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## Article

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## The Impact of Entrepreneurship Education and Entrepreneurial Attitude on Entrepreneurial Intentions among Undergraduate Students in Uganda

*Moses Kisame Kisubi<sup>1</sup>, Michael Korir<sup>2</sup> and Ronald Bonuke<sup>3</sup>*

### ABSTRACT

*The study aimed at establishing the impact of entrepreneurship education and attitude on students' entrepreneurial intentions using Liñán's entrepreneurial intention model. To attain the objective of the study, a cross sectional and explanatory survey approach were employed. Systematic sampling technique was utilized to collect data from a sample of 458 final year undergraduate students from Makerere and Kyambogo Universities in Uganda. Data was analyzed using Hayes (2018) Process macro vs3.2 (Model 4). Study findings indicate that there is no significant difference in the entrepreneurial intentions between business and non-business students. Entrepreneurship education and attitude were found to be significant predictors of students' entrepreneurial intentions. Results also indicate that attitude partially mediates the relationship between entrepreneurship education and entrepreneurial intentions. Theoretically, our study validates Liñán's entrepreneurial intention model in a developing country like Uganda. The study contributes to the already existing literature in regard to the direct effect of entrepreneurship education on entrepreneurial intentions and creates new insights on the indirect effect of entrepreneurship education on entrepreneurial intentions. Furthermore, the study suggests practical implications to policymakers, educators, and curriculum developers. The study tested the entrepreneurial intention model by Liñán and creates new knowledge in the area of the mediating effect of entrepreneurial attitude in the relationship between entrepreneurship education and entrepreneurial intentions.*

**Key Words:** *Entrepreneurship Education, Entrepreneurial Attitude, Entrepreneurial Intentions.*

### INTRODUCTION

Of the recent, student's entrepreneurial intention has drawn the researcher's attention world over (Baluku, Bantu, & Otto, 2018; Odewale, Hani, Migiro, & Adeyeye, 2019). This is because entrepreneurship has not only been perceived as a career alternative to students (Baluku, Leonsio, Bantu, & Otto, 2019; Nabi, Holden, Harris, & Gibson, 2008) but also a pathway to the attainment of desirable economic growth and development (Gelaidan & Abdullateef, 2017; Nowiński & Haddoud, 2019; Gerba, 2012). Evidence from extant literature reveals that entrepreneurial intention plays a vital role in the decision to start a new venture (Abdullahi, Zainol, Daud, & Yazid, 2017; Hattab, 2014). Thus, stimulation of students' entrepreneurial intentions is an ideal solution to the graduate unemployment crisis especially in the developing world (Baluku *et al.*, 2019; Barba-Sánchez & Atienza-Sahuquillo, 2018). The premise is that the resultant outcome of entrepreneurial intentions is business startup which creates employment opportunities for graduates (Mijoč, Stanić, & Horvat, 2016; Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017).

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Previous research indicates that entrepreneurship education occupies a central role in influencing students (e.g. Bae, Qian, Miao, & Fiet, 2014; Gelaidan & Abdullateef, 2017; Iglesias-Sánchez, Jambrino-Maldonado, Velasco, & Kokash, 2016). Thus, Entrepreneurship Training has been incorporated into strategic plans and educational curriculum to stimulate students' entrepreneurial intentions (Afolabi, Kareem, Okubanjo, Ogunbanjo, & Aninkan, 2017; Hattab, 2014; Nabi & Holden, 2008). This has been done on the claim that entrepreneurial knowledge and skills can be taught and learned (Bahadur & Shah, 2015). Entrepreneurship Education's main goal is to illustrate a business direction as a career option to students (Patricia & Silangen, 2016).

Though the effect of entrepreneurship education on entrepreneurial intentions is widely studied, there seems no consensus on the effect of entrepreneurship education on entrepreneurial intention as both positive and negative results are reported. For example, according to Gerba (2012) in the study of Ethiopian business and engineering students, results show that students who had attended entrepreneurship education have a higher entrepreneurial intention than those who did not. Ebewo, Rugimbana, and Shambare (2017) also conclude that Participation in entrepreneurship education positively influences students' intention to become an entrepreneur. Also, Farashah (2013) contends that completion of an entrepreneurship course increases the likelihood of having entrepreneurial Intention by 1.3 times in Iran. Besides, Afolabi et al. (2017) assert entrepreneurship education positively affects entrepreneurial initiatives among Nigerian science & technology students (Mahendra, Djatmika, & Hermawan, 2017). More researchers have found similar results ( e.g. Barba-Sánchez & Atienza-Sahuquillo, 2017; Gelaidan & Abdullateef, 2017; Gerba, 2012). The argument for such results is that participating in higher education gives a person a resource advantage that may enable a successful career in entrepreneurship.

On the contrary, negative results have been reported on the claim that higher education degree makes a person become a more desirable employee and may view paid employment more attractive alternative than entrepreneurship (Joensuu, Viljamaa, Varamäki, & Tornikoski, 2013; Nabi, Holden, & Walmsley, 2010). According to Michelle and Tendai (2016) entrepreneurship education does not directly affect the entrepreneurial intentions of South African students. Additionally, Nowiński, Haddoud, Lančarič, Egerová, and Czeglédi (2019) reveal that the direct impact of entrepreneurship education was positive and significant in only one country Poland of Visegrád countries the four countries. These results are in line with the argument of Abdullahi et al. (2017) the more education an individual acquires, the less the chances of the individual taking entrepreneurship as a career. More empirical evidence exists regarding these results ( e.g. Henley, 2005; Joensuu et al., 2013; Nabi et al., 2010; Wu & Wu, 2008). Such findings are puzzling in the literature and warrant further investigation.

Given that mainly past research has concentrated on the direct effect of entrepreneurship education on entrepreneurial intentions, this study focused on the effect of entrepreneurship education on entrepreneurial intentions through entrepreneurial attitude among university undergraduate finalist in Uganda. The subsequent part of the paper is structured in four sections. The second section focuses on literature review and hypotheses development. The third section describes the methodology utilized in the study while the fourth section presents the results of the study. The paper concludes with the fifth section containing discussion of results, conclusion, implications, and limitations, and areas for future research.

## **LITERATURE REVIEW**

This research was built on Liñán's entrepreneurial intention model (Liñán, 2004), which integrates Shapero and Sokol's Entrepreneurial event model (1982) and Ajzen's theory of Planned Behaviour (1991). The entrepreneurial event model considers firm creation as a result of the interaction between contextual factors, which would act through their influence on the individual's perceptions (Shapero & Sokol, 1982). The consideration of the entrepreneurial option would take place as a consequence of an external displacement event to push or pull a person. However, people's response to the external environment will depend on their perception of the options in form of desirability and feasibility (Krueger, Reilly, & Carsrud, 2000; Liñán & Chen, 2006).

Perceived desirability relates to how personally rewarding the behaviour/task is perceived to be (Hattab, 2014). It is the personal appeal of starting a business, including both intrapersonal and extra personal impacts (Krueger et al., 2000). On other hand, Perceived feasibility is defined as the degree to which people consider themselves personally able to carry out a particular behaviour (Boukamcha, 2015). According to Shapero and Sokol (1982), the entrepreneurial event of individuals' perceptions of behavior is as a result of their distinctive social environment e.g. peers, families, educational and professional influences.

On the other hand, the theory of Planned Behavior (TPB) by Ajzen (1991) argues that the behavior of an individual is determined primarily by the intention of the individual to perform that behavior. The intention in TPB is the readiness to engage in a given behavior (Ajzen, 2011) and the stronger the intention to carry out an activity, the greater the chance that an individual will carry it through (Ajzen, 1991). According to Baluku et al. (2018), the best predictor of entrepreneurial activity or start-up is entrepreneurial intentions. Consequently, entrepreneurial career depends on the decision of the person to pursue or not to do so (Majogoro & Mgabo, 2012). The theory posits that behavioral intention (entrepreneurial intention) is determined by three components that are: (1) Attitude towards behaviour: the degree to which a person has a favourable or unfavorable evaluation of behaviour (Ajzen, 1991a). If entrepreneurship is more appealing to students, their intention to work for themselves will be high and vice versa (Ismail, Jaffar, & Hooi, 2013; Majogoro & Mgabo, 2012). (2) Perceived social norm (subjective norms), or pressure to perform the behaviour (Ajzen, 1991a). (3) Perceived behavioral control—the perception of ease or difficulty of performing certain behaviors (Ajzen, 1991a).

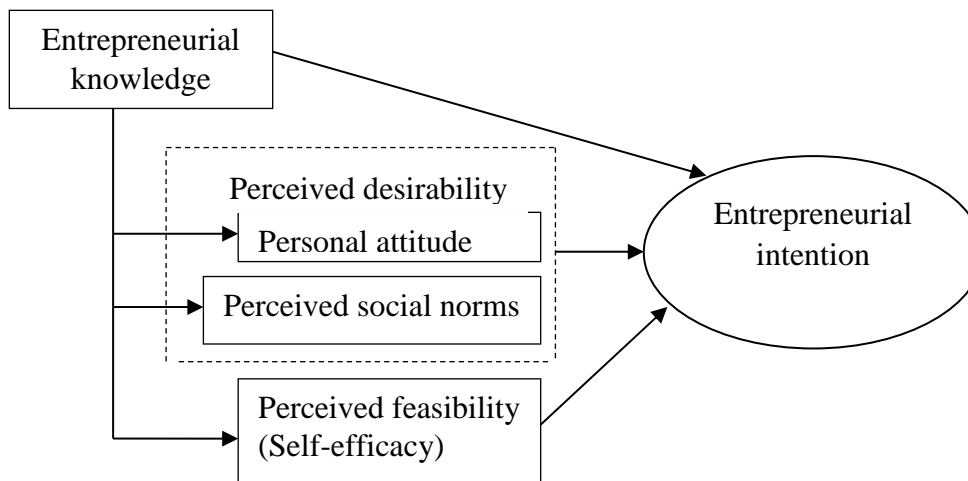
According to Liñán, Rodríguez-Cohard, and Rueda-Cantuche (2011), when the predictor variables in TPB are compared with those of entrepreneurial event model, it can be concluded that perceived feasibility corresponds well with perceived behavioral control and self-efficacy. On the other hand, perceived desirability could be understood as composed of personal attitude and perceived social norms (Krueger et al., 2000; Liñán et al., 2011). However, perceived desirability is an outcome of social and cultural influences (Liñán, 2004). Thus situational or “demographic” factors influence intentions. According to Hattab (2014), situational factors include prior exposure to entrepreneurship, availability of role models and social attitudes towards entrepreneurship; all together are likely to have a positive bearing on individual's decision to venture into business.

In particular, Liñán's model introduces entrepreneurial knowledge in the integrated models as an explanatory variable for the predictors in both TPB and entrepreneurial event model. Liñán's model postulates that greater knowledge of different entrepreneurial aspects will surely contribute to more realistic perceptions about the entrepreneurial activity (Liñán & Chen, 2006; Wu & Wu, 2008), thus influencing intentions indirectly (Liñán, 2004). Additionally, entrepreneurial

knowledge directly provide a greater awareness about the existence of that professional option, and will make the intention to become an entrepreneur more credible (Liñán & Chen, 2006). Entrepreneurship education has been widely highlighted for the provision of entrepreneurial knowledge (Liñán, 2004; Nowiński et al., 2019).

According to Liñán et al. (2011), entrepreneurial knowledge which is acquired through Entrepreneurship Education is one way how students' entrepreneurial intentions are stimulated, and the manifestation of entrepreneurial behaviour is dependent on entrepreneurial intention. The entrepreneurship education creates greater awareness that is critical for one to start and develop a business ventures (Liñán & Chen, 2006). According to Michelle and Tendai (2016), Entrepreneurship Education is therefore, focused on students to achieve a learning outcome of entrepreneurial effectiveness by experiencing entrepreneurial understanding, cultivating an entrepreneurial mindset (Liñán, 2004), through gaining a variety of skills and knowledge (Nabi et al., 2017). To sum up, the model demonstrates that entrepreneurial knowledge which is acquired through entrepreneurship education has a direct impact on entrepreneurial intentions and this relationship is mediated by attitude and self-efficacy.

**Figure 1: Liñán's entrepreneurial intention model**



Source: Liñán, 2004

### *Hypotheses*

In line with the literature and Liñán's model, the study aimed at investigating the following hypotheses:

- $H_1$**  There are differences in Entrepreneurial intentions between business and non-business students.
- $H_2$**  Entrepreneurship education positively affects students' entrepreneurial attitude.
- $H_3$**  Entrepreneurial attitude positively influence students' Entrepreneurial intention.
- $H_4$**  Entrepreneurship education positively affects students' Entrepreneurial intention
- $H_5$**  Entrepreneurial attitude mediates the relationship between entrepreneurship education and Entrepreneurial intention.

## METHODOLOGY

### *Design and sample*

A cross-sectional and explanatory research design was utilized to collect and analyze data in this study. Data was collected from a sample of 458 final year undergraduate students from Makerere and Kyambogo Universities. College of business and management science (151) and college of Engineering Design Art and Technology (93) for Makerere university whilst faculty of management and entrepreneurship (136) and faculty of engineering (78) for Kyambogo university were purposively selected to explore if there were significant differences in the Entrepreneurial intentions between business students and non-business students.

Data were collected using a closed-ended self-administered questionnaire from a sample size of 458 students selected from a target population of 6,408 final year undergraduate students in the academic year 2019/2020. The sample size was determined using Yamen's formulae (Yamen, 1973) at a 95.5% confidence level thus a 4.5% sampling error. A systematic sampling technique was employed as recommended by (Tharenou, Donohue, & Cooper, 2007) for large populations to identify the final participant from their respective colleges or faculties. A list of students was obtained from university registrars. Thereafter, the interval or  $k^{\text{th}}$  number was calculated by dividing each college's or faculty's population with its sample size, this was followed when selecting participants for the study. Data was collected in the lecture halls before the start of the lecture. Students participated voluntarily as those who declined were replaced. Findings indicate a response rate of 87%, which is above the acceptable threshold of 50% as recommended by most researchers.

### *Measurements*

Entrepreneurial intention was measured adapting 10 items from Liñán and Chen (2009) and Kim-Soon, Ahmad, and Ibrahim (2014). The scale was scored on a 7-point Likert Scale from 1 (strongly disagree) to 7 (strongly agree). Entrepreneurial intentions included items like; "I will make every effort to start and run my own business", "I am determined to create a firm in the future", "I am determined to create a firm in the future", "I have very seriously thought of starting a firm" and "I have a strong belief to become an entrepreneur".

Entrepreneurship education was operationalized using the 10 items of (Puni, Anlesinya, & Korsorku, 2018) that contain opportunity recognition and entrepreneurship knowledge acquisition. Items were measured on a five-point Likert scale. However, this study has measured the items on a 7-Likert scale from 1 (strongly disagree) to 7 strongly agree because students who were the respondents in this study are less familiar with surveys, and using two different scales would confuse them. Items for this variable included; "I have learnt several methods to generate basic business ideas", "Education enables me to recognize alternative career options", "Education enhances my ability to better perceive business opportunities in my environment."

Entrepreneurial attitude has been measured by adopting and modifying semantic differential items that assess attitudes using bipolar evaluative adjectives; to me being an entrepreneur is..... Good-Bad, wise-foolish, enjoyable-not enjoyable, beneficial-not beneficial, pleasant-unpleasant, success-failure (Ajzen, 2013; Hennessy, Bleakley, & Fishbein, 2012).

### *Respondent's profile*

Out of 458 questionnaires that were distributed, 59 questionnaires were not returned, 07 were outliers while 04 questionnaires were not properly filled. These were excluded from the analysis leaving 388 usable questionnaires. Table1 presents the demographic characteristics of the

respondents and results show that the majority of the respondents were female 50.8% while 49.2% were male. For the age of the respondents, the majority 88.9% was between the age of 20-25, followed by 26 – 30 who were 9.3% then above 30 years at 1%, and finally, only 0.8% were below 20 years. Regarding the program offered, the majority of the students 72.2% offered business programs while 27.8% offered non-business program. Lastly, most of the students' parents or guardians 62.6% are self-employed and only 37.4% are employed.

**Table 1: Respondent's profile**

Variable	Factor	Frequency	Valid percent
Gender	Female	197	50.8
	Male	191	49.2
Age	Below 20 years	3	.8
	20 - 25 years	345	88.9
	26 - 30 years	36	9.3
	Above 30 years	4	1.0
Program	Non-business program	108	27.8
	Business program	280	72.2
Parents/guardians' career	Employed parents/guardian	145	37.4
	Self-employed parents/guardian	243	62.6

Source: Research Data

*Mean, standard deviation, reliability, and correlation results*

Table 2 results reveal that Entrepreneurial Attitude has the highest mean of 6.28 with a standard deviation of .717 followed by Entrepreneurial intention of 5.96 and .877 while entrepreneurship education has the lowest mean of 5.86 with a standard deviation of .830. Additionally, a reliability test was performed and results reveal that all the study variables were found reliable with Cronbach's Alpha above .7 which is the threshold (Nunnally, 1978). Table 2, further presents that all variables positively and significantly correlated with entrepreneurial intention. Entrepreneurial attitude has the highest relationship with  $r = .655$ ,  $p < .01$  while entrepreneurship education has the lowest correlation of  $r = .539$ ,  $p < .01$ .

**Table 2: Mean, Standard Deviation, Reliability, and Correlation results**

Variable	Mean	SD	Reliability	1	2	3
Entrepreneurial intentions (1)	5.96	.877	.845	1		
Entrepreneurship education (2)	5.86	.830	.875	.539**	1	
Entrepreneurial attitude (3)	6.28	.717	.957	.655**	.549**	1

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

Before hypothesis testing, we performed factor analysis using principal component analysis with Varimax rotation to test for construct validity. The Kaiser-Meyer-Olkin Measure of sampling adequacy (KMO) reports a value of .914 with results of Bartlett's Test of Sphericity reporting a Chi-Square of 6062.324 at  $df = 496$  which was significant at .000. Given that the KMO was greater than .5 and Bartlett's test having a significant Chi-square, the results confirmed the appropriateness of factor analysis. Furthermore, the results in table3 reveal that the analysis produced three factors explaining a total variance of 49.614% for all the variables. Factor 1 was named entrepreneurial attitude and this factor contributes 21.566% of the total variance with 12 items loading. Factor two

had 10 items that loaded and this factor was named entrepreneurial intentions explaining 14.24% of the total variance and lastly, the third factor was named Entrepreneurship education which explains 13.808% of the total variance, and 10 items loaded under this factor.

**Table 3: Factor analysis**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.914
Bartlett's Test of	Approx. Chi-Square	6062.324
Sphericity	Df	496
	Sig.	.000
Items	Loadings	
I am ready to do anything to startup my own business	.563	
I will make every effort to start and run my own business	.645	
I am determined to create a firm in the future	.737	
I have very seriously thought of starting a firm	.753	
I have a strong belief to become an entrepreneur	.475	
I intend to start a firm within five years of graduation	.619	
I prefer to be an entrepreneur in my expertise	.425	
I have a strong intention to start my own business after completing my studies.	.649	
I prefer to be self-employed rather than to be an employee in a company	.653	
I am delighted to face the challenges of creating a new business	.600	
I have learnt several methods to generate basic business ideas	.566	
Education enables me to recognize alternative career options	.638	
Education enhances my ability to better perceive business opportunities in my environment	.671	
Education empowered me to solve economic and social problems in my environments for a fee	.552	
Education enables me to identify the characteristics of successful business owners	.698	
Education gives me a feeling of independence	.616	
Education increases my awareness of the different forms of businesses that I can set-up	.590	
I have acquired the skills, knowledge, and competencies needed to establish, develop and manage a new business	.681	
Training increase my awareness of the duties and rights of entrepreneurs and their commitment to their stakeholders	.564	
Education has enhanced my understanding of the different sources I can obtain funding to start a new business	.624	
To me being an entrepreneur is ..... Bad.....Good	.357	
To me being an entrepreneur is .....unpleasant ..... Pleasant	.625	
To me being an entrepreneur is .....foolish ..... Wise	.773	
To me being an entrepreneur is .....not enjoyable.....Enjoyable	.733	
To me being an entrepreneur is .....harmful ..... Beneficial	.792	
To me being an entrepreneur is a..... failure .... Success	.743	
To me being an entrepreneur is ..... Dissatisfying .....Satisfying	.811	
To me being an entrepreneur is..... disadvantageous ..... Advantageous	.794	
To me being an entrepreneur is .....Unnecessary .....Necessary	.786	
To me being an entrepreneur is .....not Important..... Important	.824	
To me being an entrepreneur is ..... unlikely ..... Likely	.750	
To me being an entrepreneur is .....Not rewarding... Rewarding	.838	

Source: research data



## STUDY RESULTS

To test for *H1*, one-way ANOVA was performed to compare whether there were significant differences in the Entrepreneurial intentions between business and non-business students. Table 4 results reveal that though business students reported a higher mean of 5.99 with a standard deviation of 1.00 compared to the non-business students who reported a mean of 5.89 and a standard deviation of .82. There were no statistically significant differences in the Entrepreneurial intentions between the two groups  $F=1.173$ ,  $P>.05$ . Thus hypothesis 1 was rejected.

**Table 4: One-way ANOVA results**

Variable	Program	N	Mean	SD	F	Sig.
Entrepreneurial intentions	Non-business program	108	5.89	1.00075	1.173	.279
	Business program	280	5.99	.82467		
	Total	388	5.96	.87723		

Source: research data

To test for *H2*, *H3*, *H4*, and *H5*, Hayes (2018) PROCESS macro vs3.2 (Model 4) was utilized. Table 5 presents different models that were used to test for different hypotheses. In order to test for the indirect effect (*H5*), a series of regression model conditions were meant as follows; Model 1; the predictor variable (entrepreneurship education) was used to predict the outcome variable (entrepreneurial attitude). Results in model 1 indicate that entrepreneurship education significantly affects entrepreneurial attitude  $\beta=.482$ ,  $p<.001$ . All the control variables were not significant thus overall the model explains 30.6% variance. In the second model, entrepreneurial attitude was found to be significantly affecting Entrepreneurial intentions  $\beta=.623$ ,  $p<.001$  with gender and guardian/parent's career being statistically significant at  $\beta=.223$ ,  $p<.001$  and  $\beta=.171$ ,  $p<.05$  respectively this model account for 50.3% variance. Furthermore, using model2 we tested for the effect of entrepreneurship education on Entrepreneurial intentions while controlling for entrepreneurial attitude. Results show that entrepreneurship education statistically and significantly affects Entrepreneurial intention  $\beta=.257$ ,  $p<.001$ .

Lastly, bootstrapping was executed repeatedly and randomly sampling observations with replacement to determine whether mediation had taken place or not (Preacher & Hayes, 2004). Results from the bootstrap method show that the indirect effect of entrepreneurship education on Entrepreneurial intention via entrepreneurial attitude were statistically significant since the confidence interval (CI) was none zero ( $a \times b$ ),  $\beta = .300$ ,  $SE = .047$ , 95% CI = .211 to .396 (see table 5, model 3). The indirect effect model indicates that entrepreneurial attitude partially mediates the link between entrepreneurship education and Entrepreneurial intention. Model 4 (Table 5) indicates the total effect ( $a_1 + b_1$ ) of the findings of entrepreneurship education on Entrepreneurial intention is  $\beta = .557$ ,  $p <.001$ . Further, results reveal that gender and guardian/parent's career significantly affects Entrepreneurial intentions  $\beta = .215$ ,  $p <.05$  and  $\beta = .202$ ,  $p <.05$  respectively. This model explains 32.3% of the variance (see Table 5, model 4). Basing on the above results, hypotheses from 2 to 5 were supported by the study findings.

**Table 5: Direct and indirect effects of entrepreneurship education and entrepreneurial attitude on Entrepreneurial intentions**

Predictors	Model1 (EA)		Model 2 (EI)		Model3 Mediation	Model 4(EI) Total effect	
	$\beta$	<i>t</i>	$\beta$	<i>t</i>		$\beta$	<i>t</i>
Gender	-.012	-.188	.223***	3.376		.215*	.2799
Age	-.014	.163	-.049	-.555		-.040	-.392
Program	-.102	-1.423	-.010	-.135		-.074	-.850
parent's career	.050	.762	.171*	2.506		.202*	2.544
E/ship education	.482***	12.801	.257***	5.503	.482 $\times$ .623=.300	.557***	12.245
E/ship Attitude	-	-	.623***	11.750		-	-
R <sup>2</sup>	.306		.503			.323	
F	33.687***		64.283***		CI=.211,.396	36.449***	

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , EA=Entrepreneurial attitude, EI=Entrepreneurial intentions

Source: research data

## DISCUSSION

A body of research exists regarding the direct effect of entrepreneurship education on entrepreneurial attitude, entrepreneurial attitude on Entrepreneurial intentions, and entrepreneurship education on Entrepreneurial intentions. The study results don't differ much from the already established findings. However, we provide more insight concerning the direct effects in the developing world and new knowledge is created concerning the indirect effect which is scarce in the literature.

Findings from this study reveal that entrepreneurship education significantly affects entrepreneurial attitude. Such results are in line with the earlier works of Hattab (2014) who found out that education has a positive impact on student's Entrepreneurial attitude. In the same study, it was argued that entrepreneurship education increases the level of entrepreneurship favorability among Egyptian students. Still, Welsh, Tullar, and Nemati (2016) conclude that entrepreneurial training significantly improves the attitudes of students towards a choice of entrepreneurial career in the United States. In a similar study by Tshikovhi and Shambare (2015), they found that high level of entrepreneurship education was observed among South African students to create favorable attitudes towards entrepreneurship. Similar findings have been established by several scholars (e.g. Alharbi, Almahdi, & Mosbah, 2018; Byabashaija & Katono, 2011; Fayolle & Gailly, 2015; Nabi & Holden, 2008; Nabi *et al.*, 2017). Therefore, the study results support Liñán's entrepreneurial intention model which posits that entrepreneurial knowledge influences personal attitude. This implies that when students are equipped with the ability recognize business opportunities and business knowledge like marketing, this stimulates their positive towards entrepreneurship.

The study found that entrepreneurial attitude significantly influences students' Entrepreneurial intentions. The results conform to the literature that entrepreneurial attitude has a positive relationship with Entrepreneurial intentions (Ayalew & Zeleke, 2018; Kolvereid, 2016; Mahendra *et al.*, 2017; Soomro & Shah, 2015). For instance, Mat, Maat, and Mohd (2015) empirically found that the engineering technology students have high attitudes towards entrepreneurship compared to other entrepreneurship predictors like support and resistance, locus of control, need for achievement. Also, in a related study, the attitude of engineering students was found more

significantly' contributing to their entrepreneurial intention than factors (Law & Breznik, 2017). To a greater extent, students with a positive attitude towards entrepreneurship express the Intention to become entrepreneurs (Juračak & Tica, 2016). Our results are aligned with Liñán's entrepreneurial intention model which posits that personal attitude conceptualized as perceived desirability in the entrepreneurial intention model (Liñán, 2004). This implies that when students perceive entrepreneurship career as favorable, beneficial, and good, their Entrepreneurial intentions arose.

Results also reveal that entrepreneurship education directly affects Entrepreneurial intentions. Despite the controversy in past empirical findings both within and in different contexts Our findings are supported by studies like Gelaidan and Abdullateef (2017); Iglesias-Sánchez et al. (2016); Mahendra et al. (2017); Puni et al. (2018) who reveal that entrepreneurship education and perceived desirability of entrepreneurship positively and significantly influence Entrepreneurial intention. However, our results contradict the findings of other scholars such as Abdullahi et al. (2017), Joensuu et al. (2013) and Vanevenhoven and Liguori (2013). For example, Nowiński et al. (2019), investigated whether entrepreneurial education contributes to the entrepreneurial intentions of university students in the Visegrád countries (Czech Republic, Hungary, Poland, and Slovakia). Results show several differences in the impact of education on entrepreneurial Intentions across the four nations. The direct impact of entrepreneurship education was positive and significant in only one country Poland of the four countries. Our results conform to Liñán's entrepreneurial intention model which postulates that entrepreneurial knowledge has a direct effect on entrepreneurial intentions.

Lastly, the mediation model shows that entrepreneurial attitude mediates the relationship between entrepreneurship education and Entrepreneurial intentions. Our results support Liñán's entrepreneurial intention model he model assumes that there exist interactions among the three explanatory elements in the model (Liñán & Chen, 2006; Liñán et al., 2011). Further, the model stipulates that a greater knowledge of the entrepreneurial environment will surely contribute to more realistic perceptions about entrepreneurship which will lead to the development of intention (Liñán, 2004). Though there is limited research in this area, a body of empirical studies supports our findings. For instance, Alharbi et al. (2018) argue that the development of entrepreneurial attitudes and behaviors to become an entrepreneur can be facilitated through entrepreneurial education. Relatedly, Gorgievski, Stephan, Laguna, and Moriano (2018) found that attitudes mediate the effect of values on entrepreneurial career intentions among students from Spain, Dutch, German, and Poland. Attitude towards becoming a social entrepreneur mediates the relationship not only between self-efficacy and social entrepreneurial Intentions but also emotional intelligence and social entrepreneurial intentions of bachelor of Engineering students in their third year (Tiwari, Bhat, & Tikoria, 2017). Thus an appropriate entrepreneurship education program changes students' entrepreneurial attitude and increases the Entrepreneurial spirit.

## **CONCLUSION**

In conclusion, the purpose of the study was to establish the effect of entrepreneurship education and attitude on Entrepreneurial intention. This was achieved by collecting data from 388 final year students from Makerere and Kyambogo Universities. Results reveal that entrepreneurship education and attitude are significant predictors of students' Entrepreneurial intentions as well as entrepreneurship education had a positive and significant effect on entrepreneurial attitude. The novelty of this study lies in the mediating results which suggest that entrepreneurial attitude

partially mediates the relationship between entrepreneurship education and Entrepreneurial intentions. A mediation effect of ( $\beta = .300$ ,  $SE = .047$ , 95%  $CI = .211$  to  $.396$ ) was found much higher than the direct effect of entrepreneurship education on entrepreneurial intentions ( $\beta = .257$ ,  $p < .001$ ). These findings imply that entrepreneurship education is more effective in determining Entrepreneurial intentions via entrepreneurial attitude as opposed to the direct influence.

## RESEARCH IMPLICATIONS

Our study provides both theoretical and practical implications. Theoretically, the study validates Liñán's entrepreneurial intention model and contributes to the already existing literature regarding the direct effect of entrepreneurship education and entrepreneurial attitude on Entrepreneurial intentions. Further, the study creates new knowledge in the area of the mediating effect of entrepreneurial attitude in the relationship between entrepreneurship education and Entrepreneurial intentions. We also provide practical implications to policymakers, curriculum developers in developing entrepreneurship curriculum content that is geared towards stimulation of Entrepreneurial intentions among learners through entrepreneurial attitude. Besides, educational and economic policymakers should design policies and programs like startup capital that are intended towards enabling graduates to realize their Entrepreneurial intentions.

## LIMITATIONS AND AREAS FOR FUTURE RESEARCH

The study employed a cross-sectional design. Therefore, future research could employ a longitudinal approach to determine whether entrepreneurial attitude and Entrepreneurial intentions are maintained or change after graduating from university. It could also be interesting to study how entrepreneurial attitudes and intent changes at different levels of education, from high school during university and after graduation. Lastly, the study sample was limited to final year undergraduates from two public universities. This may not be representative enough for the entire student's and youth population. Therefore, future research can explore the Entrepreneurial intentions of non-student's youth population and students at different levels of education like diploma and masters.

## REFERENCES

- Abdullahi, A. I., Zainol, F. A., Daud, W. N. W., & Yazid, A. S. (2017). Entrepreneurial Intention Revisited: Measuring the Impact of Socio-Cultural Business Environment using Structural Equation Modeling. *World Applied Sciences Journal*, 35(8), 1445-1456.
- Afolabi, M. O., Kareem, F. A., Okubanjo, I. O., Ogunbanjo, O. A., & Aninkan, O. O. (2017). Effect of Entrepreneurship Education on Self-Employment Initiatives among Nigerian Science & Technology Students. *Journal of Education and Practice*, 8(15), 44-51.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Ajzen, I. (2011). *The theory of planned behaviour: reactions and reflections*: Taylor & Francis.
- Ajzen, I. (2013). Theory of planned behaviour questionnaire. *Measurement instrument database for the social science*, 2-9.
- Alharbi, J., Almahdi, H., & Mosbah, A. (2018). The Impact of Entrepreneurship Education Programs (EEPs) on the Entrepreneurial Attitudes among Higher Education Students. *International Journal of Management, Economics and Social Sciences*, 7(3), 245-271.
- Ayalew, M. M., & Zeleke, S. A. (2018). Modeling the impact of entrepreneurial attitude on self-employment intention among engineering students in Ethiopia. *Journal of Innovation and Entrepreneurship*, 7(1), 8.

- Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. *Entrepreneurship theory and practice*, 38(2), 217-254.
- Bahadur, A., & Shah, N. (2015). Developing Attitudes and Intentions Among Potential Entrepreneurs. *Journal of Enterprise Information Management*, 2(8), 2.
- Baluku, M. M., Bantu, E., & Otto, K. (2018). Effect of Locus of Control on Entrepreneurial Attitudes and Self-Employment Intentions: The Moderating Role of Individualism. *Journal of enterprising culture*, 26(03), 251-283.
- Baluku, M. M., Leonsio, M., Bantu, E., & Otto, K. (2019). The impact of autonomy on the relationship between mentoring and entrepreneurial intentions among youth in Germany, Kenya, and Uganda. *International Journal of Entrepreneurial Behavior & Research*, 25(2), 170-192.
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial motivation and self-employment: evidence from expectancy theory. *International Entrepreneurship and Management Journal*, 13(4), 1097-1115.
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, 24(1), 53-61.
- Boukamcha, F. (2015). Impact of training on entrepreneurial intention: an interactive cognitive perspective. *European Business Review*, 27(6), 593-616.
- Byabashaija, W., & Katono, I. (2011). The impact of college entrepreneurial education on entrepreneurial attitudes and intention to start a business in Uganda. *Journal of Developmental Entrepreneurship*, 16(01), 127-144.
- Ebewo, P. E., Rugimbana, R., & Shambare, R. (2017). Effects of Entrepreneurship Education on Students' Entrepreneurial Intentions: A Case of Botswana. *Management*, 5(4), 278-289.
- Farashah, D. A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention: Study of educational system of Iran. *Education+ Training*, 55(8/9), 868-885.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of small business management*, 53(1), 75-93.
- Gelaidan, H. M., & Abdullateef, A. O. (2017). Entrepreneurial intentions of business students in Malaysia: the role of self-confidence, educational and relation support. *Journal of small business and Enterprise Development*, 24(1), 54-67.
- Gerba, T. D. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, 3(2), 258-277.
- Gorgievski, M. J., Stephan, U., Laguna, M., & Moriano, J. A. (2018). Predicting entrepreneurial career intentions: Values and the theory of planned behavior. *Journal of career assessment*, 26(3), 457-475.
- Hattab, H. W. (2014). Impact of entrepreneurship education on entrepreneurial intentions of university students in Egypt. *The Journal of Entrepreneurship*, 23(1), 1-18.
- Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4-40.
- Henley, A. (2005). *From entrepreneurial aspiration to business start-up: Evidence from British longitudinal data*: European Business Management School, University of Wales, Swansea.

- Hennessey, M., Bleakley, A., & Fishbein, M. (2012). Measurement models for reasoned action theory. *The annals of the American academy of political and social Science*, 640(1), 42-57.
- Iglesias-Sánchez, P. P., Jambrino-Maldonado, C., Velasco, A. P., & Kokash, H. (2016). Impact of entrepreneurship programmes on university students. *Education+ Training*, 58(2), 209-228.
- Ismail, N., Jaffar, N., & Hooi, T. S. (2013). Using EAO model to predict the self-employment intentions among the Universities' Undergraduates in Malaysia. *International Journal of Trade, Economics and Finance*, 4(5), 282.
- Joensuu, S., Viljamaa, A., Varamäki, E., & Tornikoski, E. (2013). Development of entrepreneurial intention in higher education and the effect of gender—a latent growth curve analysis. *Education+ Training*, 55(8/9), 781-803.
- Juračak, J., & Tica, M. (2016). Graduate Students' Opinions about Entrepreneurship as an Employment Opportunity. *APSTRACT: Applied Studies in Agribusiness and Commerce*, 10(1033-2016-84298), 23.
- Kim-Soon, N., Ahmad, A. R., & Ibrahim, N. N. (2014). Entrepreneurial motivation and entrepreneurship career intention: Case at a Malaysian Public University. *Crafting Global Competitive Economies*, 2020, 1001-1011.
- Kolvereid, L. (2016). Preference for self-employment: Prediction of new business start-up intentions and efforts. *The International Journal of Entrepreneurship and Innovation*, 17(2), 100-109.
- Krueger Jr, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411-432.
- Law, K. M., & Breznik, K. (2017). Impacts of innovativeness and attitude on entrepreneurial intention: among engineering and non-engineering students. *International Journal of Technology and Design Education*, 27(4), 683-700.
- Liñán, F. (2004). Intention-based models of entrepreneurship education. *Piccola Impresa/Small Business*, 3(1), 11-35.
- Liñán, F., & Chen, Y.-W. (2006). Testing the entrepreneurial intention model on a two-country sample.
- 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.
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: a role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218.
- Mahendra, A. M., Djatmika, E. T., & Hermawan, A. (2017). The Effect of Entrepreneurship Education on Entrepreneurial Intention Mediated by Motivation and Attitude among Management Students, State University of Malang, Indonesia. *International Education Studies*, 10(9), 61-69.
- Majogoro, K., & Mgabo, M. R. (2012). Self-employment intention among university students: testing Ajzen's theory of planned behaviour (TPB). *International Journal of Physical and Social Sciences*, 2(8), 67-84.
- Mat, S. C., Maat, S. M., & Mohd, N. (2015). Identifying factors that affecting the entrepreneurial intention among engineering technology students. *Procedia-Social and Behavioral Sciences*, 211, 1016-1022.

- Michelle, K., & Tendai, C. (2016). The association of entrepreneurship education and entrepreneurial intention among university students in the Eastern Cape province of South Africa. *International Journal of Educational Sciences*, 12(3), 200-211.
- Mijoč, J., Stanić, M., & Horvat, J. (2016). Measuring attitudes in the self-employment intention model: methodological considerations. *Croatian Operational Research Review*, 7(2), 333-348.
- Nabi, G., & Holden, R. (2008). Graduate entrepreneurship: intentions, education and training. *Education+ Training*, 50(7), 545-551.
- Nabi, G., Holden, R., Harris, M. L., & Gibson, S. G. (2008). Examining the entrepreneurial attitudes of US business students. *Education+ Training*.
- Nabi, G., Holden, R., & Walmsley, A. (2010). From student to entrepreneur: towards a model of graduate entrepreneurial career-making. *Journal of Education and Work*, 23(5), 389-415.
- Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277-299.
- Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of Business Research*, 96, 183-193.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2019). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 44(2), 361-379.
- Nunnally, J. (1978). Psychometric theory (2nd edit.) mcgraw-hill. *Hillsdale, NJ*, 416.
- Odewale, G. T., Hani, S. H. A., Migiyo, S. O., & Adeyeye, P. O. (2019). Entrepreneurship education and students' views on self-employment among international postgraduate students in universiti utara malaysia. *Journal of Entrepreneurship Education*, 22(1).
- Patricia, P., & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa (Development Research of Management): Jurnal Manajemen*, 11(1), 67-86.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Puni, A., Anlesinya, A., & Korsorku, P. D. A. (2018). Entrepreneurial education, self-efficacy and intentions in Sub-Saharan Africa. *African Journal of Economic and Management Studies*, 9(4), 492-511.
- Soomro, B. A., & Shah, N. (2015). Developing attitudes and intentions among potential entrepreneurs. *Journal of Enterprise Information Management*, 28(2), 304-322.
- Tharenou, P., Donohue, R., & Cooper, B. (2007). *Management research methods*: Cambridge University Press.
- Tiwari, P., Bhat, A. K., & Tikoria, J. (2017). The role of emotional intelligence and self-efficacy on social entrepreneurial attitudes and social entrepreneurial intentions. *Journal of Social Entrepreneurship*, 8(2), 165-185.
- Tshikovhi, N., & Shambare, R. (2015). Entrepreneurial knowledge, personal attitudes, and entrepreneurship intentions among South African Enactus students. *Problems and Perspectives in Management*, 13(1), 152-158.

- Vanevenhoven, J., & Liguori, E. (2013). The Impact of Entrepreneurship Education: Introducing the Entrepreneurship Education Project. *Journal of small business management*, 51(3), 315-328.
- Welsh, D. H., Tullar, W. L., & Nemati, H. (2016). Entrepreneurship education: Process, method, or both? *Journal of Innovation & Knowledge*, 1(3), 125-132.
- Wu, S., & Wu, L. (2008). The impact of higher education on entrepreneurial intentions of university students in China. *Journal of small business and Enterprise Development*, 15(4), 752-774.