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A REVIEW OF ENTREPRENEURIAL KNOWLEDGE AND SKILLS AMONG STUDENTS AT A SOUTH AFRICAN HIGHER EDUCATION INSTITUTION

Abstract:

Entrepreneurship are regarded as a key element in fostering economic growth and job creation. However, growth of a country's economy rely on developing future leaders with the right skills and knowledge to be entrepreneurs. Entrepreneurial knowledge and skills are key attributes for students if they consider self-employment. In South Africa entrepreneurship is common in higher education, however young individuals in South Africa urgently need to be trained, educated and equipped with the necessary entrepreneurial knowledge and skills to foster an entrepreneurial activity in their complex environment. The purpose of this paper is to determine students at a South African HEI perception of their level of entrepreneurial knowledge and skills. A descriptive research design approach was followed. A self-administered questionnaire was used to collect the data from a convenience sample of 338 students at a South African public HEI situated in the Gauteng Province. Data were analysed using descriptive statistics, reliability and validity analysis and a one-sample t-test. The findings infer that at this specific HEI, students feel they have the necessary knowledge and skills to be entrepreneurial. This study contributes by implementing initiatives to equip students with the knowledge and skills they may lack in becoming active individuals in economic growth.

Keywords:

Entrepreneurial knowledge, Entrepreneurial skills, Students, Higher education institutions, South Africa

JEL Classification: I25, M21, M29

1 Introduction

Entrepreneurship has been an important research field among academics for a considerable length of time (Kuckertz & Prochotta, 2018). Many researchers and economists worldwide regard entrepreneurship as a key element in fostering economic growth and job creation (Zaki & Rashid, 2016; Chen, 2014; Kritikos, 2014). Furthermore, entrepreneurs are viewed as the main producers and drivers of such growth and therefore identified as economic actors. Hence, entrepreneurs contribute to economic growth through their leadership, management, innovation, job creation and the creation of new businesses (Kritikos, 2014). According to Zerihun, (2014) entrepreneurs are extremely beneficial to a country, as they help to build a strong economy. Ultimately economic growth may be facilitated through more individuals' regarding entrepreneurship as a career choice as opposed to seeking employment (Islam *et al.*, 2018).

When considering entrepreneurship in South Africa, a country characterised as an emerging economy (Mamabolo *et al.*, 2017), the encouragement of entrepreneurship remains a critical concern for the South African Government (Littlewood & Holt, 2018). Since, South Africa are bombarded with socio-economic difficulties, such as high levels of unemployment and poverty (Banda *et al.*, 2016). Moreover, the country has one of the greatest unemployment rates recorded globally, indicating an unemployment rate of 26.7 percent in 2018 (QLFS, 2018). Therefore, in the South African economy entrepreneurship is crucial for the continued existence and growth of the economy, and must be seen as part of an integrated strategy to move the economy of South Africa on a different path, one in which the economy is expanded, productivity is enhanced and entrepreneurship prospers (Littlewood & Holt, 2018).

Evidence from the literature suggests that in order to ensure economic growth in a country, it is crucial to encourage young individuals', seen as the future leaders of a country to be actively involved in entrepreneurial development (Steinberg, 2014). Additionally, young individuals following a tertiary qualification are essential to the future of a country (World Economic Forum, 2015) assuming that graduates have a higher future earning potential and typically a higher future standing within society (Baum, 2014). Worryingly, today's youth faces unique obstacles when entering the business environment (Lowrey, 2013). According to Banks, (2016) if poor global economic conditions persist, the result will be an acceleration of mass unemployed youth. Therefore, creating an entrepreneurial culture amongst today's youth will be of immense value, as it will help to insure a decrease in the unemployment rate amongst these individuals (Bokhari, 2013). Moreover, the growth of a country's economy rely on creating an entrepreneurial culture amongst the youth and equipping these future leaders with the right knowledge and skills when entering the business environment (Bux, 2016).

Entrepreneurship is a discipline, like other disciplines that can be learned (Prochazkova, 2015; Morisette & Schraeder, 2007; Drucker, 1985). It is clear from the literature that education including entrepreneurship contributes to job creation and reducing poverty (Maina, 2013). Entrepreneurship education can be defined as the engagement of educators in the life of students, informing them of the necessary skills to be successful in entrepreneurial activity (Chimucheka, 2014). The purpose of entrepreneurial education is for educators to develop certain knowledge, skills and qualities pertaining to entrepreneurship (Sinkovec, 2013). Entrepreneurial

knowledge and skills are key attributes for young individuals if they consider self-employment or want to successfully navigate the job market after graduation (Beranek, 2015). Moreover, youth with entrepreneurial knowledge and skills are considered to be more accountable for their own actions, have teamwork skills and know how to be successful in business (Bux, 2016). As such, Higher Education institutions (HEIs) are regarded as the custodians of knowledge in society and play an important role in an economy (Mwadiwa, 2013). Furthermore, HEIs are essential as they provide future leaders with the right knowledge and skills on how to handle problems related to finances and general management of the business environment (Hunjet, *et al.* 2015). In addition, HEIs equip students with the necessary skills and encourage students to have entrepreneurial mind-sets (Solesvik, *et al.*, 2013). Though entrepreneurship is common in higher education in South Africa, the future of entrepreneurial activities in South Africa and the volume thereof will depend on how well the country is going to equip the youth to start their own businesses and to encourage these individuals not to start businesses for themselves but to create jobs for others (Fin 24, 2017). Thus, young individuals in South Africa urgently need to be trained, educated and equipped with the necessary entrepreneurial knowledge and skills to foster entrepreneurial activity in their complex environment (Mamabolo *et al.*, 2017).

From the literature, it is evident that several studies have been concerned with entrepreneurial education as such (Hasan, *et al.*, 2017 McAuley, 2015; Chimucheka, 2014; Nicolaidis, 2011). However, limited studies concentrated on students' entrepreneurial knowledge and skills specifically (Brijlal & Brijlal, 2013), an extensive search of the literature unveiled no similar studies on reviewing entrepreneurial knowledge and skills among South African students at a specific Higher Education Institution. Gaining insights into what knowledge and skills students feel they exhibit towards becoming entrepreneurs will contribute towards implementing initiatives to equip students with knowledge and skills they may lack in becoming active individuals in economic growth. As such, the purpose of this study is to report on a study undertaken to review entrepreneurial knowledge and skills among students at a South African Higher Education Institution.

2 Methodology

For the purpose of this study, the descriptive research design, following the single cross-sectional approach was used.

2.1 Sampling method

The target population for this study was defined as students, enrolled full-time at a South African public higher education institution (HEI). For the sampling frame, one HEI campus located in the Gauteng province was selected. Thereafter, a non-probability convenience sample of 328 undergraduate students was used to conduct the main study.

2.2 Research instrument and data collection

In order to determine South African students' entrepreneurial knowledge and skills, this study used a structured, self-administered questionnaire. The students were requested to complete a questionnaire comprising of two sections. The first section gathered the students' demographic

information and the second section included the 45-item scale concerning entrepreneurial knowledge and skills. The scale consisted of two sub-scales, namely knowledge (15 items) and skills (30 items). The students' entrepreneurial knowledge and skills were determined on a four-point Likert scale, ranging from completely disagree (1) to completely agree (4), based on the students' agreement or disagreement to the statements relating to the entrepreneurial knowledge and skills. Furthermore, a cover letter, providing assurance of confidentiality concerning the participants' information was included. In order to establish reliability, the questionnaire was piloted on a convenience sample of 57 students that did not form part of the main sample. A Cronbach alpha value of 0.995 was computed for the entire scale, which is above the suggested level of 0.70 (Pallant, 2016). After permission was asked from lecturers, the questionnaires were then distributed to their students. The gathered data was analysed using reliability and validity analysis, descriptive statistical analysis and a one-sample t-test. The captured data were analysed using the Statistical Package for Social Sciences (IBM SPSS), Version 25 for Windows.

Results and discussion

2.3 Sample description

From the sample of 338 questionnaires distributed, 319 completed and usable questionnaires were returned, which signifies a 94 percent response rate. The sample included a greater number of female participants (62.0%) than male participants (38.0%). The majority of participants specified being 20 years (28.3%) of age, followed by those specified being 19 years (20.6%) of age and 21 years (18.6%) of age. Concerning the participants' race, a greater number of participants indicated being African (83.5%), followed by participants being White (12.9%) and Coloured (3.0%). The majority of participants indicated their mother-tongue language as Sesotho (36.4%). Pertaining to the participants' current year of study, the largest portion of the participants were students in the first year of study (77.4%), followed by students in their second year of study (11.3%) and those in their third year of study (8.5%). Table 1 shows a description of the sample.

Table 1: Sample description

| Gender | (%) | Age | (%) | Race | (%) | Mother tongue language | (%) | Year of study | (%) |
|---------|------|-----|------|----------|------|------------------------|------|-----------------|------|
| Males | 38.0 | 18 | 4.8 | African | 83.5 | Afrikaans | 11.1 | 1 st | 77.4 |
| Females | 62.0 | 19 | 20.6 | Coloured | 3.0 | English | 8.4 | 2 nd | 11.3 |
| | | 20 | 28.1 | Asian | 0.6 | IsiNdebele | 1.2 | 3 rd | 8.5 |
| | | 21 | 20.3 | White | 12.9 | IsiXhosa | 7.2 | 4 th | 0.9 |
| | | 22 | 12.6 | | | IsiZulu | 20.5 | Hons | 1.9 |
| | | 23 | 4.5 | | | Sesotho | 36.6 | | |
| | | 24 | 4.2 | | | Setswana | 8.4 | | |
| | | 25 | 1.5 | | | SiSwati | 3.3 | | |
| | | 26 | 0.9 | | | Tshivenda | 1.2 | | |
| | | 28 | 0.3 | | | Xitsonga | 2.1 | | |

| | |
|----|-----|
| 29 | 0.6 |
| 33 | 0.3 |
| 36 | 1.0 |
| 41 | 0.3 |

Source: Own

2.4 Reliability and validity

A Cronbach alpha value of 0.905 was computed for the entire scale measuring entrepreneurial knowledge and skills in the main study, which exceeded the recommended value of 0.70, therefore providing evidence of internal-consistency reliability (Brace *et al.*, 2012). Moreover, the average inter-item correlation were also calculated and were, 0.266, which was within the recommended range of 0.15 to 0.50 (Clark & Watson, 1995), therefore providing further proof of reliability, also suggesting convergent and discriminant validity of the scale.

2.5 Descriptive statistics

After the reliability and validity of the scale had been determined, the descriptive statistics were calculated. Table 2 and Table 3 report on the means and standard deviations concerning entrepreneurial knowledge and skills.

Table 2: Descriptive statistics Knowledge

| | Mean | Median | Standard Deviation |
|---|------|--------|--------------------|
| Items Knowledge | | | |
| Obtain financial assistance | 2.97 | 3.0 | 0.803 |
| Use the help and guidance of mentors and counsellors to assist in starting a business | 3.31 | 3.0 | 0.625 |
| Identify and make use of a variety of business opportunities | 3.26 | 3.0 | 0.602 |
| Demonstrate creative problem-solving when faced with obstacles when starting a business | 3.23 | 3.0 | 0.617 |
| Compile a feasibility study | 3.13 | 3.0 | 0.643 |
| Compile a business plan | 3.30 | 3.0 | 0.636 |
| Establish a sustainable competitive advantage in my business | 3.20 | 3.0 | 0.627 |
| Calculate a break-even analysis | 3.24 | 3.0 | 0.646 |
| Draw up financial statements | 3.18 | 3.0 | 0.752 |
| Manage the growth of my business | 3.25 | 3.0 | 0.656 |
| Identify signs and causes of business failure | 3.23 | 3.0 | 0.659 |
| Conduct market research | 3.14 | 3.0 | 0.665 |

| | | | |
|--|------|-----|-------|
| Manage the cash flow of the business | 3.23 | 3.0 | 0.680 |
| Manage the marketing of the business and its products / services | 3.30 | 3.0 | 0.648 |
| Manage the legal aspect and registration of the business | 2.99 | 3.0 | 0.793 |

Source: Own

As presented in Table 2, the highest mean across entrepreneurial knowledge items was recorded for item 2 (mean=3.31), followed by item 14 (mean=3.30). The lowest mean was recorded for item 1 (mean=2.97). This suggests that South African students perceive that they have the knowledge to use the help and guidance of mentors and counsellors to assist them in starting a business as well as having the knowledge to manage the marketing of the business and its products or services. However, participants feel that they do not have the necessary knowledge to obtain financial assistance.

Table 3: Descriptive statistics Skills

| | Mean | Median | Standard Deviation |
|--|------|--------|--------------------|
| Items Skills | | | |
| Verbal communication | 3.26 | 3.0 | 0.676 |
| Non verbal communication | 2.97 | 3.0 | 0.839 |
| Effective presentations | 3.16 | 3.0 | 0.693 |
| Interpretation of information | 3.31 | 3.0 | 1.779 |
| Ability to ask questions | 3.21 | 3.0 | 0.716 |
| Ability to listen | 3.45 | 3.0 | 0.580 |
| Communicate in order to persuade | 3.30 | 3.0 | 0.807 |
| Demonstrate creativity in completing tasks | 3.25 | 3.0 | 0.651 |
| Demonstrate innovation in completing tasks | 3.21 | 3.0 | 0.652 |
| Solicit feedback | 3.06 | 3.0 | 0.694 |
| Reflect on my actions and do self-inquiry | 3.20 | 3.0 | 0.659 |
| Share information about myself with others | 3.28 | 3.0 | 2.383 |
| Air and manage conflict | 3.14 | 3.0 | 0.705 |
| Give feedback to develop others | 3.26 | 3.0 | 0.610 |
| Catalyse change | 3.08 | 3.0 | 0.646 |
| Demonstrate a positive outlook | 3.28 | 3.0 | 0.563 |

| | | | |
|--|------|-----|-------|
| Adapt to change | 3.31 | 3.0 | 0.611 |
| Initiate goals | 3.34 | 3.0 | 0.594 |
| Keep commitments | 3.34 | 3.0 | 0.608 |
| Understand informal structure | 3.17 | 3.0 | 0.656 |
| Show empathy | 3.27 | 3.0 | 0.634 |
| Recognise social patterns | 3.25 | 3.0 | 0.615 |
| Ability to make different kinds of decisions | 3.34 | 3.0 | 0.583 |
| Ability to participate in team and group decision-making | 3.30 | 3.0 | 0.642 |
| Identify different decisions | 3.29 | 3.0 | 0.583 |
| Make effective decisions in order to solve problems | 3.33 | 3.0 | 0.579 |
| Set goals | 3.48 | 4.0 | 0.578 |
| Shape other's behaviour toward high performance | 3.31 | 3.0 | 0.657 |
| Use rewards to reinforce people's behaviour | 3.37 | 3.0 | 1.800 |
| Help people perform to achieve rewards | 3.40 | 3.0 | 0.611 |

Source: Own

From Table 3 the highest mean for items pertaining to entrepreneurial skills was recorded for item 27 (mean=3.48), followed by item 6 (mean=3.45). The lowest mean was recorded for item 2 (mean=2.97). This implies that South African students perceive that they have the skills to set goals and the ability to listen to others. Though, participants feel that they do not show the necessary skills to communicate through non-verbal messages.

2.6 One-sample t-test

In order to determine whether the items of entrepreneurial knowledge and entrepreneurial skills were statistically significant, a one-sample t-test was computed. The expected mean was set at 3 (that is in the agreement area of the scale) and the significance level at the conventional 0.05 level. Table 4 and Table 5 reports on the calculated means, standard deviations, t-values and p-values.

Table 4: One sample t-test Entrepreneurial Knowledge

| | Mean | Standard Deviation | Standard error | t-values | P- values |
|---|------|-----------------------|-------------------|----------|-----------|
| Items Entrepreneurial Knowledge | | | | | |
| Obtain financial assistance | 2.97 | 0.803 | 0.045 | -0.696 | 0.487 |
| Use the help and guidance of mentors and counsellors to assist in starting a business | 3.31 | 0.625 | 0.035 | 8.936 | 0.000* |
| Identify and make use of a variety of business opportunities | 3.26 | 0.602 | 0.034 | 7.786 | 0.000* |
| Demonstrate creative problem-solving when faced with obstacles when starting a business | 3.23 | 0.617 | 0.035 | 6.723 | 0.000* |
| Compile a feasibility study | 3.13 | 0.643 | 0.036 | 3.490 | 0.001* |
| Compile a business plan | 3.30 | 0.636 | 0.036 | 8.361 | 0.000* |
| Establish a sustainable competitive advantage in my business | 3.20 | 0.627 | 0.035 | 5.712 | 0.000* |
| Calculate a break-even analysis | 3.24 | 0.646 | 0.036 | 6.682 | 0.000* |
| Draw up financial statements | 3.18 | 0.752 | 0.042 | 4.323 | 0.000* |
| Manage the growth of my business | 3.25 | 0.656 | 0.037 | 6.925 | 0.000* |
| Identify signs and causes of business failure | 3.23 | 0.659 | 0.037 | 6.198 | 0.000* |
| Conduct market research | 3.14 | 0.665 | 0.037 | 3.788 | 0.000* |
| Manage the cash flow of the business | 3.23 | 0.680 | 0.038 | 6.028 | 0.000* |
| Manage the marketing of the business and its products / services | 3.30 | 0.648 | 0.036 | 8.382 | 0.000* |
| Manage the legal aspect and registration of the business | 2.99 | 0.793 | 0.049 | -0.155 | 0.877 |

* Significant at $p < 0.05$ (one-tailed)

Source: Own

Table 5: One sample t-test Entrepreneurial Skills

| | Mean | Standard Deviation | Standard error | t-values | P-values |
|--|------|-----------------------|-------------------|----------|----------|
| Items Entrepreneurial Skills | | | | | |
| Verbal communication | 3.26 | 0.676 | 0.038 | 6.872 | 0.000* |
| Non verbal communication | 2.97 | 0.839 | 0.047 | -0.536 | 0.592 |
| Effective presentations | 3.16 | 0.693 | 0.039 | 4.219 | 0.000* |
| Interpretation of information | 3.31 | 1.779 | 0.100 | 3.104 | 0.002* |
| Ability to ask questions | 3.21 | 0.716 | 0.040 | 5.172 | 0.000* |
| Ability to listen | 3.45 | 0.580 | 0.033 | 13.732 | 0.000* |
| Communicate in order to persuade | 3.30 | 0.807 | 0.045 | 6.599 | 0.000* |
| Demonstrate creativity in completing tasks | 3.25 | 0.651 | 0.037 | 6.905 | 0.000* |
| Demonstrate innovation in completing tasks | 3.21 | 0.652 | 0.037 | 5.760 | 0.000* |
| Solicit feedback | 3.06 | 0.694 | 0.039 | 1.539 | 0.125 |
| Reflect on my actions and do self-inquiry | 3.20 | 0.659 | 0.037 | 5.530 | 0.000* |

| | | | | | |
|--|------|-------|-------|--------|--------|
| Share information about myself with others | 3.28 | 2.383 | 0.134 | 2.107 | 0.036 |
| Air and manage conflict | 3.14 | 0.705 | 0.040 | 3.425 | 0.000* |
| Give feedback to develop others | 3.26 | 0.610 | 0.034 | 7.729 | 0.000* |
| Catalyse change | 3.08 | 0.646 | 0.036 | 2.084 | 0.38 |
| Demonstrate a positive outlook | 3.28 | 0.563 | 0.032 | 8.812 | 0.000* |
| Adapt to change | 3.31 | 0.611 | 0.034 | 8.948 | 0.000* |
| Initiate goals | 3.34 | 0.594 | 0.033 | 10.305 | 0.000* |
| Keep commitments | 3.34 | 0.608 | 0.034 | 9.877 | 0.000* |
| Understand informal structure | 3.17 | 0.656 | 0.037 | 4.535 | 0.000* |
| Show empathy | 3.27 | 0.634 | 0.036 | 7.558 | 0.000* |
| Recognise sociAa patterns | 3.25 | 0.615 | 0.034 | 7.295 | 0.000* |
| Ability to make different kinds of decisions | 3.34 | 0.583 | 0.033 | 10.420 | 0.000* |
| Ability to participate in team and group decision-making | 3.30 | 0.642 | 0.036 | 8.299 | 0.000* |
| Identify different decisions | 3.29 | 0.583 | 0.033 | 8.719 | 0.000* |
| Make effective decisions in order to solve problems | 3.33 | 0.579 | 0.033 | 10.096 | 0.000* |
| Set goals | 3.48 | 0.578 | 0.033 | 14.851 | 0.000* |
| Shape other's behaviour toward high performance | 3.31 | 0.657 | 0.037 | 8.405 | 0.000* |
| Use rewards to reinforce people's behaviour | 3.37 | 1.800 | 0.101 | 3.600 | 0.000* |
| Help people perform to achieve rewards | 3.40 | 0.611 | 0.034 | 11.667 | 0.000* |

* Significant at $p < 0.05$ (one-tailed)

Source: Own

As evident from Table 4, significant p-values ($p=0.000 < 0.05$) were computed for all the entrepreneurial knowledge items, except for item 1 and item 15. This infers that South African students perceive that they do exhibit entrepreneurial knowledge towards becoming entrepreneurs. Conversely with the exception of the skill to obtain financial assistance and the skill to manage the legal aspect and registration of the business. As indicated in Table 5, significant p-values ($p=0.000 < 0.05$) were computed for all the entrepreneurial skills items, except for item 2, item 10, item 12 and item 15. This suggests that South African students perceive that they have entrepreneurial skills to become entrepreneurs. Though with the exception of the skill to communicate non-verbally, solicit feedback, share information about themselves to others and catalyse change.

For this reason, as indicated in Table 4 and Table 5 the findings of this study suggest that at this specific HEI, South African students feel they have the necessary knowledge and skills to engage in entrepreneurial activity. In such, the findings indicate that students perceive they do have the skills to set goals and help people perform to achieve rewards. On the other hand, these students are questioning if they will have the knowledge to obtain financial assistance if they want to start a business and the skill to take part in non-verbal communication.

3 Conclusion

Entrepreneurship is considered as a key element in fostering economic growth and job creation. In order to ensure economic growth in a country, it is crucial to encourage young individuals', seen as the future leaders of a country to be actively involved in entrepreneurial development. However, growth of a country's economy rely on creating an entrepreneurial culture amongst the youth and equipping these future leaders with the right knowledge and skills when entering the business environment. The findings of this study infer that students at this specific HEI in South Africa perceive they do have the skills to set goals and help people perform to achieve rewards. Furthermore, these students are questioning if they will have the knowledge to obtain financial assistance if they want to start a business and the skill to take part in non-verbal communication.

A review of entrepreneurial knowledge and skills among students at a South African Higher Education Institution, makes an important contribution to the South African government and HEIs. By gaining insights into what knowledge and skills students perceive they exhibit towards becoming entrepreneurs will contribute towards implementing initiatives to equip students with the knowledge and skills they may lack in becoming active individuals in economic growth.

While entrepreneurship is common in HEIs in South Africa it is suggested that entrepreneurship should be introduced from a young age to establish an entrepreneurial culture in the country. Entrepreneurship may be introduced to the youth as early as the beginning of their education. More entrepreneurial focused programmes need to be introduced in schools and HEIs to create employers rather than employees. This study further recommends that educators often have limited skills on entrepreneurship and the creation of a business. It is vital to equip educators with the right skills and knowledge to educate the new generation entering the business environment. Educators lacking knowledge and skills may experience difficulty in guiding students regarding launching a new business.

Owing to certain limitations of this study, future research opportunities exist. As mentioned, the study undertook a single cross-sectional research design. Future research may focus on a longitudinal research design which may provide useful information regarding any changes in students' perceived entrepreneurial knowledge and skills at this specific HEI in South Africa. Furthermore, the sample characteristics of this study were limited to one HEI from South Africa. Future research can review entrepreneurial knowledge and skills across more HEIs in this country.

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