

ENTREPRENEURSHIP EDUCATION AS A DRIVER OF ENTREPRENEURIAL INTENTIONS AMONG UNIVERSITY STUDENTS

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Abstract

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Entrepreneurship has received much recognition worldwide in both the academic and corporate fields, mainly due to its contribution to job creation and economic development. Entrepreneurship education was identified across the literature as one of the key drivers of entrepreneurship intention. For this purpose, Jena (2020) argued that entrepreneurship education is a good predictor of how competitive a country's economy is. However, in South Africa, few studies have been conducted on entrepreneurship education offered in local universities. This study, therefore, sought to investigate the impact of entrepreneurship education on students' entrepreneurship intentions. A survey was conducted with a sample of 197 undergraduate students selected from two public universities in Durban. Data were collected using a self-administered questionnaire and analysed using Statistical Package for the Social Sciences (SPSS) version 27. The findings of the study concluded a strong positive significant relationship between entrepreneurship education and students' entrepreneurial intentions ($r = 0.79$, $p < 0.01$). However, regression analysis concluded that subjective norms are a good predictor of students' entrepreneurial intentions compared to entrepreneurship education ($B = 0.347$; $t = 3.785$; $p < 0.01$). Based on these results, policymakers, university management, and curriculum developers should promote entrepreneurship education and focus more on its design for effective results.

Keywords: Entrepreneurship, Entrepreneurship Education, Entrepreneurship Intention, Entrepreneurial Development, Microentrepreneurs, Start-ups

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1. INTRODUCTION

The past few decades have seen the growth of entrepreneurship worldwide, mainly due to high unemployment rates and people's changing perceptions towards 9 to 5 jobs. The growing popularity of entrepreneurship over the past years necessitated the introduction of entrepreneurship education in schools, especially higher education institutions. For this reason, Igwe et al. (2021) purported that the past two decades have seen an increase in courses and subjects offered in management degrees. However, Igwe et al. (2021) further stated that with the increase in the number of management and entrepreneurship courses offered in higher education institutions, there have been growing concerns over how they are offered. Literature has revealed that what matters is not how extensively entrepreneurship education is offered, but its intensity. According to Yi and Duval-Couetil (2021, as cited in Farrokhnia et al., 2022), the belief that learning about entrepreneurship in higher education institutions benefits students has seen a sharp increase in the number of entrepreneurship education courses offered in universities globally. The researchers believe that the actual benefits of entrepreneurship education offered in universities are more important than the perceived benefits, therefore, the need to investigate the impact of entrepreneurship education on students' entrepreneurial intentions.

According to Ratten and Jones (2021), entrepreneurship education has for the past few decades become a widely researched subject and facilitated the progress of many societies. Of interest is that most studies on entrepreneurship education have focused on its role and impact on entrepreneurship intention and have reached almost similar conclusions. Various authors (Ogbari et al., 2018; Hou et al., 2019; Oni & Mavunyangwa, 2019; Belas et al., 2019; Jena, 2020; Cera et al., 2020; Martínez-Gregorio et al., 2021) have identified entrepreneurship education as a key driver of entrepreneurship intention in different settings and contexts. For this reason, the design and methodologies adopted in implementing and teaching entrepreneurship education in higher education institutions are more important than their perceived usefulness. Mozahem and Adlouni (2021) argued that regarding entrepreneurship education, the problem is not whether entrepreneurship is being taught in higher education institutions, but whether students are acquiring relevant entrepreneurial skills or not. The authors further argued that the focus should not only be on assessing the relevancy of entrepreneurship education courses but also on measuring their effectiveness through assessing the extent of skills acquisition. Entrepreneurship education should focus on developing students' entrepreneurial skills rather than teaching them about entrepreneurship, hence the need for this study. The role and status of entrepreneurship education offered in higher education institutions is more important than its perceived benefits, showing the need for this study.

Ajzen (1991), in his theory of planned behaviour, recognised intention as a good predictor of behaviour. When individuals have the intention to engage in a certain behaviour, they are more likely to execute as compared to those without the intention. It is against this background that this study sought

to examine entrepreneurship intention as it relates to entrepreneurial behaviour and to question what factors contribute to the development of entrepreneurship intention amongst students. The authors identified entrepreneurship education as central to the development of students' entrepreneurship intention. The model of entrepreneurial intentions designed by Kadir et al., (2011) identified attitudinal factors, educational support, and behavioural factors as central to the development of entrepreneurship intention. Entrepreneurial intentions can therefore be influenced by several factors, other than entrepreneurship education. For this reason, this study also sought to investigate the role of entrepreneurship education in influencing students' entrepreneurial intentions compared to their personal attitudes toward entrepreneurship and subjective norms.

The concept of entrepreneurship education assessed against entrepreneurship intention has not been studied extensively in South African institutions, thus, the state of South African entrepreneurship education as a predictor of students' entrepreneurship intention is not clear. One of the study objectives was to localise the focus on entrepreneurship education for the specific benefit of South African university students. Students' perceptions of the entrepreneurship education they are subjected to would thus be captured and the researchers would, in turn, provide context-specific recommendations. The main objective of this study was to evaluate the influence of entrepreneurship education on students' entrepreneurship intentions. In addition, the study sought to assess the contribution of entrepreneurship education toward students' entrepreneurial intentions compared to their attitudes toward entrepreneurship and subjective norms.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature on entrepreneurship education and entrepreneurship intention. The section explains and discusses the key variables that form this study, entrepreneurship education, and entrepreneurship intentions, and identifies the tested hypotheses. Section 3 analyses the methodology that was adopted to conduct empirical research on the impact of entrepreneurial education on students' entrepreneurial intentions. Furthermore, this section reviews the research instrument used to collect primary data for this research. Section 4 outlines the results from the correlation and regression analyses conducted to test the hypotheses outlined in this paper. Section 5 discusses the research results in relation to the literature, highlighting the similarities and differences and the contributions of the current study. Section 6 concludes this paper by discussing the limitations of the study and putting forward recommendations for the betterment of entrepreneurship education and entrepreneurship development.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Tripathi et al. (2022) defined entrepreneurship as a process of starting a new business that involves both risks and opportunities for the entrepreneur. The authors define entrepreneurship as the process

of starting and running a business regardless of size. Entrepreneurship has gained momentum for various reasons. Ikebuaka and Dinbabo (2018) posited that entrepreneurship is a cure for unemployment and a better solution for poor-performing economies. Kirkley (2017), together with Park (2017), argues that entrepreneurship can contribute to economic development by improving productivity, innovation, and employment.

2.1. Entrepreneurship education

Reviewed literature provides varied definitions of entrepreneurship education as this subject can be discussed from different perspectives. Welsh et al. (2016) defined entrepreneurship education as education designed to develop individual relevant entrepreneurial attitudes and skills. Fayolle et al. (2006) provided a more comprehensive definition of entrepreneurship education, defining it as “any pedagogical programme or process of education for entrepreneurial attitudes and skills, which involves developing certain personal qualities, it is therefore not exclusively focused on the immediate creation of new businesses” (p. 702). Baseska-Gjorgjeska et al. (2012) posited that entrepreneurial learning refers to formal and informal education and training whose purpose is to drive entrepreneurial passion and knowledge with or without the intention to start and operate a profitable business. For this study, the authors have defined entrepreneurship education as a field of study that seeks to provide learners with business-associated knowledge, ranging from how to identify noble business ideas, to start and successfully manage business enterprises. What is common and central in all the definitions provided here is that entrepreneurship education seeks to develop not only entrepreneurial skills in individuals but also seeks to instil in them an entrepreneurial attitude. As is suggested by Ajzen’s (1991) theory of planned behaviour, a positive attitude is directly related to the intention to engage in the desired behaviour. Baseska-Gjorgjeska et al.’s (2012) definition pointed out two types of entrepreneurship education, informal and formal.

2.2. Entrepreneurship intention

Similar to entrepreneurship education, entrepreneurship intention is a concept that has received widespread recognition, analysis, and investigation. The literature is awash with various definitions of the concept. Thompson (2009) defined entrepreneurship intention as “a self-acknowledged conviction by a person that they will set up a new business venture and consciously plan to do so at some point in the future” (p. 687). Similarly, Guerrero et al. (2008) defined entrepreneurial intention as an individual’s desire and aim to start a new business venture within an established business. This definition, however, can be best used to define intrapreneurship intention which Nasaj et al. (2022) defined it as a bottom-up process whereby employees start new businesses in existing organisations intending to receive recognition and promotion. This paper focuses on a discussion on entrepreneurship intention. The authors define entrepreneurship intention as an individual’s desire and will to start a business or act in an entrepreneurial manner. Influenced by Ajzen’s (1991) recognition of

intention as a good predictor of behaviour, the researchers are of the notion that entrepreneurship intention has a good bearing on students’ entrepreneurial behaviour.

2.3. Drivers of entrepreneurship intention

Through conducted research studies, numerous factors are believed to have a significant impact on entrepreneurship intention. Considerable research effort (Herdjiono et al., 2017; Farrukh et al., 2018; Kadir et al., 2011; Ozaralli & Rivenburgh, 2016; Fatoki, 2014) has been put into investigating the significant determinants of entrepreneurship intention. The following factors have been identified across the literature as contributors: personality factors, family environment, entrepreneurship education, attitude, and behavioural factors such as creativity and risk-taking. The authors of this study have identified entrepreneurship education as a paramount factor influencing students’ entrepreneurial intentions.

2.4. Entrepreneurship education and entrepreneurship intention

Martínez-Gregorio et al. (2021) conducted a meta-analysis study on the effect of entrepreneurship education on the entrepreneurship intentions of primary, secondary, and tertiary education students. The findings concluded that entrepreneurship education has a positive effect on students’ entrepreneurial intentions and self-efficacy (Martínez-Gregorio et al., 2021). However, Martínez-Gregorio et al. (2021) argued that the effect of entrepreneurship education on students’ entrepreneurial intention is weak, and the course duration is critical for better results. For this reason, students who enrol in entrepreneurship degrees probably have higher levels of entrepreneurial intentions than those who enrol in short or individual courses. Like Martínez-Gregorio et al. (2021), Belas et al. (2019) argued that entrepreneurship education develops in individuals the skills, capabilities, and motivation to become an entrepreneur, hence, it can be seen as a strong enabler of entrepreneurship. However, the authors did not specify the type of entrepreneurship education that would develop students’ entrepreneurial skills and capabilities and rather referred to entrepreneurship education in general. Furthermore, in comparison to Martínez-Gregorio et al. (2021) who found a small effect of entrepreneurship education on students’ entrepreneurial intentions, Belas et al. (2019) concluded a strong effect. Martínez-Gregorio et al.’s (2021) and Belas et al.’s (2019) findings correspond with Feder and Nişu-Antonie’s (2017) who stated that higher education and training in entrepreneurship is a good and direct predictor of entrepreneurship intention. In addition, Grecu and Denes (2017) went further than just acknowledging entrepreneurship education as an instigator of entrepreneurial intention, concluding that entrepreneurship education helps individuals to find a business, prepares them to run the business, and develops in them critical thinking skills. For this reason, Jena (2020) contended that entrepreneurship education is one of the key forces of a competitive economy.

Research conducted by Cera et al. (2020) revealed that courses in entrepreneurship have a strong effect on students' entrepreneurial intentions. These findings confirmed and are consistent with those of various past studies conducted on entrepreneurship education and intentions. Entrepreneurship education, therefore, is understood to play a significant role in developing individuals' entrepreneurial skills. Hou et al. (2019) have noted that entrepreneurship education creates an environment that gives students an entrepreneurial attitude which eventually improves their intention to engage in entrepreneurial activities. A study conducted by Ogbari et al. (2018) to assess the value of university entrepreneurship education on the performance of aspiring entrepreneurs in selected Nigerian universities, concluded that it positively impacts aspiring student entrepreneurs' performance. These authors further noted that university entrepreneurship education has a positive effect in particular on students' ability to develop products. (Ogbari et al., 2018). Even though the context in which this study was conducted is different from the current study, the results provide insights into the role played by university entrepreneurship education. Contrary to the results of Ogbari et al. (2018), Ozaralli and Rivenburgh (2016) concluded that taking courses that discuss entrepreneurship does not significantly impact Turkish and American students' entrepreneurial intentions. These results can be said to correlate with Kirby's (2004) theory, which stated that entrepreneurship courses educate students about entrepreneurship rather than for entrepreneurship.

In a study conducted by Manyaka-Boshielo (2017) to investigate the influence of entrepreneurship education in South African township communities, it was concluded that it prepares individuals for the launch of new ventures and increases their self-efficacy. Oni and Mavunyangwa (2019) conducted a study with students drawn from four faculties of a previously disadvantaged university in South Africa: Health Sciences, Management and Law, Humanities and Science, and Agriculture. The study identified significant differences in students' entrepreneurial intentions based on their faculty of study; students from the Management and Law faculty recorded higher entrepreneurial intentions as compared to students from the other three faculties. These results could be attributed to the fact that students from the Management and Law faculty are usually subjected to entrepreneurial and business studies courses. Thus, entrepreneurship education may have potentially played a role in positively influencing the entrepreneurial intentions of students registered in the faculty.

2.5. Hypotheses development

To achieve the objectives of the study, the following hypotheses were tested:

H1: There is a positive significant relationship between entrepreneurship education and students' entrepreneurship intention.

H2: Entrepreneurship education is a strong predictor of students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

3. RESEARCH METHODOLOGY

3.1. Research design

To achieve the objective of the study, a quantitative research design was adopted. Stockemer (2019) noted that a cross-sectional research design is adopted by studies that collect data once in the research process, these data are analysed to fulfil the predetermined research objectives and the data collection process is not repetitive. The cross-sectional research design was appropriate in the case of this study as the researchers sought to provide a relevant and informed report on the present state of entrepreneurship education and South African university students' entrepreneurship intentions. This is in line with Serakan and Bougie (2016) who insinuated that the purpose of cross-sectional studies is to collect adequate data to provide answers to the research questions. A quantitative research approach was adopted for this study. According to Aliaga and Gunderson (2002), "quantitative research is explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics)" (p. 128). The structure of this study adequately fits the quantitative research description provided by Aliaga and Gunderson (2002). Numerical data were collected from the study participants and analysed using Statistical Package for the Social Sciences (SPSS) version 27. Choy (2014) stated that in quantitative research studies, data is collected using standardised questionnaires. Accordingly, a structured questionnaire was used to collect data for this study.

Furthermore, the study adopted the survey research strategy. Muijs (2011) stated that survey research strategies are characterised by face-to-face, mail and telephonic data collection using questionnaires distributed to a randomly selected sample. For data collection, a highly structured questionnaire was distributed to students online. The researchers were restricted from physically collecting data as the study was conducted during the COVID-19 era.

3.2. Population and sampling

Creswell (2014) posited that quantitative studies are popular with a well-defined target population that is expressed in numerical terms. The target population for this study was undergraduate students registered for entrepreneurship courses in the two selected public universities in Durban: the University of KwaZulu-Natal and the Durban University of Technology. Approximately 1000 undergraduate students were registered for three entrepreneurship courses: Introduction to Entrepreneurship, offered in both institutions and Entrepreneurial Skills, offered at the Durban University of Technology. A probability sampling technique was used to select the study participants from the entire population of students. Stockemer (2019) suggested that samples used in quantitative studies must be true representations of their populations. Furthermore, Muijs (2011) identified generalisation as a core principle in quantitative studies, which is made possible using unbiased samples. The simple random sampling technique was used to select participants for inclusion in the study.

3.3. Participants

The study sample comprised students from two public universities in Durban, South Africa: the University of KwaZulu-Natal and the Durban University of Technology. A sample of 278 students was randomly selected from a population of approximately 1000 undergraduate students registered for entrepreneurship courses at the two institutions: Introduction to Entrepreneurship and Entrepreneurial Skills. The sample size selection was guided by Krejcie and Morgan (1970), who proposed that for a population of 1000 ($N = 1000$) a sample size of 278 ($S = 278$) can be selected. Finally, 197 questionnaires were successfully collected from students giving a response rate of 70.9%. Of these participants, 88% (174) were registered at the University of KwaZulu-Natal, and 12% (23) were registered at the Durban University of Technology. Of the participants, 51% (100) were females and 49% (97) were males, three quarters, or 76% (149), were aged between 16-25, 22% (42) were between 26-15, and only 2% (5) were aged between 36-45 years old. Most of the participants, 79% (156), were 3rd-year students, and 16% (31) and 5% (10) were 2nd and 1st-year students, respectively. More than half of the study participants, 53% (104), indicated that they had registered for the entrepreneurship course because it was a pre-requisite module whilst 23% (46) indicated that they were interested in entrepreneurship. More than half of the participants, 58.9% (116), were registered for the Bachelor of Commerce degree.

3.4. Research instrument

A structured questionnaire was used to collect data from participants. Section A of the questionnaire measured participants' age, gender, level of study, race, degree registered for, institution of study, and reason for studying entrepreneurship, amongst other variables. Sections B to E consisted of the different scales used to measure the constructs represented in the study: attitude towards entrepreneurship, subjective norms, entrepreneurship intention, and entrepreneurship education. The different scales were adopted from the entrepreneurial intention scale developed by Liñán and Chen (2009) and the individual entrepreneurial intent scale developed by Thompson (2009).

The entrepreneurship education (EE) construct was measured by a 16-item entrepreneurship education (EE) scale ranging from "strongly disagree" (1) to "strongly agree" (5). This EE scale sought to measure students' perceptions of the education received from their respective entrepreneurship courses. High scores implied a positive perception of entrepreneurship education. The Cronbach's alpha coefficient for the EE scale was 0.95. The scale indicated a score range of 16-80.

The entrepreneurship intention (EI) construct was measured by a 17-item entrepreneurship intention (EI) scale ranging from "strongly disagree" (1) to "strongly agree" (5). The EI scale sought to measure students' level of entrepreneurship intentions. High scores indicated a higher level of entrepreneurial intentions. The Cronbach's alpha coefficient for the EI scale was 0.95. The scale had a score range of 17-85.

Students' personal attitudes (PA) toward entrepreneurship were measured by a 10-item personal attitude (PA) towards entrepreneurship scale ranging from "strongly disagree" (1) to "strongly agree" (5). High scores on the PA scale indicated a positive attitude toward entrepreneurship. The PA scale reported a Cronbach's alpha coefficient of 0.90. The scale had a score range of 10-50.

Subjective norms (SN) were measured by a 17-item subjective norms (SN) scale ranging from "strongly disagree" (1) to "strongly agree" (5). High scores on the SN scale indicated students' positive perceptions of entrepreneurial support received from their families, friends, colleagues, lecturers, their societies, and the country at large. The scale reported a Cronbach's alpha coefficient value of 0.91. The scale had a score range of 17-85.

3.5. Research instrument validity

The validity of research instruments ensures that they are measuring what they are intended to measure. For this study, content validity was used to validate the research instrument. Heale and Twycross (2015) noted that content validity is measuring the extent to which a research instrument covers the content pertaining to the constructs under study. These authors further reported that face validity is a good measure of content validity (Heale & Twycross, 2015). According to Creswell et al. (2007), the face validity of a research instrument can be performed by industry experts, and this is the face value of the questionnaires. The questionnaire used for data collection in this study was given to academics and experts in the field of entrepreneurship and their input was incorporated into its design. Moreover, the questionnaire was adapted from Liñán and Chen (2009) and Thompson (2009), therefore, having been used in prior studies it was considered valid.

4. RESULTS

Data were analysed using SPSS version 27, running both descriptive and inferential statistics to provide answers to the research objectives. A correlation analysis was conducted to ascertain the relationship between entrepreneurship education and students' entrepreneurial intentions whilst a regression analysis was conducted to ascertain the influence of entrepreneurship education on students' entrepreneurial intentions compared to students' personal attitudes toward entrepreneurship and subjective norms.

4.1. Sample characteristics

The sample was made up of 100 (51%) female students and 97 (49%) male students. Three quarters of the sample, 149 students (76%) were from the 16-25 age category. Almost half of the students 96 (49%) identified as Indians, whilst 86 (44%) identified as Africans. Most of the students, 174 (88%), were registered at the University of KwaZulu-Natal whilst three quarters, 156 (79%), were doing their final year studies. More than half of the students, 104 (53%), indicated they registered for an entrepreneurship course because it was a prerequisite module, whilst only 13 (7%) took up the course to improve their entrepreneurial

knowledge and skills. Over half of the students, 116 (58.9%), were registered for the Bachelor of Commerce degree. Twenty-one students (10.7%) indicated accounting as their major, 12 (6.1%) business administration, 10 (5.1%) management whilst only 4 (2%) indicated clinical pathology as their major. These sample characteristics indicate that most students were registered for entrepreneurship courses as a requirement, whilst only a few registered with the intention to improve their entrepreneurship knowledge and skills with the possibility of starting and running a business. Furthermore, the results indicated that most students studying entrepreneurship are from the business field.

4.2. Results from correlation analysis

Table 1 illustrates the results from the correlation analysis. The results show that entrepreneurship education is significantly correlated with students' entrepreneurial intentions at the 0.01 level,

indicating a greater confidence in the results of the analysis ($r = 0.79$, $p < 0.01$). Cohen's (1988) interpretation of correlation analysis results was used to analyse the results of this study: values ranging from $r = 0.50$ to $r = 1.0$ indicate a strong relationship between the variables. The results, therefore, indicate a strong relationship between entrepreneurship education and students' entrepreneurial intentions ($r = 0.79$). The coefficient of determination indicates that entrepreneurship education helps to explain 62% of the scores in students' entrepreneurial intentions; the two variables therefore shared much variance. The results imply that an increase in entrepreneurship education would result in an increase in entrepreneurial intentions. The more entrepreneurship education students receive, the more they would want to venture into entrepreneurship, engage in entrepreneurial activities or start business ventures. The results support the tested hypothesis to a greater extent; it was therefore accepted, and the null hypothesis (H_0) was rejected.

Table 1. Correlation analysis results

Variable	Pearson correlation	EE	EI	SN	PA
EE	Pearson correlation	1	0.790**		
	Sig. (2-tailed)		0.000		
	N		183		
EI	Pearson correlation		1	0.821**	0.785**
	Sig. (2-tailed)			0.000	0.000
	N			184	190
SN	Pearson correlation			1	
	Sig. (2-tailed)				
	N				
PA	Pearson correlation				1
	Sig. (2-tailed)				
	N				

Note: ** Correlation is significant at the 0.01 level (2-tailed).

A standard multiple regression analysis was conducted among the variables that were found to be strongly correlated with entrepreneurship intention, that is entrepreneurship education, personal attitude towards entrepreneurship, and subjective norms. The researchers sought to determine the best predictor of entrepreneurship intention among the variables and the results of the analysis were presented in Table 2, Table 3, and Table 4.

4.3. Results from regression analysis

According to Table 2 and Table 3, the standard multiple regression analysis shows that the regression model accounted for a significant proportion of 73.2% of the variance in the dependent variable

(entrepreneurship intention), $R^2 = 0.732$; $F = 157.709$, $p < 0.01$. The independent variables of entrepreneurship education, personal attitude towards entrepreneurship, and subject norms combined explained 73.2% of the variance in entrepreneurship intention which is a good result. It is however important to assess the relative contribution of each independent variable in predicting entrepreneurship intention.

Table 2. Model summary from regression analysis

Model	R	R ²	Adjusted R ²	Std. error of the estimate
1	0.856	0.732	0.728	8.650

Note: a. Predictors: (Constant), entrepreneurship education, personal attitude, subjective norms. b. Dependent variable: Entrepreneurship intention.

Table 3. ANOVA from regression analysis

Model	Sum of squares	df	Mean square	F	Sig.	
1	Regression	35399.199	3	11799.733	157.709	0.000
	Residual	12943.825	173	74.820		
	Total	48343.024	176			

Note: a. Dependent variable: Entrepreneurship intention. b. Predictors: (Constant), entrepreneurship education, personal attitude, subjective norms.

As illustrated in Table 4, all the independent variables made a statistically significant contribution to entrepreneurship intention. Subjective norms had the highest contribution to the dependent variable ($B = 0.347$; $t = 3.785$; $p < 0.01$), therefore, it was the best predictor of entrepreneurship intention.

Personal attitude towards entrepreneurship made the second highest contribution to entrepreneurship intention ($B = 0.324$; $t = 4.854$, $p < 0.01$). Amongst the three independent variables, entrepreneurship education contributed the least to entrepreneurship intention ($B = 0.244$; $t = 2.968$; $p < 0.01$). Even though

entrepreneurship education was found to have a significant positive correlation with students' entrepreneurial intentions, compared with *subjective norms* and *personal attitudes* toward entrepreneurship, it was the least contributor.

Table 4. Regression analysis summary of the best predictors of entrepreneurship intention

Predictor variable	Beta	t	Sig.
Personal attitude	0.324	4.854	0.000
Subjective norms	0.347	3.785	0.000
Entrepreneurship education	0.244	2.968	0.003

Subjective norms play the biggest role in positively influencing students' entrepreneurial intentions therefore a strong support system must be made available for students in entrepreneurship. A university support system must be set up to support every student to yield their entrepreneurial capacity. Support from family, parents, and colleagues is also important for students to see the need to venture into entrepreneurship. The results of the study led to the rejection of the alternative hypothesis (*H_a*). Even though entrepreneurship education has a significant influence on students' entrepreneurship intentions, the results show that subjective norms have the highest influence followed by entrepreneurship.

5. DISCUSSION

The study found empirical evidence to conclude that there is a positive significant relationship between entrepreneurship education and students' entrepreneurial intentions. The results indicate a strong relationship between entrepreneurship education and students' entrepreneurship intentions ($r = 0.79$). The study, therefore, lends support to various other studies (Martinez-Gregorio et al., 2021; Jena, 2020; Cera et al., 2020; Belas et al., 2019; Ogbari et al., 2018; Manyaka-Boshielo, 2017; Oni & Mavunyangwa, 2019; Hou et al., 2019) confirming a positive relationship between entrepreneurship education and entrepreneurship intention. The results of the study concur with those of Manyaka-Boshielo (2017) who concluded that entrepreneurship education plays a significant role in preparing people in South African township communities for the launch of business ventures and improves their self-efficacy. Although the two studies were conducted in different settings, a township community and a university, the results help communicate the contribution of entrepreneurship education toward students' entrepreneurship intentions. Based on the findings of this study, it is probable that exposure to entrepreneurship education results in a behaviour change and the way individuals view entrepreneurship. For instance, learning from stories of successful entrepreneurs, attending entrepreneurship workshops, and receiving mentorship from a popular businessperson would result in students being more entrepreneurially inclined.

In addition to Manyaka-Boshielo (2017), the findings of this study correspond with Cera et al. (2020) who found that entrepreneurship courses have a strong effect on students' entrepreneurial intentions. This study was conducted on students

registered for entrepreneurship subjects and the results revealed a significant positive correlation between entrepreneurship education and students' entrepreneurial intentions. Nevertheless, the authors argue that in addition to entrepreneurship education, students should receive adequate entrepreneurship support from home, school, society, and government as findings from this study revealed that subjective norms are best predictors of entrepreneurial intentions. Whilst higher education institutions offer students entrepreneurship education, societies should be receptive and supportive of small business owners and the government provide funding and the necessary infrastructure. The findings of this study revealed that not only entrepreneurship education is essential to develop in students the intention to become entrepreneurs, but also support from various stakeholders is equally important for effective entrepreneurship development. In this regard, the findings of this study lend support to Martinez-Gregorio et al. (2021) who concluded that entrepreneurship education has a positive but weak effect on students' entrepreneurial intentions. Following this, for the findings of this study to have a greater influence on decision-makers, the authors provide specifications on the nature of entrepreneurship education that could potentially prepare students for entrepreneurship. In their definition of entrepreneurship education, Baseska-Gjorgjieska et al. (2012) referred to formal and informal entrepreneurship education. The authors think that universities should implement formal entrepreneurship education that is both theoretical and practical to effectively develop students' entrepreneurial interests and intentions.

The results of this study also lend support to Oni and Mavunyangwa's (2019) study. The authors concluded that students in the Management and Law faculty recorded higher levels of entrepreneurial intention as compared to those from the Humanities and Science, Agriculture, and Health Sciences faculties. The significant difference in students' entrepreneurial intentions could potentially be attributed to students in the Management and Law faculty receiving entrepreneurship education. These results provide a better perspective of entrepreneurship education, as there was a comparison between students who may have received entrepreneurship education and those from the Health Sciences faculty who may not have received entrepreneurship education. Therefore, the current study could have included a control group of students who were not subjected to entrepreneurship education so that better comparisons could have been made for more accurate results. However, the results add to the literature that identifies entrepreneurship education as a significant contributor to entrepreneurship intentions.

The results of this study contradict those of Ozaralli and Rivenburgh (2016), who concluded that taking courses that discuss entrepreneurship did not have a significant impact on Turkish and American students. It is not clear whether students included in that study were studying entrepreneurship courses or courses with entrepreneurship topics. Students included in this study were registered for pure entrepreneurship courses: Introduction to

Entrepreneurship and Entrepreneurial Skills; therefore, they would have received comprehensive coverage of the different aspects of entrepreneurship. Ozaralli and Rivenburgh's (2016) findings resonate with Kirby's (2004) argument which says entrepreneurship education teaches students about entrepreneurship and not for entrepreneurship. In as much as universities and other learning institutions may want to include entrepreneurship education in their curriculum, considerable effort must be spent on the design of the curriculum rather than its implementation. Significantly, insights be drawn from Kirby's (2004) argument. Entrepreneurship students must be taught for entrepreneurship not about entrepreneurship, the design of entrepreneurship education curriculum must therefore be focused. The model of the entrepreneurial university originated by Streeter et al. (2002) could provide substantial guidance in designing an entrepreneurship education curriculum. Streeter et al. (2002) stated that for an effective entrepreneurship environment, universities must ensure that both internal (student associations, career service networks, tech transfer centres, incubators) and external (community, mentors, social events, invited speakers, corporations, partnerships with organisations) stakeholders are incorporated. This is supported by Jena (2020) who argued that entrepreneurship education can be seen as an enabler of strong economic development.

The results of the study correspond with those of Ogbari et al. (2018), who conducted a study to assess the effectiveness of entrepreneurship education on the performance of aspiring student entrepreneurs in Nigerian universities and concluded that entrepreneurship education plays a significant role in the students' performance. Hou et al. (2019) argued in relation to these results, positioning that entrepreneurship education creates an environment that gives students an entrepreneurial attitude which increases their entrepreneurial intentions. Similarly, the results of the current study support the assertion by Ozaralli and Rivenburgh (2016), who noted that entrepreneurship education improves entrepreneurial aspirations, knowledge, skills, and awareness. The results of the current study together with the perspectives and findings of the various authors discussed confirms the significant role played by entrepreneurship education in improving students' entrepreneurial intentions.

6. CONCLUSION

In as much as the study of entrepreneurship and the practise thereof is encouraged amongst students and graduates, what is important to note is the role of entrepreneurship education as one of the key drivers of entrepreneurship intention. This study investigated the relationship between entrepreneurship education and tertiary students' entrepreneurial intentions and found a significant positive relationship between entrepreneurship education and students' entrepreneurial intentions. In addition, the study revealed that subjective norms are the best predictor of students' entrepreneurial intentions compared to entrepreneurship education and students' personal attitudes towards

entrepreneurship. Entrepreneurship education significantly influences students' entrepreneurship intentions; therefore, special attention and effort should be devoted to the designing of effective entrepreneurship education curriculums in higher education institutions. Policymakers, university management and leadership, and curriculum developers can contribute immensely to the progression of entrepreneurship education by focusing more on its design than implementation. Based on the findings of this study, an entrepreneurial university is essential for effective entrepreneurship development as the findings revealed the importance of subjective norms in influencing students' entrepreneurial intentions. Both internal and external stakeholders, academic and non-academic stakeholders should work toward entrepreneurship development. Academics including lecturers, tutors and researchers, parents, societies and the government should work together towards supporting students for entrepreneurship. It is not only the responsibility of higher education institutions through entrepreneurship education to promote entrepreneurship, but external stakeholders should also provide the necessary support and a conducive environment for entrepreneurship to thrive. The country's economy should be favourable for entrepreneurship development and this is a larger extent the responsibility of governments.

Based on the results of this study, the management implications and recommendations must be discussed. University management, curriculum developers, and relevant stakeholders should acknowledge the pivotal role played by entrepreneurship education in developing students' entrepreneurial intentions and develop effective subject curriculums. Emphasis should be on designing an entrepreneurship education curriculum that seeks to educate students for entrepreneurship not about entrepreneurship; research should therefore focus on the specific aspects of entrepreneurship content that can produce augmented entrepreneurship courses. University management needs to invest in the continuous development of entrepreneurship education. Key lessons can be drawn from the model of the entrepreneurial university designed by Streeter et al. (2002). Entrepreneurship education should not only include the teaching aspects (entrepreneurial mindset, entrepreneurial skills) but also include research (involve doctoral schools and Ph.D. students, bring research to the market, commercialize, innovate with impact) and extra-curricular activities (competitions, conferences, summer schools, networking between students and staff, programmes and workshops).

Universities are recommended to consider introducing entrepreneurship degrees like a Bachelor of Entrepreneurship or a Bachelor of Business Entrepreneurship. This would enable students to specialize in entrepreneurship-specific courses that cover both basic and higher-level entrepreneurial skills.

Entrepreneurship education can be offered to all students regardless of their field of study, whether from the faculty of management, health sciences, engineering, or agricultural sciences. If they are exposed to entrepreneurship education, they can all start businesses in their field of study.

Universities can consider introducing entrepreneurship-specific courses at all undergraduate levels, from first to third year. The entrepreneurship courses should be designed according to the complexity of the level of study. An Introduction to Entrepreneurship course can be offered to 1st-year students and more advanced courses to 2nd and 3rd-year students.

The study was conducted during the COVID-19 pandemic which negatively impacted the data collection process. The questionnaire was distributed online which resulted in a limited number of students completing the questionnaire. The study was conducted in only two public

universities in Durban, due to resource constraints, which resulted in a restricted population size and sample. Further research can be conducted with more universities and students to see if similar results can be obtained. The study adopted a cross-sectional research design which implied the collection of data once in the research process and therefore could not check for any trends in the relationship between the variables. Future research can be conducted with a longitudinal study research design so that changes in the relationship between the variables can be traced after adjustments to the entrepreneurship education curriculum.

REFERENCES

1. Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
2. Aliaga, M., & Gunderson, B. (2002). *Interactive statistics*. SAGE Publications.
3. Belas, J., Gavurova, B., Korony, S., & Cepel, M. (2019). Attitude of university students toward entrepreneurship environment and toward entrepreneurship propensity in Czech Republic and Slovak Republic — International comparison. *Economic Research*, 32(1), 2500–2514. <https://doi.org/10.1080/1331677X.2019.1615972>
4. Baseska-Gjorgjieska, M., Milevska, M., & Jankuloski, B. (2012). Formal and informal education in entrepreneurship and SME management-current situation and tendencies in Macedonia. In J. Sousa, A. Marta, C. N. Simões, I. Stošić, D. Erić, & H. Hanić (Eds.), *Managing structural changes trends and requirements* (pp. 360–374). Faculty of Economics of the University of Coimbra. https://www.researchgate.net/publication/292127512_FORMAL_AND_INFORMAL_EDUCATION_IN_ENTREPRENEURSHIP_AND_SME_MANAGEMENT-CURRENT_SITUATION_AND_TENDENCIES_IN_MACEDONIA
5. Cera, G., Mlouk, A., Cera, E., & Shumeli, A. (2020). The impact of entrepreneurship education on entrepreneurial intention: A quasi-experimental research design. *Journal of Competitiveness*, 12(1), 39–56. <https://doi.org/10.7441/joc.2020.01.03>
6. Choy, L. (2014). The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *IOSR Journal of Humanities and Social Science*, 19(4), 99–104. <https://doi.org/10.9790/0837-194399104>
7. Cohen, J. (1988). Set correlation and contingency tables. *Applied Psychological Measurement*, 12(4), 425–434. <https://doi.org/10.1177/014662168801200410>
8. Creswell, J. W. (2014). *Research design: Qualitative, Quantitative, and mixed methods approaches* (4th ed.). SAGE Publications, Inc.
9. Creswell, J. W., Ebersohn, L., Eloff, I., Ferreira, R., Ivankova, N. V., Jansen, J. D., Nieuwenhuis, J., Pieterse, V. L., Plano Clark, V. L., & van der Westhuizen, C. (Eds.) (2007.) *First steps in research sampling*. Van Schaik Publishers.
10. Farrokhnia, M., Baggen, Y., Biemans, H., & Noroozi, O. (2022). Bridging the fields of entrepreneurship and education: The role of philosophical perspectives in fostering opportunity identification. *The International Journal of Management Education*, 20(2), Article 100632. <https://doi.org/10.1016/j.ijme.2022.100632>
11. Farrukh, M., Alzubi, Y., Shahzad, I. A., Waheed, A., & Kanwal, N. (2018). Entrepreneurial intentions: The role of personality traits in perspective of theory of planned behaviour. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(3), 399–414. <https://doi.org/10.1108/APJIE-01-2018-0004>
12. Fatoki, O. (2014). The entrepreneurial intention of undergraduate students in South Africa: The influences of entrepreneurship education and previous work experience. *Mediterranean Journal of Social Sciences*, 5(7), 294–299. <https://doi.org/10.5901/mjss.2014.v5n7p294>
13. Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training*, 30(9), 701–720. <https://doi.org/10.1108/03090590610715022>
14. Feder, E.-S., & Nişu-Antonie, R.-D. (2017). Connecting gender identity, entrepreneurial training, role models and intentions. *International Journal of Gender and Entrepreneurship*, 9(1), 87–108. <https://doi.org/10.1108/IJGE-08-2016-0028>
15. Grecu, V., & Denes, C. (2017). Benefits of entrepreneurship education and training for engineering students. *MATEC Web. Conf.*, 121, Article 12007. <https://doi.org/10.1051/mateconf/201712112007>
16. Guerrero, M., Rialp, J., & Urbano, D. (2008). The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model. *International Entrepreneurship and Management Journal*, 4, 35–50. <https://doi.org/10.1007/s11365-006-0032-x>
17. Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing*, 18(3), 66–67. <https://doi.org/10.1136/eb-2015-102129>
18. Herdjiono, I., Puspa, Y. H., & Maulany, G., & Aldy, B. E. (2017). The factors affecting entrepreneurship intention. *International Journal of Entrepreneurial Knowledge*, 5(2), 5–15. <https://doi.org/10.37335/ijek.v5i2.55>
19. Hou, F., Su, Y., Lu, M., & Qi, M. (2019). Model of the entrepreneurial intention of university students in the Pearl River Delta of China. *Frontiers in Psychology*, 10, Article 916. <https://doi.org/10.3389/fpsyg.2019.00916>
20. Igwe, P. A., Okolie, U. C., & Nwokoro, C. V. (2021). Towards a responsible entrepreneurship education and the future of the workforce. *The International Journal of Management Education*, 19(1), Article 100300. <https://doi.org/10.1016/j.ijme.2019.05.001>
21. Ikebuaka, K., & Dinbabo, M. (2018). Beyond entrepreneurship education: Business incubation and entrepreneurial capabilities. *Journal of Entrepreneurship in Emerging Economies*, 10(1), 154–174. <https://doi.org/10.1108/JEEE-03-2017-0022>

22. Jena, R. K. (2020). Measuring the impact of business management student's attitude towards entrepreneurship education on entrepreneurial intention: A case study. *Computers in Human Behavior, 107*, Article 106275. <https://doi.org/10.1016/j.chb.2020.106275>
23. Kadir, M. B. B. A., Salim, P. M., & Kamarudin, H. B. (2011). *Factors affecting entrepreneurial intentions among Mara Professional College students*. <https://docplayer.net/23302074-Factors-affecting-entrepreneurial-intentions-among-mara-professional-college-students.html>
24. Kirby, D. A. (2004). Entrepreneurship education: Can business schools meet the challenge? *Education + Training, 46*(8/9), 510-519. <https://doi.org/10.1108/00400910410569632>
25. Kirkley, W. W. (2017). Cultivating entrepreneurial behaviour: Entrepreneurship education in secondary schools. *Asia Pacific Journal of Innovation and Entrepreneurship, 11*(1), 17-37. <https://doi.org/10.1108/APJIE-04-2017-018>
26. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610. <https://doi.org/10.1177/001316447003000308>
27. Liñán, F., & Chen, Y-W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice, 33*(3), 593-617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
28. Manyaka-Boshielo, S. J. (2017). Social entrepreneurship as a way of developing sustainable township economies. *HTS Theologiese Studies/Theological Studies, 73*(4), Article a3830. <https://doi.org/10.4102/hts.v73i4.3830>
29. Maresch, D., Harms, R., Kailer, N., & Wimmer-Wurm, B. (2016). The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies university programs. *Technological Forecasting and Social Change, 104*, 172-179. <https://doi.org/10.1016/j.techfore.2015.11.006>
30. Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing, 28*(2), 211-224. <https://doi.org/10.1016/j.jbusvent.2012.03.002>
31. Martinez-Gregorio, S., Badenes-Ribera, L., & Oliver, A. (2021). Effect of entrepreneurship education on entrepreneurship intention and related outcomes in educational contexts: A meta-analysis. *The International Journal of Management Education, 19*(3), Article 100545. <https://doi.org/10.1016/j.ijme.2021.100545>
32. Mozahem, N. A., & Adlouni, R. O. (2021). Using entrepreneurial self-efficacy as an indirect measure of entrepreneurial education. *International Journal of Management Education, 19*(1), Article 100385. <https://doi.org/10.1016/j.ijme.2020.100385>
33. Muijs, D. (2011). *Doing qualitative research in education with SPSS* (2nd ed.). SAGE Publications Ltd. <https://doi.org/10.4135/9781849203241>
34. Nasaj, M., Badi, S., Murtagh, N., & Blaique, L. (2022). Intrapreneurial personality and individual innovation behaviour in service organisations: Network building ability as a mediator. *International Journal of Innovation Management, 26*(4), Article 2250029. <https://doi.org/10.1142/S1363919622500293>
35. Ogbari, M. E., Olokundun, M. A., Uzuegbunam, J., Isiavwe, D. T., Ilogho, J. E., Obi, J. N., & Moses, C. L. (2018). Data on entrepreneurship education and entrepreneurial performance of aspiring entrepreneurs in selected Nigerian universities. *Data in Brief, 20*, 108-112. <http://dx.doi.org/10.1016/j.dib.2018.07.044>
36. Oni, O., & Mavuyangwa, V. (2019). Entrepreneurial intentions of students in a historically disadvantaged university in South Africa. *Acta Commercii, 19*(2), Article a667. <https://doi.org/10.4102/ac.v19i2.667>
37. Ozaralli, N., & Rivenburgh, N. K. (2016). Entrepreneurial intention antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research, 6*, Article 3. <https://doi.org/10.1186/s40497-016-0047-x>
38. Park, C. (2017). A study on effect of entrepreneurship on entrepreneurial intention: Focusing on ICT majors. *Asia Pacific Journal of Innovation and Entrepreneurship, 11*(2), 159-170. <https://doi.org/10.1108/APJIE-08-2017-024>
39. Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal: Researching Entrepreneurship, 25*(5), 479-510. <https://doi.org/10.1177/0266242607080656>
40. Ratten, V., & Jones, P. (2021). Entrepreneurship and management education: Exploring trends and gaps. *The International Journal of Management Education, 19*(1), Article 100431. <https://doi.org/10.1016/j.ijme.2020.100431>
41. Remeikiene, R., Startiene, G., & Dumciuviene, D. (2013). Explaining entrepreneurial intention of university students: The role of entrepreneurial education. In *Proceedings of the Management, Knowledge and Learning International Conference 2013 "Active Citizenship by Knowledge Management & Innovation"*. ToKnowPress. <http://www.toknowpress.net/ISBN/978-961-6914-02-4/papers/ML13-258.pdf>
42. Serakan, U., & Bougie, R. J. (2016). *Research methods for business: A skill building approach* (7th ed.). John Wiley & Sons, Limited.
43. Stockemer, D. (2019). *Quantitative methods for the social sciences: A practical introduction with examples in SPSS and Stata*. Springer Cham. <https://doi.org/10.1007/978-3-319-99118-4>
44. Streeter, D. H., Jaquette, J. P., Jr., & Hovis, K. (2002). *University-wide entrepreneurship education: Alternative models and current trends* (Working Paper WP 2002-02). Cornell University. https://ecommons.cornell.edu/bitstream/handle/1813/57923/Cornell_Dyson_wp0202.pdf?sequence=1
45. Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *International Journal of Academic Research in Management (IJARM), 5*(2), 18-27. <https://doi.org/10.2139/ssrn.3205035>
46. Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice, 33*(3), 669-694. <https://doi.org/10.1111/j.1540-6520.2009.00321.x>
47. Tripathi, M. A., Tripathi, R., Sharma, N., Singhal, S., Jindal, M., & Aarif, M. (2022). A brief study on entrepreneurship and its classification. *International Journal of Health Sciences, 6*(S2), 7985-7695. <https://doi.org/10.53730/ijhs.v6nS2.6907>
48. Welsh, D. H. B., Tullar, W. L., & Nemati, H. (2016). La formación en emprendimiento: proceso, método o ambos? [Entrepreneurship education: Process, method, or both?] *Journal of Innovation & Knowledge, 1*(3), 125-132. <https://doi.org/10.1016/j.jik.2016.01.005>