methods like simulation for students to practice analytical and decision-making skills.

Key words: Entrepreneurship education, entrepreneur, academic, university, students, assessment methods and curriculum.

INTRODUCTION

One of the key challenges in South Africa is to offer an education curriculum that addresses an ever increasing unemployment rate. Policy makers believe that more entrepreneurship is required to reach higher levels of economic growth and innovation. Empirical research also supports positive links between entrepreneurial activity and economic outcomes (Oosterbeek et al., 2007). Our (South African) policy makers believe that increased levels of entrepreneurship can be reached through education and especially in training in entrepreneurship. It is therefore noted that such education is promoted and implemented in curricula in many South African universities.

Interest in entrepreneurship and small business management education has grown remarkably during the 1980s. It is widely believed that this growth occurred in credit and non-credit courses, in all types of higher education institutions, and that it occurred despite the less than wholehearted support of the educational establishment (Nwanko, 2005). Leading experts in government and business generally accept that small business and entrepreneurship are critically important in determining the future economic and social well-being of South Africa (Kroon, 2007).

Entrepreneurship is one of the fields in business management that has attracted much interest in the last

few years, not only in South Africa, but also throughout the world (Nwanko, 2005). Nieman and Nieuwenhuizen (2009) point out Europe's long tradition of entrepreneurship research, mentioning that it is regarded as the birthplace of theoretical studies of entrepreneurship through such authors as Richard Cantillon, Jean-Baptiste Say, and the seminal work of Schumpeter in 1911. Schumpeter (1934) indicated that entrepreneurship means creating something different with value by devoting the necessary time and effort to it, assuming the accompanying financial, psychic, and social risk, and receiving the resulting rewards of monetary and personal satisfaction. However, it is Schumpeter (1934) who launched the field of entrepreneurship by associating it with innovation and his work shows the importance of entrepreneurs in explaining the economic development.

Politicians, policy makers and academics accepted the potential contribution that entrepreneurship can make to the economy. They acknowledged the positive impact that new business creation can have on employment levels and the competitive advantage that small business can have on large firms (Henry et al., 2005). Hisrich et al. (2010) pointed out that entrepreneurship is both beneficial and necessary for a healthy economy. The field of entrepreneurship is recognized as the fundamental

importance for our economy and it has been suggested that high levels of entrepreneurship create jobs and encourage growth. They pointed out that entrepreneurship is seen as the answer to economic recession and rising unemployment rates and a recipe for economic prosperity. It is therefore a need to increase the supply of entrepreneurial talent to create and grow new businesses that will generate employment and create wealth for the local economy. This goal can be achieved by developing entrepreneurship education initiative. Then entrepreneurship training can complement the early stage awareness raising function of entrepreneurship education as it provides the more practical skills that entrepreneurs require when they are ready to start their businesses (Henry et al., 2005).

The growing interest in entrepreneurship education contributed to an increased demand for entrepreneurship courses from students who are interested in starting businesses. Research by Hills (1998) highlighted that the recent years have shown unabated growth in the number of universities offering entrepreneurship courses. Since entrepreneurship education is considered to benefit both the society and individuals, it is therefore regarded as both necessary and reasonable that everybody should have access to it. The rationale of entrepreneur education appears to be an uncomplicated input-output model where the desired results are expected to be produced if only the right content is put in and treated in the right way (Van der Kuip and Verheul, 2004).

The aim of this article is to shed light on the entrepreneurship education currently offered at higher education institutions in South Africa. University education is characterized as the part that remains when what you were taught has been forgotten (Hindle, 2006). The programs offered in entrepreneurship education at South African universities, both in terms of content and methods; do not appear to achieve the desired outcomes since there is a high rate of entrepreneurship students seeking jobs. Therefore this study aimed at assessing the state of entrepreneurship education at South African universities and also determining how entrepreneurship should be taught.

Research problem

Entrepreneurship education has been widely accepted as having relevance in contributing to economic development but still little can be said about its implementation after completion of the program. The importance of entrepreneurship education cannot be over-emphasized. Entrepreneurship education is seen as the way to reconstruct welfare and build partnerships between public and business sectors by harnessing the dynamism of markets with a public interest focus (Sikalie and Otieno, 2010). It is therefore argued that

universities as agents of social transformation should spearhead this kind of partnership. Developing entrepreneurial skills and initiatives should be a major concern of higher education in order to facilitate employability of graduates who will be called upon not as job seekers but as job creators (UNESCO, 1998). This organization (UNESCO) underscores the need for universities to reinforce its role of service to society like, elimination of poverty, illiteracy and environmental degradation and diseases. Entrepreneurship education studies by Sikalieh and Otieno (2010), found that most entrepreneurship programs at the universities aim to: identify and stimulate entrepreneurial drives, talent and skills; to enable the development of autonomous behavior; to develop an understanding about business start-ups and management skills. Findings from these authors show that existing entrepreneurship programmes do not address social and economic problems. Studies on entrepreneurship education have been done, but no such studies on how to teach entrepreneurship education exist in South Africa. The focus of this study was to establish how entrepreneurship can be taught at the universities to reduce job seekers and increase job creators.

LITERATURE REVIEW

Entrepreneur and entrepreneurship are two concepts which are related and which are often interpreted in different ways. When we talk about entrepreneurs, we are interested in their particular behaviors, attributes and skills, and when we talk about entrepreneurship, we tend to have a process in mind – a process which involves specific outcomes relating to the introduction of new economic activity. Stokes et al. (2010) said human beings have behaviors, attributes and skills which can be developed through learning, and this is where entrepreneurial education comes in. There is confusion in the field of entrepreneurship, since there is no consensus on the definition of entrepreneurship.

For the purpose of this article Nieman and Nieuwenhuizen's (2009) definition of entrepreneurship will be adopted, namely that it is a process that causes changes in the economic system through the innovations of individuals who respond to opportunities in the market. Nieman and Nieuwenhuizen (2009) define an entrepreneur as a person who sees an opportunity in the market gathers resources and creates and grows a business venture to meet these needs. When we look at the definitions of entrepreneur and entrepreneurship, the following important aspects can be identified: identifying an opportunity – which means that there must be a real business opportunity; innovation and creativity – which means that something new and different is required; getting resources – in other words, one must get capital

labor and operating equipment; creating and growing a venture – which means starting a new business venture; taking risk – which means there will be personal and financial risks involved in running the business; and managing the business – which entails planning, organizing, leading and controlling the functions in the business venture. These important aspects of being an entrepreneur and of entrepreneurship inform how the curricula for entrepreneurship should be designed, for example, the necessity of paying attention to creativity and innovation is clear.

An entrepreneur is evidently someone who possesses a bundle of specific qualities and who thinks and behaves in an innovative and creative way. According to Kroon and Nieuwenhuizen (2006), entrepreneurs tend to be people who recognize business opportunities and marshal the necessary resources to exploit business opportunities for personal gain.

For entrepreneurship educators to understand what should be taught in entrepreneurship curricula, they must know what the entrepreneur should be like. In recruiting students for entrepreneurial training, it is beneficial to consider who, through learning, can become an entrepreneur.

These authors further indicate that most South Africans are not taught to become entrepreneurs, but to enter the labour market as employees. Among those people who become entrepreneurs, many do so because they cannot obtain employment in the formal sector of the economy. Many who become entrepreneurs are not doing so because of a highly developed need for achievement as business people, but in order to make money.

It is clear from the aforementioned that there is a difference between the concept of entrepreneur (which refers to a person who sees an opportunity in the market, gathers resources and creates and grows a business venture to meet these needs) and the concept of entrepreneurship (which refers to a process of creating something new with value by devoting the necessary time and effort; assuming the accompanying financial, psychic, and social risks and uncertainties; and receiving the resulting rewards of monetary and personal satisfaction). The focus of entrepreneurship education is on the behaviors, attributes and skills which can be developed through learning. The next area highlights the behavioral requirements that an entrepreneur should meet in order to be successful. These requirements can be learned through entrepreneurship education, which is the topic in this article.

Behavioral requirements of entrepreneurs

Nieman and Nieuwenhuizen (2009) suggest that there are 14 behaviors that are required by the entrepreneur, depending upon the situation in which he/she is to be

found. They indicate that these behaviors can be learned. These behavioral requirements are: total commitment or determination and perseverance; drive to achieve and grow; orientation to goals and opportunities; taking initiative and personal responsibility; veridical awareness and sense of humor; seeking and using feedback; internal locus of control; tolerance of ambiguity, stress and uncertainty; calculated risk-taking and risk sharing; low need for status and power; integrity and reliability; decisiveness, urgency and patience; learning from failure; team builder and hero maker.

According to Nieman and Nieuwenhuizen (2009) for one to be trained as an entrepreneur, one needs to meet these requirements. Knowing these requirements makes it possible for curriculum designers to know what to include in the curriculum to shape emerging entrepreneurs. The next area will look at entrepreneurship education and how it can be improved.

Entrepreneurship education

Entrepreneurship education is defined as a collection of formalized teachings that trains and educates anyone interested in participating in socioeconomic development through a project to promote entrepreneurship awareness, business creation or small business development (UNESCO, 2006). Entrepreneurial education seeks to foster self-esteem and confidence by drawing on the individual's talents and creativity, while building the relevant skills and values that will assist students in expanding their perspectives on schooling and opportunities beyond.

In Europe, universities introduced entrepreneurship education to play a key role in the creation of new ventures (Sikalieh and Otieno, 2011). Entrepreneurship education should equip students with relevant experience and help them develop self-confidence. Therefore lack of these qualities, found to be the reasons for new graduates not engaging in entrepreneurship after graduation (Sikalieh and Otieno, 2011), because entrepreneurship education promote the set up of new venture by students after graduation. In this way, entrepreneurship education and training is used to mean the acquisition of that set of competencies by formal and informal means. Therefore education means a process guided by more formal structures, including experiential learning or learning by doing.

Changes in educational methods are needed to foster competence in enterprising, which is a vitally important qualification needed by the young as they enter society. This means that people will need to be creative rather than passive, and capable of self-initiated action rather than dependent; they will need to know how to learn rather than expect to be taught and they will need to be enterprising in their outlook and not think and act like an

employee or a client. The organizations in which they work, communities in which they live and societies to which they belong will also need to possess all these qualities. Kabongo and Okpara (2010) view entrepreneurship education as the ability to envision and chart a course for a new business venture by combining information from the functional disciplines and from the external environment in the context of the extraordinary uncertainty and ambiguity which faces a new business venture. Their study looks at entrepreneurship education in the South African context.

Entrepreneurship is a young and developing field of study in South Africa and there is an increasing demand for grounded knowledge in this field. Although various studies (Fayolle et al., 2006) have been done on the construction of learning programs at secondary school level as well as at university level, there is still a need for further research on the designing of courses and programs at university level. This would empower the lecturers and help to meet the increasing demand for appropriate entrepreneurship education. A sound education at tertiary level will also enable the students to start their own businesses (Kroon and Meyer, 2007).

Jones and English (2004) highlighted that the growing literature on entrepreneurship education tends to argue that a different approach, a departure from the traditional lecture-centered, passive learning used in traditional business disciplines like marketing and management, is needed. The new style should be action oriented to encourage experiential learning, problem solving and creativity.

The underlying assumption is that for better learning to take place, experiences have to occur. Dhliwayo (2008) confirms that entrepreneurial learning is an experiential process in which knowledge develops through experiencing, reflecting, thinking and acting. Work-integrated learning is a structured educational strategy that progressively integrates academic study with learning through productive work experiences in a field related to a student's academic or career goals, not as an add-on, but as an integral part of the educational process (Groenewald, 2003). Areas of entrepreneurship education as identified by Jesselyn Co and Mitchell (2006) are:

Education about entrepreneurship: This involves developing, constructing and studying the theories on entrepreneurs, firm creation, contribution to economic development and the entrepreneurial process.

Education for entrepreneurship: This is aimed at present and potential entrepreneurs with the objective of developing and stimulating the entrepreneurial process, providing all the tools necessary for the start-up of a new venture, both within and outside an existing organization.

Jesselyn Co and Mitchell (2006) highlight that education *about* entrepreneurship is mainly based on the construction and transference of knowledge about the field, while education *for* entrepreneurship focuses on the learning experience and the development of competencies, skills, aptitudes and values. These authors indicate that the methods that are most frequently used in teaching entrepreneurship include reading, case studies, research papers and theses/dissertations. South African entrepreneurship education has thus far focused more on a traditional academic approach, failing to offer entrepreneurship training which can produce entrepreneurs. There is a dire need for South African universities to start producing entrepreneurs, not just entrepreneurship graduates. As O'Neill (2004) points out: "What does an entrepreneurship student become if he or she does not become an entrepreneur?" It is questionable if the nursing school can produce nurses but the entrepreneurship school cannot produce entrepreneurs (Dhliwayo, 2008). It has been proven that entrepreneurship can be taught, so is it then the current teaching method which is wrong? The next area will highlight the current state of entrepreneurship education at the South African universities.

METHODOLOGY

There is extensive restructuring going on in the higher education sector so that it can meet the national requirements for knowledge and skills development, in the context of globalization. In South Africa, there are eleven traditional universities and four universities of technology (former technikons) which operate under the Department of Education and Training.

This research is based on entrepreneurship education at the South African universities in 2011 under the Department of Education and Training. The study population was therefore based on 11 universities. Both primary and secondary data were collected for this study. Techniques for data collection method which were applicable for the qualitative and quantitative research methods were used with qualitative data brought together for final data analysis. No hypothesis was formulated since the study was on discovering the state of entrepreneurship education in South African universities and how this program should be offered. The empirical research was aimed at SA universities. The sampling procedure was based on the principle of random sampling and the selected universities constituted the elements of target population.

The study was only done at the undergraduate level. The secondary sources of information consisted of periodicals, articles, books and universities web-sites. The primary sources were composed of key persons in the selected universities. Hence, interviews and appointments played a key role in this study, through such instruments as the structured questionnaire. The questionnaire was developed on the basis of the study objectives. To enhance the validity and reliability of data collection instruments, a pilot test of the questionnaire and the interview guide was conducted with selected members of the target population who in themselves were not included in the sample. The feedback from this process was used to improve the quality of data collection instruments before actual collection. The primary sources were

Table 1. Modules offered.

Module	%
Entrepreneurship (Introduction)	90
Small business management	80
New venture creation	60
Family business	78
Innovation and technology	80
Creativity management	55
Franchising	78
Small business finance	50
Growth management	56

Table 2. In-class teaching methods that are used.

Method	Undergraduate degree	Diploma
Business plan creation	44	56
Lecture	70	68
Discussion	52	50
Case studies	40	23
Guest speakers	12	10
Seminar	13	11

dealt with through the qualitative approach, for such approach allows the researcher to actually record data in the subject's own words.

The researcher used a modified existing questionnaire from other researchers in entrepreneurship education, Jesselyn Co and Michelle (2006). The survey questionnaire consisted of a set of questions divided into sections covering the following information, respondents were asked to indicate: (1) modules offered in entrepreneurship qualification; (2) assessment methods utilized; (3) out-of-class teaching methods; (4) outside assistance the university entrepreneurship offer; (5) linkages university have with government institutions; (6) University involvement in outreach programs. The items were a likert scale type, 1-4, that required the respondents to show their level of agreement or disagreement with each statement, with 1 being strongly disagrees, 2- disagree, 3- agree and 4- strongly agree. The following are the names of the institutions under study: Cape Peninsula University of Technology; Durban Institute of Technology; Mangosuthu Technikon; Nelson Mandela Metropolitan University; North-West University; Rhodes University; Tshwane University of Technology; University of the Free State; University of Johannesburg; University of KwaZulu-Natal ; University of Pretoria; Stellenbosch University; University of South Africa; University of the Western Cape; University of Limpopo; and University of the Witwatersrand.

Response was received from only 7 universities in the country under the Department of Education and Training. The findings of each of the items would be presented.

RESULTS

This area provides a summary of the data analysis and interpretation of the research findings based on the res-

ponses of the respondents who completed the qualitative research questionnaires. A descriptive analysis of the data will be given.

Out of the targeted sample of 11 universities, only 7 responses were received, which yield 64% response rate. The respondents were requested to provide information on the modules offered at their universities (Table 1), teaching methods used within and outside the classroom (Table 2), major assessment methods used, and assistance offered outside academic programs, and the existence of outreach programs. This information is given in the form of tables.

Modules offered

In this regards, the study sought to establish from the departmental section heads of Entrepreneurship whether the following modules are offered at their respective universities: Introduction to entrepreneurship and small business; new venture creation; family business; innovation and technology; franchising; small business finance; creativity management and growth management. The items were a likert scale type, 1-4 that required the respondents to show their level of agreements or disagreements with each of the statements, with 1 being strongly disagree, 2- disagree, 3- agree and 4- strongly agree.

Asked whether the university offer the listed known modules in Entrepreneurship on the questionnaire, the departments reported mean score of 3.7% with majority of them at 90% strongly agreeing with statement and 1.5% disagree with statements on Introduction to entrepreneurship; technology and small business management (80%). Family business and franchising modules also offered by the majority of universities (78%). Few universities offer modules like growth management (56%), small business finance (50%), creativity management (55%) and new venture creation (60%).

In-class teaching methods

The study sought to establish from the departmental section heads of entrepreneurship whether the in-class teaching methods are offered at their respective universities. Majority of the departments agreed with the statement with most commonly used method being lecture at 70% with mean score of 3, 1 and 21% being disagreeing with the statement; followed by class discussions at 52% being in agreement while 25% being disagreeing; business plan creation at 44% being agreeing while 27% being in disagreement; followed by case study with 40% universities being agreeing they offer while 31% disagree with the statement.

Table 3. Out-of-class teaching methods used.

Method	Undergraduate (%)	Diploma (%)
Internship	2	3
Community development	8	2
On-site visit	10	3
Feasibility studies	3	1
Small business consulting	1	0

Table 4. Major assessment methods used.

Method	Undergraduate (%)	Diploma (%)
Examinations	100	100
Assignments	90	68
Tests	75	78
Business plan	44	56

For the diploma level, lecturing also takes the lead with 68% of universities agreeing to offer it while 23% disagreeing to offer it, followed by business plan creation (56%), agreeing to offer it while 26% disagreeing to offer it, discussions (50%)- agreeing to offer it while 35% disagreeing, case studies (23%)-agreeing to offer it while 57% disagreeing to offer it, guest speakers (10%)-agreeing to have it while 90% disagreed to have it and seminars (11%)- agreed to have while 88% disagreed to have that at their respective institutions of higher learning. This is a clear indication that South African universities are still using traditional in-class methods of teaching, rather than following the emerging trend towards modern techniques like computer simulations.

Out-of-class teaching methods

The study sought to establish from the departmental section heads of entrepreneurship whether the out-of-class teaching methods are offered at their respective universities.

Table 3 shows that only few institutions of higher learning use these training methods. Only a small number of institutions (10%)-agreed to make use of on-site visits while 90% disagreed to use it and community engagement (8%)-agreed to use that while 91% disagreed to use it. This is a clear indication that most universities and technikons do not use training outside of the class. This is a discouraging finding, because the outside methods help to teach and practice important skills and to expose students to entrepreneurship development. Compulsory work during holidays is also important for students' development towards entrepreneurship.

Major assessment methods

The study sought to establish from the departmental section heads of entrepreneurship whether the following major assessment teaching methods are offered at their respective universities.

Table 4 shows the major assessment methods used, with examinations (100%)- agreeing to use this method, assignments (90 and 68%)- agreeing to use this method while (10 and 42%)- disagreeing to use it, tests (75 and 78%)- agreeing to use this method while (25 and 22%)-disagree to use this method and little on business plans (44 and 56%)- agreeing to use this method while (60 and 44%)- disagreeing to use it.

Assistance university offer

The study sought to establish from the departmental section heads of entrepreneurship, whether the university offer any assistance outside their academic program to the community.

This area shows in what way institutions of higher learning have an impact on society. From Table 5, it is clear that some of the South African universities offer very little assistance to entrepreneurs in SA. Some of the universities (30%) - agreeing to offer distance learning entrepreneurship programs while some (70%) disagreeing with the statement. Only a few institutions (9%)-agree to help with internship opportunities while more (89%) disagree to offer internships, technical assistance to entrepreneurs (7%) - agreeing to offer it while most (90) disagree to offer that and management assistance to entrepreneurs (4%) - agreeing to offer it while most (96%) disagree to offer that, and none (0%) of the universities offer executive development courses in entrepreneurship degree or diplomas. These are not encouraging findings. Improvements need to be made in the lacking areas.

Outreach programs

The study sought to establish from the departmental section heads of entrepreneurship, whether the university offer any outreach program outside their academic program to the community.

Table 6 shows clearly that South African universities do not really participate in community engagement. Only few (15%)- agree to be involved with secondary schools while most (85%)- disagree to be involved in that, 7% - agreed are engage with nearby communities while most (91) – disagreed to engage in nearby communities and just 3% agreed to engage with primary schools while 73% disagreed they engage with primary schools. This is cause for concern. Promoting entrepreneurship in schools and communities can help to develop the

Table 5. Assistance universities offer outside academic programs.

Assistance	%
Technical assistance to entrepreneurs	7
Management assistance to entrepreneurs	4
Distance learning	30
Internship opportunities	9
Executive development courses	0

Table 6. Outreach programs of the universities.

Method	%
Community	7
Secondary schools	15
Primary schools	3

country.

DISCUSSION AND CONCLUSION

It is clear from the results that our universities are adhering to the traditional way of teaching this program. Newer delivery methods require participation and interaction on the part of students. It is therefore evident that entrepreneurship in South Africa is still in its early stages (Jesselyn Co and Mitchell, 2006). Entrepreneurship scholars like Nwanko (2005) have pointed out that university departments that teach entrepreneurship should have practical experience and should be in contact with other businesses outside the university. This lack of focus in academic departments may be attributed to the lack of academics in these departments who actually have degrees that are related to entrepreneurship.

The research proves that little is being done to improve entrepreneurship education. It is the responsibility of academic institutions to ensure that their present teaching and assessment methods are effective. The present entrepreneurship curriculum educates students about entrepreneurship, instead of educating them to be entrepreneurs. Then entrepreneurship education is thereby 'false' in the sense that it can never fulfill its own claims but its shortcomings will always appear to be the results of the directions not having been fully followed (Henry et al., 2005).

The programs and assessment methods have to be evaluated, to determine whether the techniques used really help to accomplish the objectives outlined in the modules. It is recommended that courses in negotiation, leadership, creative thinking, and exposure to technological innovation be built into entrepreneurship education. Important entrepreneurial education areas

identified include awareness of entrepreneurial career options, sources of venture capital, idea protection, ambiguity tolerance and characteristics that define the entrepreneurial personality (Kabongo and Okpara, 2009).

It is further recommended that more use be made of interactive methods like simulation for students to practice analytical and decision-making skills (Jesselyn Co and Mitchell, 2006). Academic institutions should introduce more opportunities/involvement outside the classroom, like internships, small business consulting and community development, as these would expose students to the actual experience of entrepreneurship. Students are likely to give up on entrepreneurship if they find that they are not suitably trained. It is also advised that academics should participate in international conferences on entrepreneurship education. This will help them to know what to bring into, or take out of their entrepreneurship curriculum. National universities can also collaborate with international universities with their entrepreneurship programs.

Universities should actively engage with communities and local small business owners. This will help in opening up chances for final-year students to do internships or on-site visits. Such ties may also enable universities to provide small business owners with technical and management assistance.

Hills (1998) have mentioned that the existence of a student entrepreneurship club is important for the entrepreneurship students. Universities should have clubs for entrepreneurship program alumni, in order to provide a community support network and continue the learning process. They need to invite entrepreneurs as guest speakers and role models as that is considered an important course attribute. Universities are furthermore in the position to establish venture capital funds for use by entrepreneurship students. For entrepreneurship curriculum to be relevant to the needs of the society, its objectives must be aligned to the current social problems of the society.

It is hoped that this article will trigger discussion among academics at institutions of higher learning about how they might integrate entrepreneurship with social and economic dimensions and the goals of higher education in South Africa. Like in other countries of the world, in South Africa, entrepreneurship is very important for the economic development of the country.

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