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# Entrepreneurial intentions among students: a case of Tshwane University of Technology, South Africa

## Abstract

This article presents findings of a study conducted among university students to determine perceptions of entrepreneurial intention. Data were collected using a structured questionnaire in a classroom setting, and of the returned questionnaires, 537 were valid for analysis. The participants consisted of students registered for both Entrepreneurship and Entrepreneurial Skills. Factor analysis identified two key factor components relating to self-efficacy. The findings indicate that entrepreneurship education is likely to enhance students' self-confidence to start businesses. This is evident in the optimism displayed by the students. Most of the students indicated that they intended to start businesses as soon as they had completed their studies. Notably, if entrepreneurship education is well developed, it could essentially benefit students intending to follow entrepreneurship as a career.

**Keywords:** entrepreneurial intention, entrepreneurship education, self-efficacy, entrepreneurial self-efficacy.

**JEL Classification:** M10.

## Introduction

Entrepreneurship-oriented intentions are deemed antecedents of entrepreneurial action. To understand entrepreneurship theory, scholars argue that there is a need to have a clear conceptualization of the factors that might essentially influence the intentions of those considering entrepreneurship for the first time, namely nascent entrepreneurs (McGee, Peterson, Mueller and Sequeira, 2009). According to Pihie (2009), self-efficacy is the strong personal belief in skills and abilities to initiate a task and lead it to the next level. In contrast, Venter, Urban and Rwigema (2008) argue that self-efficacy is an important construct in behavioral management and describe it as people's judgement of their capabilities in terms of organizing and executing activities designed to accomplish a certain level of performance. Turker and Selcuk (2009) posit that self-confidence is widely accepted as a valuable individual asset and key to personal success. In this context, once a person has high level of self-belief, there is a greater possibility to undertake projects and ordinarily persevere in pursuit of his or her goal. Self-efficacy is further regarded as a motivational construct that influences individual choices and also as development through interventions such as training, education and even modelling. Promoting entrepreneurial intentions of university students has received considerable attention among researchers who want to establish whether entrepreneurship education programs create entrepreneurial attitudes and intentions of students (Wu and Wu, 2008).

Theory attests that targeted education such as entrepreneurship education plays a crucial role in developing levels of entrepreneurial self-efficacy. Bandura (1997) believes, as confirmed by Turker and Selcuk (2009), that self-confidence in the ability to execute specific tasks successfully comes from four

keys areas: master experiences, modelling, social persuasion and judgements of our own physiological states. Entrepreneurship-oriented intentions are considered precursors of entrepreneurial action (Krueger and Brazeal, 1994). This confirms the findings of Co and Mitchell (2006), who found that universities are offering entrepreneurship education with a view to enhancing entrepreneurial self-efficacy and intentions. Entrepreneurship education relates to subjects such as Entrepreneurship and Entrepreneurial Skills. In order to create a pathway for effective development of entrepreneurship theory, researchers need to have a full understanding of the factors that might influence the intentions of those considering entrepreneurship for the first time, particularly nascent entrepreneurs. From various research studies, it is evident that there are many factors that will influence a person to become an entrepreneur, including various combinations of personal features, background, experience and disposition.

Entrepreneurial intention is defined as the state of mind directing a person's attention and action towards self-employment in contrast to getting employment (Bird, 1998). Attitudes towards self-employment are the difference between perceptions of personal desirability of becoming self-employed or employed by an organization. Kolvereid and Isaken (2006) further agree that self-employment refers to the situation in which individuals are faced with two alternatives when selecting a career, namely to be self-employed or employed in an organization. Importantly, an attitude towards self-employment is an individual opinion on working as the owner of a business. The notion of self-employment is an imperative factor which predicts potential entrepreneurs in future.

From literature, it has emerged that many students who study entrepreneurship education at universities might simply not have developed self-efficacy and

entrepreneurial intention to become entrepreneurs and as such they become job seekers in contrast to creating jobs. Based on the above articulations and literature, the aim of this study was to determine whether entrepreneurship education can enhance entrepreneurial intention among university students.

### **1. Theoretical perspective on entrepreneurial intentions**

From a social point of view, both entrepreneurship and the educational system are vital for economic growth. According to Wu and Wu (2008), through access to education people not only gain knowledge and develop ability, but they also have more opportunities to improve their quality of life. This, importantly, has led to universities focusing on the offerings of entrepreneurship education to students. Entrepreneurship needs to be instilled in university students if new businesses are to be started up in the country. In this regard, self-efficacy and entrepreneurial self-efficacy become imperative. The theory of self-efficacy emerged from the work of Bandura (1997) on social learning theory and reflects essence of belief that one is personally capable of implementing or even engaging in an intention. These two aspects complement each other when nascent entrepreneurs intend to start their own businesses. Self-efficacy is regarded as psychological self-confidence in carrying out specific tasks. Entrepreneurial self-efficacy plays a major role in the new venture creation process. Notably, people establish intentions about focusing on entrepreneurial activities if they believe at all that there is a high possibility of success. Notwithstanding this notion, a person could have the intention to create a new venture or focus on the existing entrepreneurial intention. This could be achieved when self-efficacy is very much in line with the perceived requirements of a specific opportunity (Boyd and Vozikis, 1994). According to Mueller and Dato-On (2008), self-efficacy has received considerable attention in recent years as a key factor in explaining why some individuals are motivated to become entrepreneurs whilst others are not. More importantly, self-efficacy is one of the core components of entrepreneurial intention models. Franco, Haase and Lautenschlager (2010) posit that intentionality is regarded as a key when it comes to understanding the reasons for individuals' careers. The intention is related to attitudes with perceived desirability of entrepreneurship and in this context, desirability relates to perceptions of personal appeal of starting a business.

Krueger (1993) explains that entrepreneurial intentions refer to a commitment to starting a new business. Intentions essentially represent a future course of action anticipated to be performed.

Entrepreneurial intentions emanate from motivation and cognition, the latter relating to intellect, ability and skills. All these traits can be acquired through learning; hence the need for entrepreneurship education. Purposeful education is likely to enhance students' entrepreneurial efficacy by providing them with knowledge and skills to cope with the complexities embedded in entrepreneurial activities. This could include seeking opportunity, organizing resources and leading the business to greater heights. Nabi, Holden and Walmsley (2010) posit that though research indicate that start-up activity suggest that a sizeable proportion of students have reasonably strong intentions to start their own business, but only a small percentage translate the intent into reality. Therefore showing strong intentions does not always lead into start-ups.

As it is a known fact that entrepreneurship-oriented intentions are regarded as antecedent of entrepreneurial action as posited by McGee et al. (2009). In this endeavor, it is imperative to have an understanding of the factors that serve as a foundation of those considering entrepreneurship for the first time that is nascent entrepreneurs are for instance experience, personal attributes and so on. In this context, McGee et al. (2009) indicate that nascent entrepreneurs refer to individuals who have yet to start a new business. These entrepreneurs have a desire and intention to start a business and involved in certain activities that lead to accomplishments of such desire. According to Barbosa, Gerhardt and Kickul (2007) one of the key influencer is entrepreneurial self-efficacy (ESE) and this is regarded as an antecedent to new intentions. In this regard, ESE is a construct that measures a person's belief in their ability to successfully start entrepreneurial venture. Importantly, this attributes could be enhanced through training and education which would improve the level of entrepreneurial activities (Florin, Karri & Rossiter, 2007).

Entrepreneurship education enhances entrepreneurial efficacy of the students through business-related activities. Research posit that targeted education can contribute in developing self-efficacy (Mohammed & Aparna, 2011). In order for this to be achieved, the universities should be able to create entrepreneurship programs that are contextually appropriate and strengthen the students' desirability of entrepreneurship; they first understand the entrepreneurial intentions and perceived barriers of their prospective students (Giacomin, Janssen, Pruett, Shinnar, Llopis & Toney, 2010). Education can positively influence self-efficacy. It is imperative to understand how self-efficacy influences the tendency to initiate the opening of new businesses and their successful operation. The following needs to be done, as

stipulated by Chartney and Libecap (2000): firstly, trace personal, behavioral and environmental factors that encourage or discourage people to start businesses and secondly, refine entrepreneurial education to include not only insight into how to start the business, but also confidence in being able to apply the acquired knowledge effectively.

**1.1. Problem investigated.** Most of the universities instil the culture of entrepreneurial orientation within their environments with the intent of enhancing self-confidence and entrepreneurial self-efficacy. With the efforts taken by universities to offer entrepreneurship education, the question is: Are these initiatives making strides in enhancing self-confidence in students to start their own businesses as soon they complete their studies?

**1.2. Primary objective of the research.** Based on the problem stated above, the primary objective of this study was to determine the contribution of entrepreneurship education to the enhancement of entrepreneurial intentions among students at Tshwane University of Technology (TUT).

**1.3. Propositions for the study.** The researcher formulated the following propositions for the research:

*P1: Entrepreneurship education influence students' intentions to follow entrepreneurship as a career.*

*P2: Entrepreneurship education creates self-efficacy among students.*

## 2. Research design and methodology

**2.1. Research design.** The researcher used the survey design which was cross-sectional in nature. According to Creswell (2009), the survey method provides a quantitative or numeric description of trends, attitudes, or opinions of a particular population by studying a sample of that population. This type of design allows the researcher to generalize or make claims about the population in these instance students. This design was appropriate in this situation as the researcher intended to reach a large sample and to obtain the opinions of the participants about the topic under investigation (De Vos et al., 2011; Creswell, 2012). This is in line with what Leedy and Ormrod (2010) posit, namely that survey design is best suited when the researcher intends acquiring information from a group of people, in this case entrepreneurship education students.

**2.2. Methodology.** The researcher adopted a quantitative approach which was descriptive and exploratory in nature. A survey method in a form of structured questionnaire was used to determine whether entrepreneurship education enhances self-efficacy for graduate to start their businesses as soon as they have completed their studies. This type of

design was deemed appropriate due to the fact that it is easier to capture the opinions of the participants about a phenomenon (De Vos et al., 2011).

**2.3. Population and sampling strategy.** As previously articulated, the population of the study consisted of the 650 students who registered for entrepreneurship education across three campuses of TUT. A purposive sampling was used because of the fact that for the students to take part in the study they should have registered for either entrepreneurship education. These students were chosen as a result that they enrolled for entrepreneurship education and therefore they would be beneficial for the study.

**2.4. Data collection strategy.** Data were collected at the three campuses where entrepreneurship education is offered, namely Pretoria, Arcadia and Ga-Rankuwa and they were purposively selected to take part in the study. The researcher and three lecturers collected data during the entrepreneurship education classes using a structured questionnaire to measure biographical information of the students, entrepreneurial intention and self-efficacy. The qualifying criteria for students to take part in the survey were that they had to be registered for Entrepreneurship or Entrepreneurial Skills. Data collected were analyzed using SPSS version 20.

**2.5. Ethical considerations.** Prior to data collection, permission was obtained from the research ethics committee of the university. Before the distribution of questionnaires, the researchers and the three lecturers explained the purpose of the study and the students' rights as prospective participants and assured them that the data obtained would be treated as confidential (Babbie, 2008). Once this major step was taken, questionnaires were distributed to the students in a classroom setting. The rationale for distributing questionnaire was that students might not have had access to computers and a monkey survey was not an option. Physical distribution of questionnaires would ensure a reasonable response rate from the respondents.

## 3. Findings

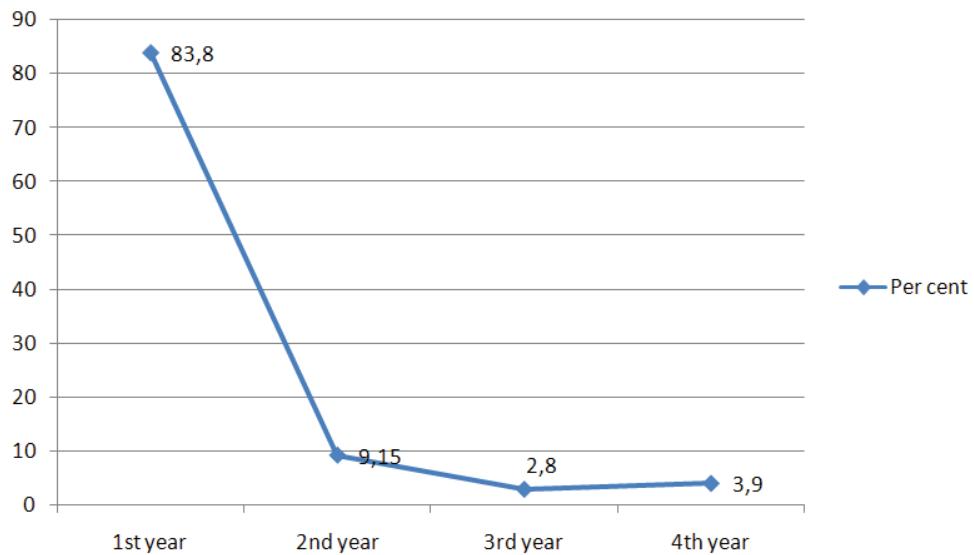
The findings of the research will be presented as follows: sample realization followed by the discussion, which will be based on both descriptive and factor analysis.

**3.1. Sample realization.** During the survey, 650 questionnaires were distributed among TUT students registered for Entrepreneurial Skills and Entrepreneurship. The subject lecturers distributed questionnaires at the beginning of their classes. Of the 650 questionnaires distributed, 560 were returned, representing a response rate of 82.6%. After checking the missing values, 23 questionnaires were disregarded due to the high percentage of missing values. In

total, 537 were fully completed and valid for the analysis.

The average student age was 20 years, accounting for 73.9% of the total students who participated in the research. Of these participants, the majority (54.9%) were females and 45.1% were males. As

summarized in Figure 1 below, the majority (83.8%) of the respondents were in the first year of their studies, 9.15% were in second year, 2.8% were in third year and 3.9 % were in fourth year. From this it can be seen that entrepreneurship education is offered at different levels at TUT.



**Fig. 1. Student enrolment by year of study**

#### 4. Discussion

Most of the respondents (46.4%) had a great ambition of operating their businesses internationally, whilst 33.3% had a dream of running their businesses nationally and others felt that they would like to operate regionally (10.5%) and locally (9.9%). Of the total participants, 38% stated that they would use their own savings when starting their businesses, 28.6% indicated that they would approach a bank for possible funding for their venture creation and 18.3% were indifferent.

It emerged from the research that most of the students surveyed (44.3%) were quite optimistic that they would start their business as soon as they completed their studies. This however confirms the proposition one that entrepreneurship education influence students to follow entrepreneurship as a career. Importantly, this finding is in line with what Mohammed and Aparna (2011) found in their study that participation in entrepreneurship programs significantly increase perceived feasibility of starting a business. Some 11.4% indicated that they would start their businesses during their studies and only 4.7% had already started their businesses. Of the participants who indicated that they intended starting their own businesses, 21.3% indicated that they intended starting private companies, 14.6% would start their businesses as sole traders, whilst 32.1% preferred partnerships. It is interesting that only 9.3% indicated that they were not planning to

start a business and 30.4% remained indifferent to starting a business. Most (38.3%) of the participants stated that they intended spending five days or more in their businesses, and 8% would spend three days in their respective businesses.

It was also important and insightful to determine the extent to which self-efficacy, as an antecedent of entrepreneurial intention, faired among the participants. To measure the self-efficacy construct, the researcher utilized Bandura's 10-item scale, which was anchored on a 5-point Likert scale (1 = Strongly disagree; 5 = Strongly agree). Using Cronbach's alpha coefficient on the 10 self-efficacy statements, the reliability among constructs was tested. The overall Cronbach's alpha for all factors was 0.704, which suggests that the statements as such were deemed reliable. This, however, is consistent with other scholars such as Clark and Watson (1995), who use a directive of 0.70, whilst Bartholomew, Antonia and Marcia (2000) posit that between 0.80 and 0.60 is still an acceptable level. Therefore the Cronbach's alpha for this research is acceptable.

Subsequently, factor analysis utilizing principal component analysis (PCA) with Oblimin rotation was conducted for the purposes of (a) testing construct validity and (b) uncovering the existence of latent variables (or factors) within the data. Firstly, it was instructive to test whether it was possible to proceed with factor analysis (Field,

2009). The factorability statistics were satisfactory ( $KMO = .794$ ; Bartlett's test  $X^2 = 632.955$ ;  $df = 45$ ;  $p < .001$ ). The latter statistics therefore indicate that analysis for self-efficacy as a factor of intention to

create a venture was suitable for the factor analysis. From the factor analysis, a two-factor structure explaining X% of the variance emerged, as reflected in Table 1.

Table 1. Factor loading: self-efficacy

	Factor 1 Self-confidence	Factor 2 Problem solving	Communalities
SE7	.746	-.304	.500
SE6	.655		.423
SE4	.581		.392
SE5	.523		.355
SE10	.397	.341	.363
SE1	.349		.245
SE3		.786	.559
SE9		.629	.483
SE2		.453	.211
SE8		.380	.339
Eigenvalues	2.799	1.071	(Total)
Percentage of variance	27.994	10.706	38.7

**4.1. Factor 1: Self-confidence.** This factor emerged from the four statements that loaded well in the analysis. This represents participants' self-confidence in their intention to establish a business and their courage to face challenges as they occur. This is a good indication that self-efficacy is crucial to enhance entrepreneurial intentions and this importantly confirms proposition two of the study. The level of self-confidence is consistent with what Bandura (1997) found, namely that when students are engaged in innovation and entrepreneurial activities, this will influence their confidence levels in respect of certain abilities. For students to achieve confidence levels of self-efficacy, a well designed entrepreneurship education program is imperative and should be able to give student a realistic sense of what it takes to start a business and increase entrepreneurial self-efficacy. This however confirms the belief of McGee et al. (2009) that for ESE to be enhanced, it is imperative to advocate the incorporation of ESE into the pre- and post-measurement of entrepreneurship training programs to enable academics with better information for continuous improvement as well as the effectiveness of the program.

**4.2. Factor 2: Alternative solutions to problems.** This factor explicitly indicates that the participants showed that they were able to bring new dimensions to solving problems in their respective situations. This shows that participants, through entrepreneurship education, were likely to face problems and forge alternative solutions to such challenges. The high loadings indicate participants' positivity regarding self-belief in solving problems as they occur. This however is line with what Turker and Selcuk (2009) posited that, once a person has high

level of self-belief, there is a greater possibility to undertake projects and ordinarily persevere in pursuit of a specific goal. The essence is that once self-belief is created, the nascent entrepreneurs have a better position to solve common problems that might be experience in the course of pursuing a particular goal.

## 5. Limitations of the research

The study, like all other studies, has limitations. Firstly, it focused only on TUT students and as such no generalizability of the findings can be claimed beyond the South African context, in particular other university students. To overcome this limitation, further studies should be conducted in other universities, particularly in South Africa and possibly the Southern African Development Community (SADC) to get a better understanding of the phenomenon. Secondly, in the study students' perceptions of entrepreneurial intentions were assessed and not entrepreneurial behavior. Since the study focused on the students intentions, it not always the case that the intentionality is translated into reality of starting own businesses. This area could be further explored by future research. A structured questionnaire was used and with this type of data collection strategy, it is however limiting in terms of responses compared to interviews. A mixed method could have been adopted in order to collect rich data for the study.

## Conclusions

The findings of this research purport that well-developed entrepreneurship education could enable students to have a realistic sense of what it is involved in starting a business and, above all, in raising their level of self-confidence. Students

surveyed in this study showed some entrepreneurial intentions. It is worth noting that most of the participants preferred to contribute their own money to start the businesses, which would ensure commitment to the businesses. Most students pointed out that they would prefer operating their business internationally and that they would like to spend more time on their businesses. Though findings confirm that there is strong intention to start a business, a small fraction of such students start the business and this remains a concern as to what happened to other graduates.

### **Future research direction**

Entrepreneurial intention develops over time and as such it is difficult to establish the association between entrepreneurial intention and actual business start-ups. Therefore a longitudinal study becomes an option to

gain more comprehensive insight into the intention formation process. A follow-up study on the graduates could also be done to investigate whether they have indeed established their own businesses.

In conclusion, the research has provided valuable information on how students with entrepreneurship education enhance their self-efficacy in creating businesses. It emerged that entrepreneurship education is likely to enhance students' self-confidence; therefore universities should ensure that offering these programs is encouraged across different academic faculties. Finally, the findings of this research pose a challenge to university policy makers to inculcate curriculum elements that enhance the development of entrepreneurial attitudes and self-efficacy so that they are less attracted towards being organizational employees.

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