

The Entrepreneurial Competencies of Non-business University Students in South Africa

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ABSTRACT This research investigated the entrepreneurial competencies of non-business university students in South Africa. Data was collected through the use of self-administered questionnaire in a survey. The research participants were drawn from three non-business faculties in one of the universities in the Limpopo Province of South Africa. Descriptive statistics and the principal component analysis were used for data analysis. The results indicated that the majority of non-business students are weak in business management and entrepreneurial competencies. Recommendations to improve the entrepreneurial competencies of non-business university students are suggested.

INTRODUCTION

Youth unemployment rate is high in South Africa due to lack of job opportunities. Entrepreneurship offers unemployed university graduates a way to become employed and also create jobs. Herrington et al. (2009) in the Global Entrepreneurship Monitor South African Report note that given the failure of the formal and public sector to absorb the growing number of job seekers in South Africa, increasing attention has focused on entrepreneurship and new firm creation and its potential for contributing to economic growth and job creation. However, the general level of entrepreneurship is particularly low in South Africa. De Kok et al. (2011) point out that in terms of job creation, enterprise birth and death play a very important role. The stock of SMMEs in a country is affected by births and deaths. According to Turton and Herrington (2012), South Africa's Total Entrepreneurial Activity (TEA) rate decreased from 9.1% in 2011 to 7.3% in 2012. South Africa's TEA is significantly below the average of efficiency-driven countries (14.3%). This indicates the South Africa's consistently below-average trend in early-stage entrepreneurial activity relative to countries with a similar economic development level.

In addition, the number of potential entrepreneurs in South Africa is below international standards. Potential entrepreneurs are defined

by the Global Entrepreneurship Monitor (GEM) as those who perceive good business opportunities and believe that they have entrepreneurial capabilities. Potential entrepreneurs include students in high schools and universities. South Africa's rate of perceived opportunities is 36%. This is below the average for efficiency-driven economies of 41%. The country's rate for perceived capabilities is 40%, below the average for of perceived opportunities efficiency-driven economies of 52% (Turton and Herrington 2012). Thus, graduate entrepreneurship is one of the ways to improve the level of entrepreneurship in South Africa.

Youth unemployment rate in South Africa is currently 48% (Statistics South Africa 2013). Graduate unemployment is much lower than overall youth unemployment. According to Van Der Berg and Van Broehuizen (2012), graduate unemployment in South Africa (where 'graduates' are considered to be those with at least university degree) is quite low in an international context. Graduate unemployment has risen extremely modestly even during the current difficult global and domestic economic conditions. The number of people with degrees has grown rapidly since 1995. And the vast majority of graduates have found employment. In 1995, there were about 460,000 graduates in the work force, 4% of whom were unemployed. By 2011, there were more than one million graduates in the work

force, with 5% unemployed. This implies that by 2011, there were at least 50,000 graduates that were unemployed in South Africa, despite the overall low graduate unemployment rate.

City Press (2012) reports that university degrees or diplomas no longer hold the promise of jobs for young South Africans as hundreds of thousands of them battle to find work. Not all graduates have found jobs. The most sought-after skills are in finance, accounting, management, law, and medicine. Management skills account for nearly half of the 829 000 vacancies in corporate South Africa. Graduates with degrees in the arts and social sciences are far more likely to have difficulties in finding jobs. This suggests that business students stand a better chance of being employed than non-business students.

Thus, focusing on entrepreneurship is one of numerous solutions to reduce youth and graduate unemployment in South Africa. According to Beeka and Rimmington (2011) and Buang (2011), entrepreneurship is one of the career options for youths and graduates. Sardeshmukh and Smith-Nelson (2011) point out that there is the need to provide the kind of education that is needed to develop an opportunity-oriented entrepreneurial mind set among tertiary students. In addition, employers want graduates that are entrepreneurially minded. Lourenco et al. (2013) point out that the development of an entrepreneurial mind-set and/or enterprising skills is on the agenda for developing graduates in order to enhance their employability. Employers are looking for graduates equipped with skills that will enable them to act in enterprising ways so they can deal effectively with a difficult business environment, and a personal life that is increasingly full of uncertainties and complexities.

To improve entrepreneurship, there is the need for students to develop entrepreneurial competencies when they are in the universities. Stoof (2005) defines competency as the combination of knowledge, skills and attitudes that are required to perform a task. A considerable amount of literature suggests that competencies are necessary for the development and survival of business ventures (Onstenk 2003), (Phelan and Sharpley 2007). Studies such as De Tienne and Chandler (2004) and Inyang (2009) find that competency is an important element in opportunity identification and commencement and success of new business ventures.

Objective of the Study

Statistics South Africa (2013) asserts that unemployment has increased in South Africa as the deepening economic recession has led to massive corporate downsizing. City Press (2012) points out that university degrees or diplomas no longer hold the promise of jobs for young South Africans as some of them battle to find work. One of the ways to solve graduate unemployment is entrepreneurship. Competency is an important element in opportunity identification and commencement and success of new business ventures. The objective of the study is to investigate the entrepreneurial competencies of non-business university students. This will help to determine the readiness of non-business students for entrepreneurship.

Literature Review

Definition of Entrepreneurial Competency

According to Hellriegel et al. (2008), competencies are sets of knowledge, skills, behaviours and attitudes that contribute to personal effectiveness. Penchev and Salopaju (2011) point out that competencies are the sum of experiences and the knowledge, skills, values and attitudes acquired during lifetime, which are necessary for effective performance in a job or life role. Inyang and Enuoh (2009) define entrepreneurial competencies as those clusters of related knowledge, attitudes, and skills which an entrepreneur must acquire through managerial training and development to enable him produce outstanding performance, and maximize profit, while managing a business venture or an enterprise. Entrepreneurial competencies are characteristics such as generic and special knowledge, motives, traits, self-images, social roles and skills which result in birth of venture, its survival and/or growth. According to Phelan and Sharpley (2011), entrepreneurial competencies refer to the sum of the entrepreneur's requisite attributes for successful and sustainable entrepreneurship. These attributes include attitudes, values, beliefs, knowledge, skills, abilities, personality, wisdom, expertise (social, technical, and managerial), mind-set, and behavioural tendencies. Inyang and Enuoh (2009) find that entrepreneurial competencies are necessary for the development and survival of business ventures. Entrepreneur-

ial competencies are important for opportunity identification, business commencement and success. In the context of entrepreneurship, competencies are particularly related to the birth, survival and/or growth of a venture.

Types of Entrepreneurial Competency

According to Dixon et al. (2005), entrepreneurial competencies include knowledge, cognitive ability, self-management, administration, human resources, decision skill, leadership, opportunity recognition, opportunity development and organisation skill. Dixon et al. (2005) classify entrepreneurial competencies into eight clusters. The clusters are team leadership, communication, trustworthiness, organisational skills, basic business skills, problem solving skills, personal traits and creativity. Inyang and Enuoh (2009) point out that entrepreneurial competencies include time management, marketing management, business ethics, leadership, decision-making, and financial management. Similarly, Mitchelmore and Rowley (2013) identify four clusters of entrepreneurial competencies. These are personal and relationship, business management, entrepreneurial and human resources competencies.

According to Li (2009), opportunity competency is the ability to recognize and envision taking advantage of opportunities. Opportunity competency comprises of the entrepreneurial activities in spotting opportunities, actively seeking new opportunities, and developing the opportunities. Aouni and Surlemont (2008) point out that opportunity recognition is a central aspect of entrepreneurship. According to De Tienne and Chandler (2004), the opportunity identification literature indicates four ways in which opportunities are identified. These are active search, passive search, fortuitous discovery, and creation of opportunities. Active search, passive search, and fortuitous discovery adopt the perspective that opportunities exist and it is the job of the entrepreneur to uncover these opportunities. The creation perspective argues that opportunities are a product of one's mind. Organising competency centres on the ability to lead, control, monitor, organize, and develop the external and internal resources towards the firm's capabilities. Strategic competency requires the entrepreneur to have a vision or a big picture in their mind for their business, to have clear

goals to achieve and formulate and implement strategies to achieve these vision and goals. Relationship competency relates to person-to-person or individual-to-group based interactions. De Tienne Chandler (2004) add that commitment competency focuses on the entrepreneur being totally committed, determined and dedicated, as well as taking proactive actions towards his/her responsibilities and duties. Conceptual competency centres on the entrepreneur's ability in making cognitive and analytical thinking, learning, decision making and problem solving, sustaining temporal tension, innovating and in coping with uncertainty and risk.

RESEARCH METHODOLOGY

The survey was conducted at one of the universities in Limpopo province, South Africa. The participants in the survey were final year students in the Faculties of Health Science, Humanities and Science and Agriculture. Data was collected through the use of self-administered questionnaire in a survey. Convenience sampling method was used. 150 questionnaires (50 per faculty) were distributed to final year students in class with the assistance of the lecturers. The questionnaire was divided into two parts (1) Biographical information (2) entrepreneurial competencies. Five-point Likert scale questions ranging from "1 extremely poor, 2 below average, 3 average, 4 above average, 5 excellent" were used to assess the entrepreneurial competencies of non-business students. A thirty-item questionnaire to measure entrepreneurial competencies was developed following studies such as Dixon et al. (2005) and Mitchelmore and Rowley (2013). A pilot study was conducted on the survey instrument used in this research with 15 students in order to ensure face and content validity. The pilot study led to some modifications to the questionnaire. Owners were assured of confidentiality with regard to the data collected. Data analysis included descriptive statistics and the principal component analysis. The Cronbach's alpha was used as a measure of reliability.

RESULTS AND DISCUSSION

Biographical details: 150 questionnaires were distributed to the respondents and 127 returned. The response rate was 84.7%. 68 respondents

were male and 59 female. 42 respondents came from Humanities, 41 from Health sciences and 44 from Science and Agriculture.

Descriptive Statistics for Entrepreneurial Competencies

The results of the descriptive statistics are presented in Table 1. The results reveal that non-business students are above average in certain entrepreneurial competencies. These are interpersonal skills, the desire to succeed, oral communication skill, ability to use technology, written communication skill, relationship building, networking, passion for work and commitment. The results also indicate that non-business students are below average in familiarity with the markets, proactiveness, budgeting operations, idea generation, opportunity recognition, business plan preparation and knowledge of the sources of finance. Some of the competencies that non-business students are below average in are very important to entrepreneurship. Stud-

Table 1: Descriptive statistics for entrepreneurial competencies

<i>Measures of entrepreneurial competencies</i>	<i>Mean</i>	<i>Standard deviation</i>
Interpersonal skill	4.22	0.848
Desire to succeed	4.22	0.746
Oral communication skill	4.19	0.899
Ability to use technology	4.18	0.923
Written communication skill	4.14	0.945
Relationship building	4.14	0.979
Networking with others	4.13	0.943
Passion for work	4.10	0.875
Commitment	4.07	0.782
Self-confidence	3.86	0.972
Decision-making skill	3.30	0.608
Problem solving skill	3.26	0.843
Self-management skill	3.26	0.895
Stress tolerance	3.15	0.918
Familiarity with the markets	2.40	0.674
Being proactive	2.38	0.791
Budgeting skills	2.28	0.776
Business operation skills	2.32	0.984
Business idea generating skills	2.15	0.859
Opportunity recognition skill	2.13	0.771
Business plan preparation	2.06	0.785
Motivation skills	2.06	0.863
Leadership skill	2.05	0.776
Risk taking	2.02	0.905
Coming up with innovative ideas	2.02	0.862
Marketing management skill	2.02	0.774
Strategic planning skill	2.01	0.894
Financial management skills	1.92	0.692
Sources of finance to start business	1.70	0.974
Marketing research skill	1.68	0.759

ies such as Dixon et al. (2005), Inyang and Enuoh (2009) and Mitchelmore and Rowley (2013) point out that budgeting, risk-taking and proactiveness, opportunity recognition and business plan preparation are critical entrepreneurial competencies. According to Li (2009), opportunity competency is the ability to recognize and envision taking advantage of opportunities. Opportunity competency comprises of the entrepreneurial activities in spotting opportunities, actively seeking new opportunities, and developing the opportunities.

Factor Analysis

Cooper and Schindler (2006) describe factor analysis as a multivariate statistical method used to describe variability among observed variables in terms of fewer unobserved variables called factors. Factor analysis is a statistical approach that can be used to analyze inter-relationships among a large number of variables and to explain these variables in terms of their common underlying dimensions (factors). The statistical approach involving finding a way of condensing the information contained in a number of original variables into a smaller set of dimensions (factors) with a minimum loss of information. Factor analysis has two main purposes. Firstly, it is used for data reduction and secondly for detection of structure (underlying dimensions) in a set of variables. To ensure the use of factor analysis, the Barlett Test of Sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) test of appropriateness were carried out accordingly. The results (BTS = 472.065; sig. =0.001) indicated that the data were appropriate for the purpose of factor analysis. Statistically, this meant that there exists relationships between the variables and that they can be appropriately included in the factor analysis. The result of the KMO measure of sampling adequacy was 0.782. The results indicate that there are sufficient items for each factor. The two tests support the appropriateness of the factor analysis technique. Five factors with Eigenvalues greater than one account for 73.873 % of the total variance. The five factors are further confirmed by the rotation sums of squared loading after Varimax rotation. According to the rules of factor analysis only factors that have Eigenvalues greater than one should be retained.

Table 2 depicts the results of the principal component analysis. Five factors with Eigen values greater than one were identified. Factor 1 is labeled as relationship competencies and consists of seven items. The factor includes interpersonal skills, use of technology, oral communication, written communication, relationship with others, networking and proactiveness. Factor 2 is labeled personal strength competencies and consists of five items which are passion for work, commitment, desire to succeed, self-confidence and stress tolerance. Factor 3 is labeled decision-making competencies. The factor is made of four items which are problem-solving skill, decision-making skill, self-management skill and strategic planning skill. Factor 4 is labeled managerial competencies and consists of eight items that can help in the management of a business. The items are business operation skill, budgetary skill, familiarity with the market, leadership skill, motivation, financial management

skill, marketing management skill and marketing research skill. Factor 5 is labeled entrepreneurial competencies and includes six items which are necessary to effectively start a business. The items are opportunity recognition, idea generation, risk-taking, business plan preparation, innovation and sources of finance.

CONCLUSION

This research investigated the entrepreneurial competencies of the non-business university students in South Africa. The results indicated that non-business students are above average in certain entrepreneurial competencies. These are interpersonal skills, the desire to succeed, oral communication skill, ability to use technology, written communication skill, relationship building, networking, passion for work and commitment. The results also indicate that non-business students are below average in familiarity

Table 2: Rotated component matrix

Items	1	2	3	4	5
Interpersonal skills	0.8228				
Use of technology	0.7891				
Oral communication	0.7435				
Written communication	0.6872				
Relationship with others	0.6573				
Networking	0.6349				
Proactive	0.6218				
Passion for work		0.7589			
Commitment		0.7174			
Desire to succeed		0.6739			
Self confidence		0.6221			
Stress tolerance		0.5768			
Problem solving skill			0.6882		
Decision-making skill			0.6396		
Self-management skill			0.5938		
Strategic planning skill			0.5473		
Business operations				0.6138	
Budgetary skills				0.5829	
Familiarity with markets				0.5534	
Leadership skills				0.5120	
Motivation				0.4629	
Financial management skill				0.4237	
Marketing management skill				0.3988	
Marketing research skill				0.3591	
Opportunity recognition					0.5935
Business idea					0.5641
Business plan preparation					0.5227
Risk-taking					0.4827
Innovation					0.4451
Sources of finance					0.4167
Eigen value	18.253	9.744	5.273	3.029	1.528
Total variance explained	38.368	18.747	7.281	5.948	4.529
Cronbach's alpha	0.8882	0.8231	0.7165	0.7437	0.7210

with the markets, proactiveness, budgeting operations, idea generation, opportunity recognition, business plan preparation and knowledge of the sources of finance. Factor analysis was used to reduce thirty measures of entrepreneurial competency to five factors. The five factors were relationship competencies, personal strength competencies, decision-making competencies, managerial competencies and entrepreneurial competencies.

RECOMMENDATIONS

Entrepreneurship-based courses should be incorporated in the curriculum of all faculties and should not be limited to Faculty of Management. In addition, non-business students should have opportunities to compete for start-up funding through endowed entrepreneurship programs. Non-business students should have the opportunity to compete for funding for a research concept with entrepreneurial potential. Universities should create resources and opportunities that will encourage and support student entrepreneurship. Campus entrepreneurship should be encouraged and supported. This can be a technology innovation centre or an entrepreneurship centre that will assist students in developing and commercialising innovations. Successful business owners should be invited by the university to talk about entrepreneurship to students. Businesses should assist on entrepreneurship training and can also provide financial grants and mentorship to students. This should be a major part of the corporate social responsibility of businesses. Students should be encouraged to work with businesses during the holiday to gain practical entrepreneurial experience. The university can assist by networking with businesses and also create a placement center that will place students with businesses. Students should be encouraged to join organisations that support entrepreneurship such as Enactus and the Black Management Forum (BMF). Government must also try by all means to promote and encourage youth to become entrepreneurs. This can be achieved by making students aware of organisations such as SEDA (Small Enterprise Development Agency) and NYDA (National Youth Development Agency) and SEFA (Small Enterprise Finance Agency). In addition, these agencies must have the structure in place to support campus and student entrepreneurship.

LIMITATIONS OF THE STUDY AND AREAS FOR FURTHER STUDY

The study was conducted in only one university. Therefore, care should be exercised in the generalisation of the results. Other studies can investigate the impact of personal attributes such as gender on the competencies of non-business students.

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