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## Entrepreneurial knowledge, personal attitudes, and entrepreneurship intentions among South African Enactus students

### Abstract

This paper investigates how action-based entrepreneurship training influences entrepreneurial knowledge and personal attitudes, which in turn reportedly develop individuals' entrepreneurship intentions. A cohort of students who had undergone social entrepreneurship training under the auspices of Enactus South Africa was studied to determine the relationship between these three key variables associated with entrepreneurship tendencies. The study, in particular, addresses the question of whether practical entrepreneurship training bears any consequences on developing students' personal attitudes, entrepreneurship knowledge, and entrepreneurship intentions. Stratified sampling techniques were utilized to collect data from 355 Enactus South Africa students from the constituent 27 colleges and universities that make up Enactus South Africa. While findings of the study indicated that both entrepreneurial knowledge and personal attitudes have significant influence on entrepreneurship intentions, personal attitudes were observed as having a greater influence on the former. Furthermore, high levels of entrepreneurship knowledge were observed to impact on favorable attitudes towards entrepreneurship.

**Keywords:** entrepreneurial knowledge, personal attitudes, Enactus, entrepreneurial intentions.

**JEL Classification:** M10.

### Introduction

Enactus (formerly known as students in free enterprise or simply SIFE), is a global organization that seeks to foster entrepreneurial leadership by creating sustainable partnerships among university students, higher education institutions (HEIs), business and corporate leaders. The focus of Enactus is to encourage students to identify entrepreneurial solutions to socio-economic challenges within their communities. Students, in other words, are challenged to think of problems within their communities as entrepreneurial opportunities. To tackle these problems, Enactus requires students to design entrepreneurial projects that address the three key Enactus pillars of profit, people, and planet. Enactus projects, therefore, seek to improve both the quality of life and standard of living of the 'people in need' without necessarily compromising the environment (or planet) (Enactus, 2013b). Enactus projects, therefore, create a platform through which university students learn real-life business skills, and at the same time contribute towards creating better communities.

Against this background, authors such as Tshikovhi and Mvula (2014) attribute participation in Enactus projects as practical entrepreneurial training, which helps students develop positive entrepreneurial attitudes and entrepreneurial knowledge (Zeng, Bu & Su, 2011). The underlying principle is that students, through practical training, are more likely to develop various stocks of knowledge throughout the learning processes. Knowledge gained from Enactus entrepreneurship projects, therefore, helps students not only recognize entrepreneurial opportunities, but

also to develop viable business models to exploit the former (Jack & Anderson, 1999). Following this school of thought, this paper seeks to test the association between practical entrepreneurship training (as operationalized by participation in Enactus projects), personal attitudes, entrepreneurial knowledge, and entrepreneurial intentions. Given the multitude of challenges preventing South African students from engaging in entrepreneurship activities (Shambare, 2013), findings from this study are likely to provide new insights that might improve the uptake of entrepreneurship among South Africa's youth.

**Research purpose.** Several authors (c.f. Ebewo, 2013; Shambare, 2013) bemoan the absence of a practical entrepreneurial training component within the business and entrepreneurship curricular at many South African universities. However, these authors concede that Enactus, if efficiently integrated into the curriculum, university (Enactus) students are likely to benefit immensely. Although Enactus is identified as being instrumental in developing entrepreneurship intentions among participating students, the specific relationship of Enactus participation on entrepreneurship intentions has not been sufficiently tested in research, at least in South Africa. As a corollary, the purpose of this paper is to determine the influence of Enactus participation on entrepreneurship knowledge (EK) and personal attitudes (PA), which in turn influence entrepreneurship intentions (EI).

### 1. Literature review

To develop the theoretical concepts in this study, Ajzen's (1991) entrepreneurship intentions model was utilized. The model identifies three elements responsible for encouraging entrepreneurial behavior – entrepreneurship knowledge, personal attitudes, and

entrepreneurship intentions. The model pre-supposes that the interaction of these three variables ultimately define individuals' proclivity towards entrepreneurship. Ajzen's model is a robust conceptual frame, which has been tried and tested in numerous studies (Jack & Anderson, 1999). The constituent elements of the EI model are briefly discussed next.

**1.1. Entrepreneurial intentions.** Intentions have been proved to be the best predictors of individual behaviors, particularly when the behavior is rare, hard to observe or involves unpredictable time lags (Krueger & Brazeal, 1994). The establishment of new ventures and the creation of new value in existing ones, which have been identified by Bird (1988) as the two outcomes of entrepreneurial intentions, are good examples of such behaviors. Entrepreneurial intention is often regarded as the purposive pursuit of forming a new organization (Gartner, 1989). Therefore, in line with past studies, entrepreneurial intentions are deemed to be individuals' plans to start a new business venture. For the purpose of this study, EI, as utilized in the theory of planned behavior to determine actions of certain individuals towards being entrepreneurs, was considered, and as such, regarded to be the dependent variable.

**1.2. Entrepreneurship knowledge.** Simply put, entrepreneurial knowledge refers to an individual's appreciation of the concepts, skills and mentality expected of an entrepreneur (Jack & Anderson, 1999, p. 118). Massad and Tucker (2009) articulate that this knowledge can be acquired and developed through consistent exposure to entrepreneurship activities. Accordingly, entrepreneurial learning is associated with the development of entrepreneurial knowledge. Turker (2009) identifies two distinct types of entrepreneurial knowledge that complement each other when determining new venture creation processes.

The first type of knowledge relates to individuals' ability to recognize entrepreneurial opportunities. This involves the discovery and evaluation of new venture opportunities. Recognizing business opportunities involves being able to identify a market or a group of people facing a particular problem. Solving this problem often involves the development of an innovative or new approach. For instance, an Enactus student (or entrepreneur) might recognize that a farming cooperative run by a group of widows in a certain township is experiencing difficulty in accessing profitable markets. The entrepreneur recognizes that by helping the farmers brand their produce, she can link them to a local grocery store. By so doing, the entrepreneur effectively acts as both a consultant and liaison, which entitles her to a small commission.

Using the farming cooperative example above, the second type of knowledge refers to successfully exploiting the identified opportunity. The entrepreneur develops a viable business model, which involves the formation and development of a profitable business around the new venture opportunity. Both these types of knowledge are expected of entrepreneurs.

**1.3. Personal attitudes.** Personal attitude refers to individuals' perceptions of the personal desirability of performing entrepreneurial behavior. According to Nicolaides (2011), an attitude towards an act is the degree to which a person has a favorable or unfavourable evaluation or appraisal of the behavior in question. The later authors seem to have derived their views on personal attitudes from Ajzen's (1991) Theory of Planned Behavior (TPB) model. The TPB pre-supposes that individuals' attitudes towards certain actions are subjective conscious phenomena. In the context of entrepreneurship, PA, therefore, refers to the degree to which individuals hold a positive or negative valuation towards entrepreneurial behavior (Miralles, Riverola & Giones, 2012). As such, it is both a mental affair that deeply lies within oneself. At the same time, the environment can also influence it. In summary, personal attitude is a mentally prepared state for any known subject.

**1.4. Enactus South Africa.** Enactus is an international non-profit organization that brings together student, academic and business leaders who are committed to using the power of entrepreneurial action to improve the quality of life and standard of living for 'people in need'. Guided by academic advisors and business leaders, participating students form teams on their campuses to create and implement entrepreneurial projects. The experience not only transforms lives, it helps students to develop the kind of talent and perspective that is essential to leadership in an evermore complicated and challenging world.

Enactus South Africa comprises 27 teams from each of the country's HEIs. In total, the country has 2166 members participating in 162 projects (Enactus, 2013a). Enactus holds an annual national competition, which provides a platform for teams to showcase the impact of their outreach projects to be evaluated by executives serving as judges. National champion teams advance to the prestigious Enactus World Cup to represent their country (Enactus, 2013b).

**1.5. Enactus and entrepreneurial knowledge.** Enactus provides a platform for students to action-based entrepreneurship education, from identifying social problems (projects) in communities to finding entrepreneurial solution through entrepreneurial

approach as guided by Enactus (2013b). Through participation in Enactus projects, it is more likely that students would better appreciate the entrepreneurship process. Linan (2004) particularly explains that exposure to the business environment makes students more confident about their own abilities of becoming entrepreneurs. Thus, the following hypotheses were formulated:

*H1: Higher levels of entrepreneurial knowledge are positively related to higher levels of personal attitudes.*

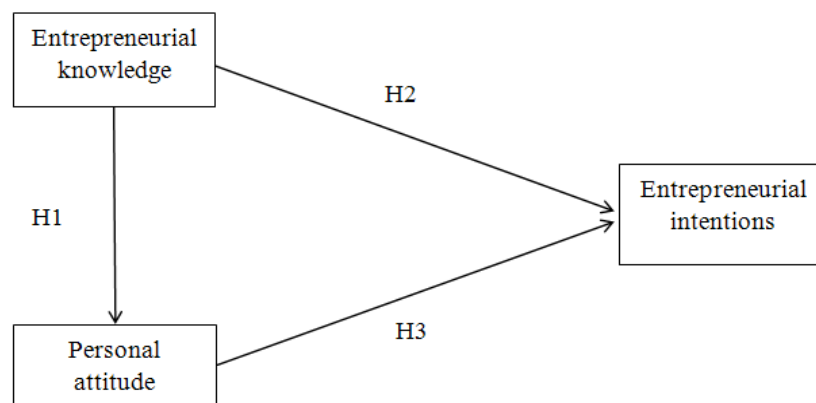
*H2: Higher levels of entrepreneurial knowledge are positively related to higher levels of entrepreneurial intentions.*

**1.6. Enactus and personal attitude.** Enactus encourages students towards an entrepreneurial attitude that leads them to entrepreneurial proclivity.

Enactus builds the individual to believe in starting and completing a task, which is a most needed motivation to the youth (Linan, 2004). This is to enable the youth to think of entrepreneurship as a career by positively contributing to the local economic development of their communities. The question is: do students put into practice the entrepreneurial attitudes that Enactus instils in them to become entrepreneurs or it ends as just attitude without action. Bosma and Levie (2009) further argue that entrepreneurial attitudes and perceptions play an important role in creating an entrepreneurial intention. From this, the hypothesis reads:

*H3: Higher levels of personal attitude are positively related to a higher level of entrepreneurial intentions.*

The proposed conceptual model for the study can thus be summarized as follows:



**Fig. 1. Proposed conceptual model**

## 2. Research methodology

This study followed a descriptive design utilizing a quantitative approach (Stangor, 2011). Self-completion questionnaires were used to collect primary data from participating Enactus students at the 2013 South Africa Annual National Competition held at the Sandton Convention Centre in Johannesburg.

**2.1. Research instrument development.** Linan's (2004) instrument was adapted to suit the South African settings. The resultant questionnaire was pre-tested on Enactus undergraduate students from the Tshwane University of Technology chapter. The researchers requested the participants of the pilot study to provide comments on whether the questions would be understood by the target population. The final questionnaire, as depicted in Table 1, included a cover letter, instructions to complete the questionnaire, and structured questions covering respondents' demographic information, entrepreneurial skills and abilities, personal attitudes, and entrepreneurship intentions.

**Table 1. Measuring instrument**

Section	Variable/ dimension	Author (year)	No. of items
A	Demographics	Tshikovhi (2013)	7
B	Entrepreneurial knowledge	Linan (2004)	5
C	Personal attitudes	Zeng (2006)	5
D	Entrepreneurial intentions	Ajzen (1991)	5

A cover letter was attached to every questionnaire, and explained the purpose of the study, confidentiality agreement, and instructions for completing the questionnaire. Also, instructions were provided at the beginning of each section as well as an explanation on the interpretation of the measurement scale (Leedy & Ormrod, 2005). The questions in the sub-scales were measured using a Likert scale (1 = strongly agree; 5 = strongly disagree).

**2.2. Sampling design.** In order to get a representative sample, stratified sampling methods were applied. Each of the 27 participating HEI was considered to be a stratum. To determine the size of each stratum, the sample size determination factor in which the ratio of the number of questions to be factor analyzed

versus the sample size, as suggested by Field (2009), was utilized. The ratio of 10:1 was applied. The final questionnaire contained 27 questions to be factor analyzed, thus a minimum sample size of  $(27 \times 10)$  270 respondents was considered the minimum acceptable sample size (Pallant, 2010, p. 183). This, therefore, translated to at least 10 participants from each HEI. The final sample, however, constituted 355 respondents from 27 Enactus teams, which surpassed the recommended 270.

**2.3. Data collection.** Research assistants were used to assist with collecting data at the 2013 Enactus South Africa Annual National Competition at the Sandton International Convention Centre held from the 10<sup>th</sup> to the 11<sup>th</sup> of July 2013. The self-completed (adapted) EIQ scale was used to collect data (Linan, 2004). At least 20 questionnaires were distributed to each participating HEI. Student assistants approached team presidents from the respective HEIs (or Enactus Chapters) and asked to distribute the questionnaires to their teams. A collection point at the event's reception area was erected so that the team presidents as well as their members could drop off the completed questionnaires. In total 540 questionnaires were distributed. Of these, 355 fully completed questionnaires were returned and used for further analysis.

**2.4. Data analysis.** SPSS version 21 was utilized to conduct the following statistical analyses:

- ◆ Descriptive analysis from the described sample.
- ◆ Factor analysis was employed to reduce the variables and to test construct validity.
- ◆ Regression analysis techniques were utilized to test the hypothesized model.

**2.5. Findings.** The study was conducted at the Enactus Annual National Competition 2013 with a sample size findings of  $n = 355$  respondents (Enactus students) who were captured for the study, 60.8 percent of whom were males and 39.2 percent of whom were females (see Table 2 below).

Table 2. Demographic profile of the sample

Demographic characteristic		Percent
Gender	Male	61
	Female	39
Age	< 21 years	47
	22-24 years	39
	25 years +	14

**2.6. Descriptive analysis.** Since it was established that entrepreneurship and the three variables under study were socially defined, it was important to determine whether these differed across gender.

Table 3. Descriptive analysis

Variable	Mean (SD)		t-test	
	Male	Female	<i>t</i>	<i>p</i> -value
Entrepreneurial knowledge	1.83 (.92)	2.18 (1.11)	-3.187	.002
Personal attitudes	1.92 (.96)	2.42 (1.05)	-4.667	.000
Entrepreneurial intentions	1.81 (.82)	2.27 (1.01)	-4.569	.000

Table 3, above, clearly indicates that for both male and female respondents, self-reported ratings of entrepreneurial knowledge, personal attitudes, and entrepreneurial intentions were quite high (lower than 3 on a scale of 1 = strongly agree; 5 = strongly disagree). While for both male and female respondents, the mean scores were quite high, male respondents were observed to have scored higher in terms of all three variables – EK, PA, and EI ( $p < .05$ ). For all the three variables, standard deviation (SD) scores for male respondents were lower than those for female respondents. This clearly shows that male respondents' responses were comparatively more uniform than female respondents. A possible explanation to having male respondents exhibiting higher levels of EK, PA, and EI is that in South Africa and many other African countries, traditionally men are considered to be the bread winners within social settings, including families. The place for women is mostly within the household and less exposed to the outside world. However, further research to investigate this phenomenon should be conducted.

**2.7. Validity and reliability.** To test the scale's construct validity of the entrepreneurial intentions questionnaire, confirmatory factor analysis was used (Hair, Black, Babin, & Anderson, 2014). In particular, principal axis factoring (PAF), with Promax rotation was utilized to test whether the constituent questions of each sub-scale loaded onto the specific factor. As usual in confirmatory factor analysis (PAF), the specific number of factors was pre-specified. In this case, three factors, as identified in Figure 1, were specified. Consequently, a three-factor solution that accounted for 75 per cent of the variance was extracted. Table 4 below summarizes the results of the PAF.

Table 4. Validity using factor analysis

Variables	EI	PA	EK	Communalities
EI3	.904			.745
EI2	.849			.757
EI1	.798			.679
EI4	.754			.680
PA3		.981		.848

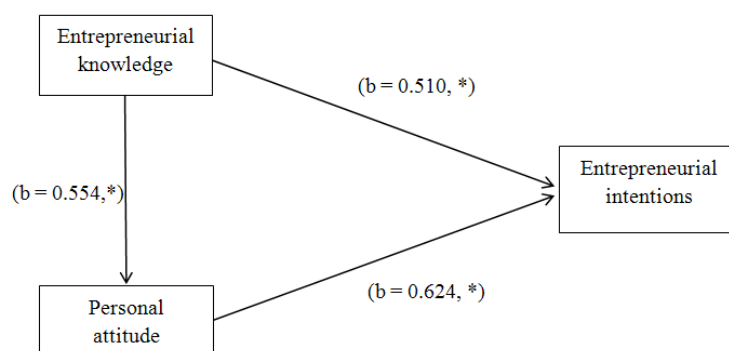
Table 4 (cont.). Validity using factor analysis

Variables	EI	PA	EK	Communalities
PA2		.771		.659
PA4		.599		.716
EK5			.900	.820
EK4			.897	.818
% variance	59.163	8.863	6.658	74.684
Cronbach's alpha	.908	.884	.899	

Following the PAF, each of the resultant sub-scales was measured for internal consistency (reliability) by means of the Cronbach's alpha coefficient. Item selection and scale purification using inter-item and item-to-total correlations were used to test internal

consistency. As commonly recommended by statistical experts, the 0.7 cut-off point of 0.7 was used in this study (Field, 2009). As shown in Table 3, all three sub-scales of the questionnaire were observed to have very high measures of internal consistency, all in excess of .880.

**2.8. Hypotheses testing.** Having established both the construct validity and reliability of the sub-scales, the researchers proceeded with hypotheses testing. Simple linear regression analysis was used to test the formulated hypotheses. In total, three hypotheses as proposed by the conceptual model were tested. Figure 2 summarizes the findings from the tests of hypotheses.



Note: ( $p < 0.000$ ) = \*.

Fig. 2. Hypotheses findings of the study

Considering results from Table 3 and Figure 2, it becomes clear that the particular cohort of Enactus students has a very high level of knowledge and personal attitude towards entrepreneurship. Furthermore, Figure 2 demonstrates that there is strong positive relationship among the variables.

It can be assumed that because of the constant exposure of the respondents to entrepreneurship projects through Enactus, they possess a relatively high level of entrepreneurial knowledge. There is also evidence that the Enactus platform promotes entrepreneurship intentions. The results from Figure 2 clearly demonstrate that personal attitudes ( $B = 0.624$ ) had a stronger relationship on entrepreneurship intentions than entrepreneurship knowledge ( $B = 0.510$ ). Personal attitudes can, therefore, be considered to be a mediating variable between entrepreneurship knowledge and entrepreneurship intentions ( $B = 0.554$ ). This undoubtedly shows that entrepreneurship knowledge is important, but personal attitude has a greater influence. This confirms that both entrepreneurship and entrepreneurship intentions are mental affairs that lie deeply within one's psyche (Miralles, Riverola, & Giones, 2012). Having said that, the notion that entrepreneurship knowledge influences personal attitudes demonstrates that entrepreneurs' environment indeed has influence on training entrepreneurs.

### 3. Discussion

While participation in Enactus has long been identified as an instrumental aspect in developing entrepreneurship intentions among participating students, the specific relationship of Enactus participation on entrepreneurship intentions has not been sufficiently tested in research, at least in South Africa. As stipulated above, the purpose of this paper is to determine the influence of Enactus participation on EK and PA, which in turn influences EI. Ebewo (2013) studied the effects of entrepreneurship education among University of Botswana students, and found a positive relationship between personal attitudes and entrepreneurship intentions. The regression coefficient was  $B = 0.378$ . In this study, the  $B$  score  $B = 0.624$  was almost twice that which was observed in Ebewo's study. The stronger relationship in this study could be attributed to the fact that the sample consisted of Enactus students whereas in Ebewo (2013), both Enactus and non-Enactus students were sampled and the number of the reported findings was out of the 343 sample.

Furthermore, when considering the relationship between entrepreneurial knowledge and entrepreneurial intentions, the Botswana students were observed to have  $B = 0.411$  as compared to  $B = 0.510$  using regression analyses, mainly because the

Botswana group was not Enactus members, just generally randomly sampled student's at UB. Again looking at Ebewo (2013), using regression analyses further found that the same group's entrepreneurial knowledge was relatively higher than general students sampled in UB. This further suggests that attitudes can be viewed as the steppingstone to entrepreneurial intentions; thus to increase the level of entrepreneurial initiative among students it is necessary to increase positive attitudes towards entrepreneurship. Research has shown that an individual's behavior is highly influenced by personal attitude towards behavior necessary to be successful (Garavan & O'Kinneide, 1994).

In Pakistan, Ali, Topping, and Tariq (2011), studied the entrepreneurial intentions of Masters of Business Administration (MBA) students. The authors found that out of the 480 sampled students with regard to entrepreneurial knowledge, a regression coefficient of  $B = 0.530$  was recorded. Ali et al. (2011) approached the personal attitudes towards entrepreneurship by introducing two categories, that of personal attitudes between rural and urban students. The findings of the study on personal attitudes toward entrepreneurship revealed that rural students tend to have a high level of personal attitude ( $B = 0.630$ ), whereas their urban counterparts had  $B = 0.466$  attitude towards entrepreneurship; again the study utilized regression analyses to come to this conclusion.

Several scholars (Garavan & O'Kinneide, 1994; Herrington, Kew, Simre, & Turton, 2011; Jack & Anderson, 1999; Krueger, Reilly, & Carsrud, 2000;

Peterman & Kennedy, 2003; Rae, 2010; Zeng et al., 2011) found similar results in terms of entrepreneurial knowledge and personal attitudes of students towards entrepreneurship. This study argues that on a specialized sampled group of students such as Enactus, the level of entrepreneurial knowledge tends to be higher than among other groups; the same with personal attitude towards entrepreneurship or the intentions to become an entrepreneur. This can be confirmed by the findings of this study.

## Conclusion

This study tested the level of influence a specialized group of study sample has on entrepreneurial knowledge and personal attitudes toward entrepreneurship. The findings revealed evidence that indeed specialized groups are more highly influenced than other groups. Moreover, it was found that personal attitude and entrepreneurial knowledge were the important factors to arouse one to act entrepreneurially, as Ali et al. (2011) and later Ebewo (2013) found in their respective studies. Chen, Chen, and Lai (2010) recommended that universities should organize and encourage students to attend entrepreneurial competitions and join workshops on entrepreneurship. This is found to support the argument of this study that specialized groups must be established in order to enhance the likelihood of entrepreneurial activity by students. Literature shows that few studies have dealt in-depth with specialized groups (for further reading on studies on specialized target groups see – Rae, 2010; Tshikovhi & Mvula, 2014; Zeng et al., 2011).

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