# Effects of Entrepreneurship Education on Start-up Propensity: Technical and Vocational College Lecturers' Perspectives

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**Abstract**

This research aimed to engage the prevailing status that education in entrepreneurship is offered to college students in South Africa to enhance the learning and teaching efficiency of TVET college, which should lead to motivating and preparing graduates to start their own businesses. At the time of this study (2020), the total youth unemployment rate was 40.3%. In addition, the youth graduate unemployment rate was 55.2%. It is concerning that the Technical and Vocational Education and Training (TVET) college graduates face this challenge. It is significantly possible that South African TVET students will face unemployment after graduation due to the high unemployment rate and the competition in the job market from other universities. Accordingly, there is a need to transform TVET college students into entrepreneurs who can self-sustain upon completion of their studies.

Ajzen's theory of planned behaviour was used to address the paucity of literature on entrepreneurial education and start-up propensity. Accordingly, a research questionnaire was structured to address the issue: "To what extent do the variables in the entrepreneurial environment (TVET colleges), in the form of knowledge of entrepreneurship, perceived self-efficacy and attitude towards entrepreneurship, affect the entrepreneurial intentions of students?" This study proved the direct relationship between entrepreneurship education, inclination, and intention to start a business.

A few recommendations are made regarding investment in entrepreneurship education and infrastructure, partnering with private and public companies, and entrepreneurship as an integral part of development in the national policy framework that addresses unemployment.

**Keywords:** Entrepreneurship education, entrepreneurship intentions, start-up propensity and TVET college

## 1. Introduction

The significance attached to entrepreneurship education in assisting graduates with entrepreneurship knowledge and in stimulating the economic growth and development of the country is increasing (Bliemel, 2014, p.237; Bowmaker-Falcorner & Herrington, 2020; Byers, Dorf & Nelson, 2019; Camacho-Minaro & Delcampo, 2017, p.673; Capiene & Ragauskaite, 2017, p.284; Gamede & Uleanya, 2018, p.10). There is limited entrepreneurial activity in South Africa in terms of start-up propensity and the development of businesses. According to the planned behaviour hypothesis, starting a new business is considered planned behaviour (TPB). Action and planned behaviour are linked (Shapero & Sokol, 1982). Furthermore, entrepreneurial intention tends to be a significant predictor of the behaviour of entrepreneurship (Ebewo, Shambare & Rugimbana, 2017).

Entrepreneurial intention is conceptualised as a sign of the propensity to start a business and it is important in entrepreneurship education (Ebewo, Shambare & Rugimbana, 2017). South Africa is characterised by a very high youth unemployment rate which is at 40.3% (STATSSA, 2021). Due to the high unemployment rate and poverty levels, entrepreneurship may be a valuable instrument for job creation and economic progress (Bhattacharya & Rach, 2021; Msimango-Galawe & Hlatshwayo, 2021). For example, the National Development Programme (NDP) cites the growth of entrepreneurship as a key socio-economic development catalyst (SEDA, 2021). According to Statistics South Africa, 40.3% of the working population aged 15–24 years is unemployed (STATSSA, 2021). It is

critical that the technical and vocational education and training (TVET) students become economically active, and entrepreneurship is one of the key means to do that, given the high unemployment and poverty rates.

Entrepreneurship education is viewed as an important mechanism in encouraging graduates to start their own businesses (Yagoub, 2017, p.21; Maina, 2013, p.376). Technical Vocational Education and Training Colleges (TVET) are institutions of higher learning where students acquire vocational and practical training. This has been identified to be more practical than traditional universities. Kennedy (2013, p.35) argues that perceptions by lecturers on entrepreneurship education are important and need to be understood in conjunction with the pillars of creating business. This is because they impart this to the TVET college students and have a great influence on how they perceive entrepreneurship. This includes the generation of employment because of its ability to lift the skills base, the individuals' capacity to create enterprises and, innovation in the work environments, among others (Pérez-López et al., 2016). Research-based evidence suggests that it is in the interest of creating a business that the call to introduce entrepreneurship education within learning institutions has received global attention (Maina, 2013).

As a result of TVET institutions creating graduates who seek work rather than those who could generate jobs, entrepreneurship education should be taught at TVET colleges (Gamede & Uleanya, 2018, p.7). There remains a limited understanding of the importance of entrepreneurship in South Africa, notwithstanding the important role of entrepreneurship in addressing the existing challenges of poverty and inequality. The issue of how to drive start-ups and successful entrepreneurship initiatives is both prominent and urgent Malebana (2014, p.132), because entrepreneurship has been positioned as a strategy for lowering unemployment in the South African setting. Colleges are currently working hard to teach critical knowledge that will help build the country's economy (Du Toit & Gaotlhobogwe, 2018, p.12; Bliemel, 2014).

TVET college education programmes are the most fundamental in providing a sought-after environment for entrepreneurship training to students (Addams, Allred, Woodbury & Jones, 2014, p.6). The prevailing circumstances in this research posit that concerted efforts are being put in place to rapidly support entrepreneurship education in TVET colleges. In this research, entrepreneurship education is viewed as the most vital and effective mechanism to attain the most relevant knowledge of entrepreneurship. In this context, entrepreneurship education includes the concrete development of entrepreneurship skills and innovation (Breznitz & Zhang, 2021; Ismail et al., 2018; Mikić et al., 2019). The alarming rate of unemployment stood at 34.9% in the third quarter of 2021 in South Africa (STATSSA, 2021). South African youths are the most affected, and the overall unemployment in this category was 40.3% (STATSSA, 2021).

This research concentrated on reducing the alarming unemployment rate in South Africa by investigating ways of increasing entrepreneurial intention through educating TVET college graduates to start their businesses (Coetzee, Steinmann, Christodoulou & Van Vollenhoven, 2006, p.15). Entrepreneurship education is the fundamental and effective tool that provides knowledge of entrepreneurship in a country (Gamede & Uleanya, 2018, p.4). Entrepreneurship education is important in imparting entrepreneurship knowledge, skills, and innovation (Ismail et al., 2019). Again, entrepreneurship education can alleviate poverty, and stimulate innovation and change, hence the emergence of start-up propensity (Mikić et al., 2019). In essence, a well-structured entrepreneurship education directly influences the development of the required attitude (Aladejebi, 2018). The entrepreneurial mind is based on how entrepreneurs have acquired an accurate and comprehensive knowledge of entrepreneurship (Dragomir & Panzaru, 2015). Consequently, this paper investigated the significance of entrepreneurship education in TVET colleges students and the intention to start businesses through the perspective of the lecturers.

## 2. Literature Review

### *2.1 Entrepreneurship*

Entrepreneurship plays a significant role in the economy's growth by contributing positively to creating jobs, easing the burden on the fiscus, and providing healthy competition (Iakovleva, Kolvereid & Stephan, 2011, p.354). Nieuwenhuizen and Kroon (2002, p.158) discussed entrepreneurship as the capacity and willingness to open a business beyond the fears of anticipated risks to amass profit. According to Kennedy (2013, p38), an entrepreneur "is a person who establishes and owns his/her business through organising and managing the enterprise". For Hannula (2018, p.4), a decent example of entrepreneurship is when a person begins a new business venture.

Karimi et al. (2016, p.187) explain entrepreneurship "as the process that pushes ideas from conceivable to existent; entrepreneurship can also be reflected as the driving force to many countries' economic growth and competition concentration". Entrepreneurship encompasses risk-taking with the behaviour of the entrepreneur, including the creation of products and services, including risk behaviour factors (Musie, 2015, p.4). Entrepreneurship is concerned

with the consideration of how and by whom to ascertain and generate ventures, as well as how and by whom the required results are brought into existence (Yang, 2016, p.8).

Entrepreneurship has the potential to be the economic growth stimuli for South Africa and globally (Thomas & Cooney, 2012, p.28). The Organisation for Economic Co-operation and Development (OECD) postulates entrepreneurship "as a state within which self-employment characterises a vigorous process that discovers economic opportunities". Frazier (2015) defines entrepreneurship as a manifestation connected with the process of conceptualising and consistently developing a business strategy for the formation of a potential new enterprise. Entrepreneurship is, therefore, considered a subject that creates an attempt to close the economic void between various situations from economic advances to business planning centred on the new business owners (Ebewo et al., 2017, p.179). Therefore, in addition to the controversies inherent in the various definitions of the concept, these definitions are broad, thus resulting in the underlying approaches included in the entrepreneurship literature. These approaches include the following:

*2.2 The Technical and Vocational Education and Training Colleges*

TVET colleges are institutions of higher learning, which are responsible for imparting knowledge and skills, including marketable skills, to students and for changing their attitude in the interests of viable development (Gamede & Uleanya, 2018, p.2). These colleges offer courses which are vocational and practical (Hunjet, Kozina & Kurecic, 2015, p.621). Vocational education entails training or re-equipping, designed to ensure that the students can find employment in a particular occupation. Technical education entails the training or re-equipping of students in relation to technical skills with the primary aim of initiating, facilitating, and ensuring the technical development of the entire nation (Rafee, Imani & Nazemi, 2017, p.14).

In line with the aim of the research to discover the lecturers' perceptions of the effect of entrepreneurship education on start-up propensity, Demiral (2014, p.43) confirms that it is possible for the teaching and learning of entrepreneurship to take place in the TVET colleges, which are more practical than traditional universities. The teaching and learning objectives are to grow the students' competencies and encourage and stimulate an entrepreneurial spirit (Morselli, Costa & Margiotta, 2014, p.333). The training of students in TVET College is centred on producing more skilled individuals who are proficient in producing quality goods and services (Neck & Corbett, 2018, p.9). The attainment of long-term employable skills goes hand in hand with a sound teaching methodology and the proper use of good instructional resources, machines, equipment, and tools to ensure effective TVET graduates (Penaluna, Penaluna, Usei & Griffiths, 2015, p.948).

Vocational education is founded on preparing a student for employment (Wise, 2013, p.33). Vocational education is more all-embracing than technical education, based on producing technical personnel (Lekoko et al., 2012, p.12024). The Department of Higher Education and Training (DHET) education policy outlines TVET college education as a process linking general education, science and technologies and the attainment of applied skills, abilities, attitudes, and knowledge involving an increased number of opportunities in the various sectors of economic and societal life (DHET, 2019, p.18). Thus, technical education is seen as the recognised training of students to become technicians in diverse occupations (Baldwin, Pierce, Joines & Farouk, 2011, p.2). Consequently, any education centred on imparting the technological abilities, skills, knowledge, and attitudes appropriate to a particular skill may be termed technical education (Lekoko et al., 2012, p.12027).

Lekoko et al. (2012, p.12026) recommended that technical education should include the training of technically inclined persons to become initiators, lecturers, facilitators, and creative implementers of the technical growth of a nation. They also added that this training of the community to become technologically inclined would lead to self-reliance and self-sustainability in individuals. Technical education directly influences national welfare (Haara & Jenssen, 2016). Hussain, Hashmi, and Gilani (2018, p.133) postulate that technical education may be regarded as a change agent and not simply as a technical advance in the direction of societal change. Consequently, Haara and Jenssen (2016, p.183) cite that "vocational and technical education plays an essential role in the development of society and contributes to economic growth through creating employment as a result of the inclination towards entrepreneurship".

*2.3 Entrepreneurship Education in TVET Colleges*

Students' preparedness in entrepreneurship is vital in building a business landscape that creates a pool of self-employed individuals (Byers et al., 2019). Entrepreneurship exposure is required to inspire students to choose entrepreneurship as a career choice after graduating and avoid dependence on job seeking. Entrepreneurship education entails promoting and developing students' underdeveloped skills in establishing businesses (Peltonen,

2015, p.493). This type of education nurtures the students' attitudes. It steers them toward decent employment centred on the following competencies: operating actions competence, taking actions competence, taking continuous action competence, and stimulating actions competence (Vonortas & Kim, 2011, p.4). People with entrepreneurship capabilities have both a vigorous, bendable, and good attitude to changes in the teaching and learning environment (Foo & Turner, 2019). They regard environmental transformation as offering a good and normal opportunity to grow (Rideout & Gray, 2013, p.334). The training of TVET lecturers on entrepreneurship is characterised by difficult challenges, including inadequate funding, limited facilities, poor staff training, substandard curricula and the brain drain (Ruskovaara & Pihkala, 2015, p.237).

Consequently, the study centred around understanding the perceptions and knowledge of TVET lecturers, looking at the effect of entrepreneurship education on the creation of start-ups. The aims of the study was outlined as follows:

i. To investigate the extent to which lecturers see entrepreneurship education as an important contribution to starting a business.

ii. To investigate lecturers' experience and knowledge in entrepreneurship education that will play a role in creating a business.

Furthermore, the following research hypotheses were developed to aid in the analysis of the research and are based on the expectations provided in the conceptual model that underpins the study:

**$H_1$:** TVET college lecturers' self-efficacy is positively related to entrepreneurial intentions.

**$H_2$:** TVET college lecturers' subjective norms are positively related to entrepreneurial intentions.

**$H_3$:** TVET college lecturers' attitude towards entrepreneurship is positively related to entrepreneurial intentions.

## 3. Conceptual Model and Theoretical Framework

The model below (Figure 1) answered the research question: "What are the TVET college lecturers' perceptions that influence entrepreneurship education on start-up propensity?" Within the context of this study, it has been shown that entrepreneurship education indicates the right way entrepreneurship knowledge may be attained. The conceptual model utilised in this research shows the hypotheses suggested and the relationships between them. The reviewed literature cites that perceived self-efficacy, perceived subjective norm and attitude towards entrepreneurship are independent variables while entrepreneurial intentions are dependent variables. Each independent variable may lead to entrepreneurship intentions (dependent variables). The conceptual model in this paper adjusts the Theory of Planned Behaviour (TPB) (Ajzen, 2011:270). It regards perceived self-efficacy, perceived subjective norm and attitude toward entrepreneurship as tools for decision-making processes that result in entrepreneurial intentions (Sanchez & Sahuquillo, 2012:132).

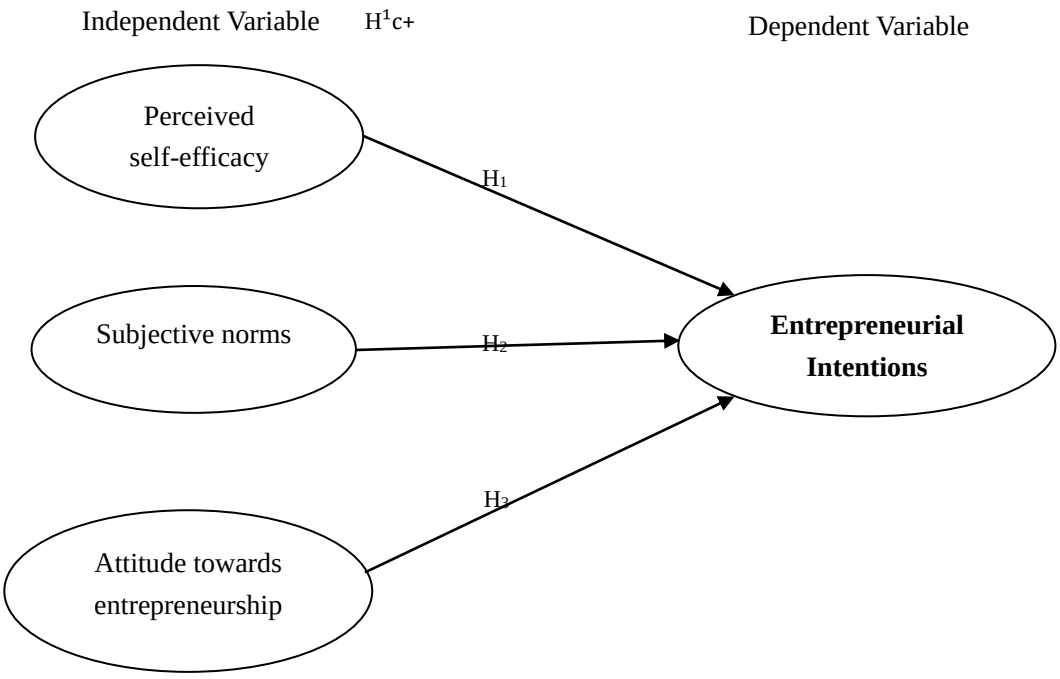


Figure 1. Conceptual Model

**Source:** Adapted from Ajzen (2011, p.270) and Ebewo, et al. (2017, p.7)

## 4. Methods

This study adapted the positivism research philosophy that utilises quantitative techniques to collect and analyse data (Bryman, 2012, p.178). The study was descriptive and cross-sectional (Babbie & Mouton, 2009, p.271). The variables used in this study were commonly known and tested using validated and reliable scales cited within the literature. The quantitative method is relevant to this study (Wagner, Kawulich & Garner, 2012). A descriptive cross-section design was utilised and deemed relevant for this study to understand the relationship between entrepreneurship activity and lecturers' perceptions of student entrepreneurship intentions.

A simple random sampling technique was used (Christensen, Johnson & Turner, 2011, p.32) to limit sampling error - it is not expensive and limits time. This study involved the lecturers, senior lecturers, and department heads working in all Southwest Gauteng TVET college faculties. All lecturing staff members were chosen because in TVET colleges, the students ought to take entrepreneurship as a course in their different fields.

The study adopted a self-administered survey instrument (Wagner, Kawulich & Garner, 2012). In the total of N = 530 staff employed, the sample of 172 participated. Due to COVID-19, the questionnaire was emailed to mitigate any related risks. The entrepreneurship education questionnaire employed validated scales adapted from previous studies (Gamede & Uleanya, 2018, p.10; Ebewo, et al., 2017, p.219). The survey instrument was adapted to suit the South Africa context.

Data was collected from the questionnaire received from participants. All questionnaires received had to be coded, and information was captured in Microsoft Excel. The data collected was also analysed using the Statistical Package for the Social Sciences (SPSS) Version 25.0 (Salkind, 2013. P.28). To analyse the sample gathered and test the proposed descriptive statistics, several multivariate statistical tests were conducted, including tests for reliability and regression analysis to test the hypotheses (Bryman, 2012, p.23).

## 5. Results

Investigation into the extent that lecturers saw their programme making a significant contribution to the start-up propensity of the students and their experience-based knowledge concerning the role of the programme in business creation was explored in the study. Table 1 outlines the variable consolidated constructs on this research.

Table 1. PCA Loadings of Variable Constructs

| Variables | Factors retained | % variance |
|---|---|---|
| **Mediating Variable** | | |
| Educating for Entrepreneurial Attitude (EEA) | 4 | 64.8% |
| Subjective Norms (SN) | 6 | 74.3% |
| Perceived Self-Efficacy(PSE) | 20 | 85.6% |
| **Dependent Variable** | | |
| Entrepreneurship Intention (EI) | 6 | 73% |
| **Independent variable** | | |
| Knowledge of Entrepreneurship (KOE) | 5 | 50.4% |

As presented in Table 1, the study indicated mediating variables EEA with four factors retained with a 64.8% variance, SN with six factors retained (74%) and PSE with 20 factors retained (85.6%). In the dependent variable, six factors were retained for 73% variance while, in the independent variables, five factors were retained for 50.4% variance. Perceived self-efficacy demonstrated a positive relationship as it results in entrepreneurial intentions.

Cronbach's alpha was used to measure both internal validity and the whole scale reliability. According to Silverman (2016), Cronbach's alpha coefficient has become a well-known indicator of consistency. Kumar (2011, p.166) explains internal consistency as a “measure of the uniformity of the items and enables the researcher to test the reliability of several items contained in the scale and administered". Cronbach's alpha golden rule, 0.5 is poor, and 0.6 is fair. In the early research stage, 0.7 is normally recommended, although 0.8 is more appropriate in applied research. When making important decisions, 0.95 (minimum 0.9) is recommended in terms of reliability.

Table 2. presents the Cronbach's alpha associated with each of the five scales in the questionnaire.

Table 2. Cronbach’s Alpha for the Subscales

| Variable | Cronbach's Alpha | N of Items |
|---|---|---|
| Educating for Entrepreneurial Attitude (EEA) | .760 | 4 |
| Subjective Norms (SN) | .807 | 6 |
| Perceived Self-Efficacy(PSE) | .909 | 20 |
| Entrepreneurship Intention (EI) | .837 | 6 |
| Knowledge of Entrepreneurship (KOE) | .586 | 5 |

Knowledge of entrepreneurship (KOE) was .586 for five items. According to Cronbach's alpha golden rule, this shows that KOE is fair since it is >0.5. EEA was 0.760 for four items; SN was 0.807 for six items; PSE was 0.909 for 20 items, and EI was 0.837 for six items. Overall, all the variables in the research were positive and significant.

Table 3. Regression: EI vs (PSE, SN, EEA)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Coefficients[a]** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .184 | .393 | | .468 | .641 |
| | PSE | .810 | .078 | .633 | 10.326 | .000 |
| | SN | .070 | .068 | .064 | 1.030 | .305 |
| | EEA | .081 | .062 | .076 | 1.304 | .194 |

## 6. Discussion

The results of this study showed that the lecturers' entrepreneurial intentions were high at 73%. The study indicated four factors mediating variables EEA with four factors retained with a 64.8% variance, SN with six (74%), and PSE with 20 factors retained (85.6%). In the dependent variable, six factors were retained for 73% variance while, in the independent variables, five factors were retained for 50.4% variance. Perceived self-efficacy demonstrated a positive relationship as it results in entrepreneurial intentions. Knowledge of entrepreneurship (KOE) was .586 for five items. According to Cronbach's alpha golden rule, this shows that KOE is fair since it is >0.5. EEA was 0.760 for four items; SN was 0.807 for six items; PSE was 0.909 for 20 items, and EI was 0.837 for six items. According to Cronbach's alpha, overall, all the variables in the research were positive and significant. This study also indicated in Table 3 that the Beta coefficient was not negative, thus illustrating a direct relationship between the variables (PSE, .633; SN, .064; EEA, .076). As cited in column B, PSE was .810, showing a direct relationship between the variables that result in entrepreneurship intention, subjective norms (SN, .070) and educating entrepreneurial attitude (EEA, .081). Table 3 shows composite variable of perceived self-efficacy had an important and direct effect on the dependent variable (PSE, .633).

## 7. Conclusion

This research examined the extent to which the variables in the entrepreneurial environment (TVET colleges), in the form of knowledge of entrepreneurship, perceived self-efficacy and attitude towards entrepreneurship, affect entrepreneurial intentions. It emerged from the study that the lecturers were knowledgeable about entrepreneurship. Many of them agreed on the importance of recognising the entrepreneurial abilities, and intentions to become the owner of a business. The research further indicated that lecturers could create a conducive learning environment for students to learn and develop an environment that would allow people to explore innovative business-related concepts.

The study also found that, according to the lecturers' perspectives, students saw entrepreneurship as a career of their choice. The students could develop and maintain direct relationships with potential investors, develop contacts with key people-linked capital sources and identify potential sources. This study also concluded that self-efficacy might influence the students' start-up propensity. The lecturers also agreed that students could promptly bring "product concepts" to the market and determine what business would be successful.

Based on the findings, the following recommendations were made. First, there should be an investment in the TVET entrepreneurship curriculum, establishing entrepreneurship centres and partnering with private and public companies. Second, government and/or policymakers should include entrepreneurship as an integral part of development in the national policy framework that addresses unemployment. In this set-up, teaching and learning would need to take place at TVET colleges and include entrepreneurship research. Third, there should be more investment in TVET colleges' infrastructure that enables entrepreneurial mindset, and appropriate education should be allowed to develop. Finally, future studies should explore the impact of an entrepreneurship education programme on changing students' attitudes towards entrepreneurship, perceived entrepreneurial abilities, and entrepreneurial intentions.

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