

Entrepreneurial Training and Entrepreneurial Intentions: A Mediated Mediation Analysis of Entrepreneurial Self-efficacy and Attitude of Undergraduate Finalists in Uganda

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Purpose – The purpose of this paper is to determine whether the association between Entrepreneurial Training and Entrepreneurial Intentions is mediated by (1) Entrepreneurial Self-Efficacy, (2) Entrepreneurial Attitude, and (3) whether the first mediation is further mediated by Entrepreneurial Attitude.

Design – to attain the study objectives, a cross-sectional and explanatory survey approach was employed. Systematic sampling technique was utilized to collect data from a sample of 458 final-year undergraduate students from two Ugandan public universities.

Results – a significant partial mediation effect of Entrepreneurial Self-Efficacy and Entrepreneurial Attitude between Entrepreneurship Training and Entrepreneurial Intentions was established and a mediated mediation effect.

Implications – the study provides maiden evidence that Entrepreneurial Training and Entrepreneurial Intentions are significantly and serially mediated by Entrepreneurial Self-Efficacy and Entrepreneurial Attitude. Managers and policymakers may use this study results to further student's entrepreneurial competencies. Society may also use our results to support entrepreneurial ventures as a vehicle for creating jobs for graduates

Originality/value – the novelty of this paper is threefold; it provides evidence on the mediating role of; (1) entrepreneurial self-efficacy, (2) entrepreneurial attitude, and (3) we provide initial evidence on the mediated mediation effect of Entrepreneurial Self-Efficacy and Attitude in the relationship between Entrepreneurial Training and Entrepreneurial Intentions.

Introduction

Graduate unemployment remains a haunting problem in the developing world, especially in sub-Saharan Africa (Gindling & Newhouse, 2012; Ntale et al., 2020). In Uganda, for instance, universities release approximately 400,000 graduates annually into the job market (NCHE, 2018) as cited by (Kisubi, Korir, & Bonuke, 2021), but only 90,000 graduates can find jobs; this leaves 310,000 unemployed (UBOS Statistical Abstract, 2017) cited by (Ntale et al., 2020). According to a study conducted by Uganda Employers Association cited by (Ngoma & Dithan Ntale, 2016), 60 percent of the unemployed are fresh graduates who had spent over five years looking for employment.

Researchers, scientists, policymakers, and governments have recommended and adopted Entrepreneurial training (ET) to inculcate an entrepreneurial culture among the participants to address this problem. Despite the ongoing debate whether entrepreneurship can be taught or not (Matlay, Abaho, Olomi, & Urassa, 2015; Solesvik, 2013), many scholars argue that entrepreneurship can be taught and learned like any other discipline (Mauer, Neergaard, & Linstad, 2017; Welsh, Tullar, & Nemati, 2016). As such public policies generally advocate that ET amplifies entrepreneurship (Gindling & Newhouse, 2012). Although empirical studies concerning entrepreneurship education/training/courses (ET) and Entrepreneurial Intentions (EIs) are not conclusive, the majority confirm a positive relationship (Gelaidan & Abdullateef, 2017; Liñán & Rodríguez-Cohard, 2015; Mahendra, Djatmika, & Hermawan, 2017; Matlay et al., 2015; Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2019; Puni, Anlesinya, & Korsorku, 2018; Thu & Le Hieu, 2017). Besides, some researchers have also reported negative results (Abdullahi, Zainol, Daud, & Yazid, 2017; Joensuu, Viljamaa, Varamäki, & Tornikoski, 2013; Nowiński et al., 2019) while others report no relationship (Michelle & Tendai, 2016).

This dilemma has attracted a lot of research interest using different methodologies. For instance, qualitative versus quantitative and cross-sectional versus longitudinal studies have been conducted. All these efforts have not solved the debate whether ET positively relates to entrepreneurship. To investigate further this dilemma, some scholars have undertaken meta-analytical studies to examine the different research methodologies, contexts, cultures, and research proficiency utilized. For example, Bae, Qian, Miao, and Fiet (2014) meta-analyzed 73 studies with a sample size of 37,285 participants. After correction for the measurement error, a weak association of .143 between ET and EIs was reported. But after controlling for pre-education EIs, the relationship between ET and post-education EIs was not significant. Similar to the earlier meta-analytical findings of Martin, McNally, and Kay (2013), a small but positive relationship was found between ET and entrepreneurship outcomes. Also, Lorz, Müller, and Volery (2011) report that 33 of the studies found a positive effect of ET on EIs, while six found no effect and two found negative findings.

Researchers have advanced their investigations on the effect of ET and entrepreneurship from a mere direct impact to interactive impacts. As such, Entrepreneurial attitude (EA) and self-efficacy (ESE) has been widely studied as mediating variables between ET and Entrepreneurial Intentions (EIs) (Barbosa, Gerhardt, & Kickul, 2007; Kisubi et al., 2021; Naushad & Malik, 2018; Nowiński et al., 2019; Oyugi, 2015; Rosique-Blasco, Madrid-Guijarro, & García-Pérez-de-Lema, 2018; Wu, Wang, Zheng, & Wu, 2019). However, to our knowledge, this study appears to be the first to examine a serial mediation effect of ESE and EA in the relationship between ET and EIs despite recommendations by (Naushad & Malik, 2018; Rosique-Blasco et al., 2018). The study, therefore, fills this gap; by examining a mediated mediation effect of ESE and EA in the association between ET and EIs.

The study findings present vital suggestions to academia, policymakers, and society. This paper provides maiden empirical evidence on how ET influences EIs through ESE and EA. Students who are yet to decide whether to opt for formal employment or entrepreneurship or both may use the study findings to make the right decision. To be specific, those who wish to choose entrepreneurship may use the study results to identify how

ESE and EA matter in their career choices. For policymakers, it would base on the results to develop ways of instilling entrepreneurial culture and mindset among learners by focusing on developing student's ESE and EA.

The rest of the paper is arranged as follows. Section 2 explains the literature review as well as hypotheses development. Section 3 talks about the methodology employed. Results and discussion are provided in Section 4, followed by a conclusion, implications, and study limitations in Section 5.

Literature Review

Social Cognitive Theory (SCT)

Bandura's SCT started as social learning theory has been widely applied in predicting any behavior, self-efficacy (Bandura, 2005; G. Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017), and learning (Harinie, Sudiro, Rahayu, & Fatchan, 2017; R. L. Nabi & Prestin, 2017). The theory posits that learning occurs through an interaction between the individual behavior (cognitive) and the environment (Bandura, 2001). Therefore, according to the theory, learning is through observation (vicarious learning) (Bandura, 1989, 2002, 2009). Students acquire knowledge, attitudes, values, emotional inclinations, and skills through a wealth of information transmitted through actual and symbolic modeling (Bandura, 2002). Observer attention to relevant environmental events is necessary for them to be meaningfully perceived (Harinie et al., 2017). Vicarious Learning processes play an essential role in shaping entrepreneurship knowledge, attitude, and skills (Edwards-Schachter, García-Granero, Sánchez-Barrioluengo, Quesada-Pineda, & Amara, 2015), which are necessary for entrepreneurial endeavors. According to Bandura (2009), through learning, an individual develops self-efficacy, which is a primary predictor of any behavior. Self-efficacy is a person's belief in his/her ability to perform a certain task (Bandura, 1997). Furthermore, the theory posits that high self-efficacy directs behavior, shapes courses of action, and increases perseverance in the face of obstacles (Bandura, 2005). The association between self-efficacy and career intent has been found to range from 0.3 to 0.6 (Bandura, 1991; Krueger Jr, Reilly, & Carsrud, 2000).

Scholars have argued that this correlation is better than most predictors used in entrepreneurship research. For instance, Krueger Jr et al. (2000) has argued that self-efficacy is a critical antecedent of entrepreneurial intent. In the context of entrepreneurship, individuals with high ESE have more intrinsic interests in entrepreneurial activities (Harinie et al., 2017; Liguori, Bendickson, & McDowell, 2018). Therefore, ESE is a robust measure for evaluating a person's belief in her/his ability to successfully launch an entrepreneurial venture (Karlsson & Moberg, 2013).

Bandura (1991) state that four principal sources of information exist from which an individual's career intention can be developed; (1) enactive mastery, i.e., one's prior performance accomplishments; (2) Vicarious experience, i.e., observing how others perform; (3) Verbal persuasion, i.e., feedback from others that one possesses the ability to perform well and (4) physiological states/arousal, i.e., information about one's physiological state. Scholars like Nowiński et al. (2019) and Watson, Gatewood, Lewis, Dempsey, and Jennings (2014) have shown that ET can provide these sources.

Vicarious learning and enactive mastery can be provided to students through storytelling by successful entrepreneurs, observing their role models, self-employed parents/guardians performing and performing on practical projects like an internship (Nowiński et al., 2019). Students also can meet entrepreneurs through field visits and guest lectures, watch or discuss stories of successful entrepreneurs amongst themselves. Therefore, according to the theory, exposure to ET produces increasingly higher levels of EIs (Welsh et al., 2016).

The theory of Planned Behavior (TPB)

TPB by Ajzen (1991b) argues that an individual's behavior is determined primarily by the intention of the individual to perform certain behaviors—behavioral intent. The intention is understood as the motivational

factors that influence behavior, meaning that the stronger the intention to carry out an activity, the greater the chance an individual will carry it through (Ajzen, 1991b).

The intention in the TPB is the readiness to engage in a given behavior (Ajzen, 2011). Entrepreneurial intention is a state of mind that directs and guides the actions of individuals towards the development and implementation of new business concepts (Hattab, 2014). The best predictor of entrepreneurial activity or start-up is EIs (Baluku, Leonsio, Bantu, & Otto, 2018). Consequently, entrepreneurship depends on the decision of the person to pursue or not to do so (Majogoro & Mgabo, 2012). According to the theory, attitudes, subjective norms, and behavioral control determine the preference for entrepreneurship (Ajzen, 1991a), which in turn determines the intention of starting a business and the actual involvement in entrepreneurship (Kolvereid, 2016)

Attitude is the degree to which an individual has a favorable or unfavorable view or analysis of a particular behavior or object (Ajzen, 1991b). Attitude towards entrepreneurship is the degree to which the individual has a positive or negative personal assessment (Ajzen, 2001). It involves not only affective ("I like it, it's attractive") but also evaluative ("it has advantages") (Liñán & Rodríguez-Cohard, 2015). If entrepreneurship is more appealing to students, their intention to work for themselves is lower and vice versa (Ismail, Jaffar, & Hooi, 2013; Majogoro & Mgabo, 2012).

Subjective Norm tests the perceived social tension to perform business activities or not. In particular, it refers to the idea that "reference people" would (or would not) approve a person's decision to become an entrepreneur (Ajzen, 2001). Perceived behavioral control is the understanding of the ease or difficulty of becoming an entrepreneur, and this construct reflects Entrepreneurial self-efficacy in this study. Therefore, the three antecedents influence the intention to do something (Majogoro & Mgabo, 2012).

ET and EIs: Mediating role of ESE

Reference is made to SCT and empirical literature from related fields. The theory suggests that self-efficacy directs conduct, forms courses of action, and increases perseverance in the face of barriers (Bandura, 2005) which are necessary for students to realize their EIs. The theory further asserts that the association between self-efficacy and career intent has been found to range between 0.3 and 0.6 (Bandura, 1991; Krueger Jr et al., 2000)). The empirical literature has proven this association (Piperopoulos & Dimov, 2015; Schmutzler, Andonova, & Diaz-Serrano, 2018; Wang, Chang, Yao, & Liang, 2016). Also, the theory suggests that from four sources, self-efficacy develops: enactive mastery, verbal persuasion, vicarious learning, and physiological arousal. Researchers have tested and demonstrated that ET provides these sources (Nowiński et al., 2019; Watson et al., 2014). A positive correlation between ET and ESE has been established (Matlay et al., 2015; Welsh et al., 2016). We, therefore, postulated that:

H1: ESE mediates the relationship between ET and EIs

ET and EIs: Mediating role of EA

Empirical evidence provides that EA mediates the relationship between ET and EIs. For instance, Ebewo, Shambare, and Rugimbana (2017) assert that participation in Entrepreneurship Education is positively related to students' attitudes towards entrepreneurship as a career option in Botswana. The development of EA and behaviors to become an entrepreneur can be facilitated through ET (Alharbi, Almahdi, & Mosbah, 2018). Thus, an appropriate ET program changes student's EA and increases the entrepreneurial rate (Dehghanpour Farashah, 2013). Similarly, Gorgievski, Stephan, Laguna, and Moriano (2018) found that attitude mediates values on entrepreneurial career intentions among students from Spain, Dutch, German, and Poland. Also, Attitude mediates the relationship between self-efficacy and social Entrepreneurial Intentions and emotional intelligence and Social Entrepreneurial Intentions (Tiwari, Bhat, & Tikoria, 2017). This mediating effect is

further discovered by Mahendra et al. (2017) and argued that EA is a pathway through which ET determines EIs. Therefore, it was hypothesized that;

H2: EA mediates the relationship between ET and EIs

ET and EIs: mediated by ESE and EA

A body of literature exists concerning the mediating role of ESE and EA (Barbosa et al., 2007; Gorgievski et al., 2018; Puni et al., 2018; Wang et al., 2016; Wardana et al., 2020; Wu et al., 2019; Zhao, Seibert, & Hills, 2005). Even studies investigating both EA and ESE as mediators have conducted parallel mediation (Nowiński et al., 2019; Puni et al., 2018; Rosique-Blasco et al., 2018; Wardana et al., 2020). To our knowledge, this appears to be the first study to conduct an indirect serial analysis of ESE and EA. Therefore, the proposition that ET and EIs are mediated by ESE and EA sequentially is based on studies that have found a positive relationship between ESE and EA (Mahendra et al., 2017; Piperopoulos & Dimov, 2015; Wardana et al., 2020; Zhao et al., 2005). On this basis, we suggest that

H3: the association between ET and EIs is mediated by ESE and EA

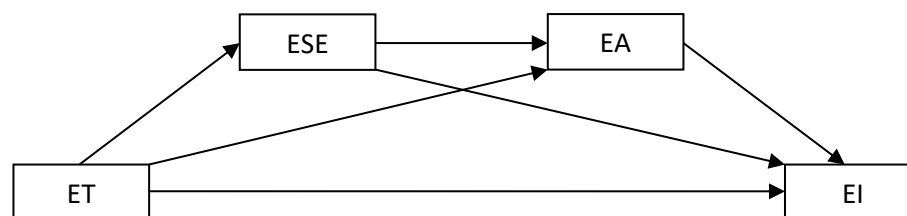


Figure 1: Adapted from *Hayes (2018) template*

Method

Design, population, sample, and sampling

A cross-sectional and explanatory research design was utilized to collect and analyze data in this study. Data was collected using a self-administered questionnaire in the English language from a sample of 458. However, due to missing data and non-response, 388 questionnaires were found helpful. The study sample was drawn from a population of 6,408 undergraduate finalists for the academic year 2019/2020 from Makerere and Kyambogo Universities. The sample size was determined using Yamane's formulae (Yamane, 1973) at a 95.5% confidence level thus, a 4.5% sampling error. The systematic sampling technique was employed as recommended by (Tharenou, Donohue, & Cooper, 2007) for large populations to identify the final participant from their respective programs. Data were collected from students in their lecture halls before the start of the lecture. Students participated voluntarily as those who declined were replaced. Findings indicate a response rate of 89% above the acceptable threshold of 50% as recommended by most researchers.

Measurement

Entrepreneurial training (ET) was operationalized using the five items of (Puni et al., 2018), while Entrepreneurial self-efficacy (ESE) was measured following the fourteen items of (De Noble, Jung, & Ehrlich, 1999). On the other hand, Entrepreneurial Intentions (EIs) were measured using the four-item scale (Liñán & Chen, 2009). Lastly, EA was measured by adapting semantic differential items that assess attitudes developed by (Ajzen 2013; Hennessy, Bleakley, & Fishbein, 2012). All items were anchored on a seven Likert scale starting from 1- strongly disagree to 7 strongly agree.

Common method bias

The study controlled for common method bias before and during data collection. Before data collection, the study followed the recommendation by Conway and Lance (2010) that researchers can rule out significant methodological biases by ensuring that the measures used demonstrate high construct validity. This was considered in this study, and it was confirmed through factor analysis (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). During data collection, the independent variables were separated from the dependent variable by conducting two surveys; the first survey involved collecting data about the independent variables. After two weeks, the second survey was carried out on the dependent variable from the same respondents of the first survey. To ensure that the same respondent answers a particular questionnaire in both surveys, respondents were given codes informing numbers that they wrote in pencil on the questionnaire. This guided the researchers at the stage of data entry to identify the corresponding questionnaires from the surveys.

Preliminary analysis

Normality tests were conducted using skewness and kurtosis criteria of absolute values less or greater than 1.96 or -1.96 (Field, 2009). Normality was not an issue since skewness, and kurtosis values for all variables were close to zero and fall in the range of +1.96 to -1.96 (Templeton, 2011). Also, we investigated for Multicollinearity problem using tolerance and variance inflation factor (VIF). The rule of thumb holds that VIF should be less than ten and above 0.2 for tolerance (Stevens, 2002). A minimum tolerance of .572 and maximum VIF of 1.749 were registered for the study, implying that Multicollinearity was not an issue.

Respondent's demographic characteristics

Students' profiles in terms of gender, age, and program offered and parent's career was captured. Results demonstrate that most of the respondents were female, 50.8%, while 49.2% were male. A large number of female students is attributed to the "educate the girl campaign" in Uganda. 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. With the program offered, most students, 72.2%, offered business programs while 27.8% offered none business programs. Lastly, most of the students' parents or guardians, 62.6%, are self-employed, and only 37.4% are employed.

Table 1: Respondent's demographic characteristics

Variable	Factor	Frequency	Valid percent
Gender	Female	197	50.8
	Male	191	49.2
	Total	388	100.0
Age	Below 20 years	3	.8
	20 - 25 years	345	88.9
	26 - 30 years	36	9.3
	Above 30 years	4	1.0
	Total	388	100.0
Program	Non business	108	27.8
	Business	280	72.2
	Total	388	100.0
Parent's career	Employed parents/guardian	145	37.4
	Self-employed parents/guardian	243	62.6
	Total	388	100.0

Results

Descriptive Statistics, Reliability, and Correlation results

The study variable descriptive statistics are presented in Table 2. Entrepreneurial intentions (EIs) have a minimum score of 2.25, maximum of 7.00, mean of 6.001, and standard deviation of 0.983. Entrepreneurial training (ET) has a minimum score of 3.2 and a maximum of 7, a mean of 5.936, and an SD of 0.860. Entrepreneurial attitude (EA) scored a minimum of 2.00 and a maximum of 7.00, while the mean and SD are 6.008 and 0.905, respectively. Lastly, Entrepreneurial self-efficacy (ESE) has a minimum of 2.57 and 7.00 maximum, a mean of 5.844, and an SD of .790. SD measures the level of agreement or disagreement in the participant's responses. If the SD values are small and thus close to the mean, this implies that the statistical mean provides a good fit for the observed data. According to Hair, Hollingsworth, Randolph, and Chong (2017), for the respondents to be consistent in their opinions, SD should be less than 1. This criterion was meant since the study's maximum SD was 0.983, which is below 1.

Cronbach alpha coefficient test was utilized to test for internal consistency of the instrument. Though there is no absolute value, most scholars agree on a minimum internal consistency coefficient of 0.70 (Taherdoost, 2016). The study research instrument is deemed reliable on this backdrop since Cronbach's alpha for the study variables ranged between 0.771 and 0.918, as shown in table2.

Pearson Product-Moment Correlation test was employed to establish the relationship between the study variables. Results indicate a positive and significant relationship between the variables. ET and EIs ($r = 0.484$, $p < 0.01$), EA and EIs ($r = 0.568$, $p < 0.01$), ESE and EIs ($r = .556$, $p < 0.01$), ET and EA ($r = 0.485$, $p < 0.01$), ET and ESE ($r = 0.599$, $p < 0.01$) and EA and ESE ($r = 0.521$, $p < 0.01$).

Table 2: Descriptive, Reliability and Correlations

Variable	Mini	Max	Mean	SD	Alpha	1	2	3	4
EIs (1)	2.25	7.00	6.001	.983	0.771	1			
ET (2)	3.20	7.00	5.936	.860	0.769	.484**	1		
EA (3)	2.00	7.00	6.008	.905	0.932	.568**	.485**	1	
ESE (4)	2.57	7.00	5.844	.790	0.918	.556**	.599**	.521**	1

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

Mediation results

A serial mediation analysis was performed with the help of Hayes (2018) PROCESS macro vs3.2 (Model 6). To ensure the stability of the study results, bootstrapping was conducted using 5,000 sub-samples at a 95% confidence level (Hair et al., 2017). The output generated three indirect effects, and all were significant (see table III). The first indirect effect indicates that ESE significantly mediates the relationship between ET and EIs ($\beta=0.170$, $SE=0.305$, $CI=0.05, 0.243$). The second mediation shows that ET influences EIs through ESE and EA ($\beta=0.077$, $SE=0.020$, $CI=0.441, 0.123$). Finally, EA mediates the relationship between ET and EIs ($\beta=0.101$, $SE=0.027$, $CI=0.056, 0.159$). The three indirect effects impose a total mediation effect ($\beta=0.348$, $SE=0.042$, $CI=0.269, 0.435$) on EIs. Regarding the nature of the mediation, Hair et al. (2017) assert that when the direct effect remains significant upon introducing a mediator in the equation, it is said to be partial mediation. When the direct effect becomes insignificant, it is full mediation. Therefore, the current study presents a partial mediation since ET's direct effect on EIs remains significant after the introduction of the mediators ($\beta=0.141$, $p=0.000$).

Table 3: Mediation results

Direct Effects	ET	ESE	EA	EIs
ET	0.000	0.564***	0.230***	0.141***
ESE		0.000	0.312***	0.302***
EA			0.000	0.440***
The total effect of ET on EIs				0.489***
Bootstrapped indirect effects	Effect	Boot SE	Boot LLCI	Boot ULCI
Mediation1	0.170	0.305	0.105	0.243
Mediation2	0.077	0.020	0.441	0.125
Mediation3	0.101	0.027	0.056	0.159
Total mediation	0.348	0.042	0.269	0.435
Note: ET-Entrepreneurial Training, ESE-Entrepreneurial Self-efficacy, EA- Entrepreneurial attitude, EIs- Entrepreneurial Intentions				
Mediation1:	ET -> ESE -> EIs			
Mediation2:	ET -> ESE -> EA -> EIs			
Mediation3:	ET -> EA -> EIs			
**** Significant at 0.001				

Discussion

The study sought to address three indirect effect hypotheses and are all supported by the results. In the first place, we hypothesized that Entrepreneurial Self-Efficacy (ESE) mediates the link between Entrepreneurial Training (ET) and Entrepreneurial Intentions (EIs), a significant partial mediation was found. Our study findings concur with previous research by (Piperopoulos & Dimov, 2015; Puni et al., 2018; Shahab, Chengang, Arbizu, & Haider, 2019; Wardana et al., 2020; Wu et al., 2019). Such results are that practical ET enhances participant's entrepreneurial competence-base, which is key in the pursuit of an entrepreneurial career. The other is that practical entrepreneurship training provides the four principal sources of self-efficacy postulated by the social cognitive theory. Such that attending an ET equips learners with the relevant entrepreneurial abilities, thus enhancing their self-efficacy, leading to the development of EIs.

The second hypothesis was supported and stated that EA mediates the association between ET and EIs. Such results are not surprising because participating in a relevant ET shapes the participant's entrepreneurial mindset in favor of entrepreneurship. Therefore, individuals who undergo ET have more chances to pursue entrepreneurship. This is because exposure to such training enlightens the participants on the goodness of entrepreneurship, thus; develop a positive and favorable attitude. The study results don't stand alone but supported by antecedent studies (Abdullahi et al., 2017; Alharbi et al., 2018; Ebewo et al., 2017; Gorgievski et al., 2018; Mahendra et al., 2017)

Finally, the third hypothesis was also supported since the mediated mediation results are significant. These results imply that ET indirectly influences EIs through ESE and EA. A total mediation effect of 0.348 was found much higher than the direct impact of 0.141 that ET imposes on EIs. These results are more insightful and unique in the literature since we didn't find any study of this nature. However, to support our results, we lean on studies that have found a positive relationship between ESE and EA (Mahendra et al., 2017; Piperopoulos & Dimov, 2015; Wardana et al., 2020; Zhao et al., 2005).

Conclusion

The purpose of this paper was threefold: (1) to determine the mediating effect of ESE in the relationship between ET and EIs (2) to determine the mediating effect of EA in the relationship between ET and EIs, and lastly, to determine mediating effect of ESE and EA in the association between ET and EIs. Results indicate

that ESE and EA partially and significantly mediate the relationship between ET and EIs. Besides, a mediated mediation effect of ESE and EA was found in this relationship.

This study presents significant contributions to academicians, policymakers, and society. This study adds to the existing literature by documenting the mediating effect of ESE and EA in the relationship between ET and EIs. Additionally, the study provides maiden evidence that ESE and EA significantly and serially mediate ET and EIs. Managers and policymakers may use the study results to enhance students' entrepreneurial competencies to fight graduate unemployment. Society may also wish to support entrepreneurial ventures as a vehicle for creating jobs for graduates. Therefore, Policies that encourage graduate entrepreneurship need to be put in place as guided by the study results.

Like any other study, this study could not exist without limitations; these provide opportunities for future researchers. First, we utilized a cross-sectional survey design. Therefore, a longitudinal design should be considered by future researchers. Second, the study was carried out in Uganda, making it difficult for the study results to be generalized to other countries with different settings and cultures. Lastly, the study relied on a quantitative approach. Thus, a qualitative approach is needed to understand deeply how student's EIs and cognitions develop by attending an ET or course. Such findings would help in strengthening the empirical results from the quantitative approach.

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