

Original Research Article

Arbitrative role of adult learners' entrepreneurial attitude and the influence of entrepreneurial education on intention in Tanzania

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The study explored the influence of entrepreneurial education (EE) on adult learners' entrepreneurial intention (EI) focusing on the arbitrative role of the entrepreneurial attitude (EA) in Tanzania. It employed convenient sampling to draw a sample of 245 respondents from 1,726 Institute of Adult Education (IAE) adult learners engaged in entrepreneurial programmes. This research applied the quantitative design, the primary data generated using a structured questionnaire was subjected to the structural equation model, which was facilitated by the Analysis of Moment Structures (AMOS 20.0) software to verify the hypothesis relationships. The study found a direct positive and significant influence of EE on EI ($\beta=0.166$, $CR=4.132$, $p<0.05$). Moreover, the study found a direct positive and significant influence of EE on EA ($\beta=0.186$, $CR=3.721$, $p<0.05$). The findings further indicate a direct positive and significant influence of EA on adult learners' EI ($\beta=0.306$, $CR=4.240$, $p < 0.05$). Furthermore, the study found the adult learners' EA to have a positive, and significant indirect arbitrative influence on the relationship between EE and EI ($\beta=0.115$, $p < 0.001$). Overall, these findings suggest that an individual's EA to IE predicates an adult learners' intention to participate in entrepreneurial venture formation, which was influenced by the module content and pedagogical approaches used in the EE. Thus, promoting EI among adult learners requires module developers to design content and pedagogical approaches that are practical-oriented, convenient, and adult learners-centred. Moreover, Tanzania government should create an entrepreneurial conducive environment for higher learning institutions interactive to the world current entrepreneurial endeavours.

Keywords: Adult learners, entrepreneurship education, intention, attitude, arbitrative role

INTRODUCTION

Initiating policies aimed to boost the graduates' propensity to become entrepreneurs is crucial for the Entrepreneurial Education (EE) taught in higher learning institutions (Ayalew and Zeleke, 2018). EE refers to a learning activity associated with improving knowledge, abilities, skills, and

personal character regarding EE (Wang et al., 2021). In essence, EE is expected to develop or change an individual's EA refers to the extent to which an individual has a welcome or unwelcome and good or bad appraisal of entrepreneurial behaviour (Pulka et al., 2015). Kakkonen

(2018) provided the concurrent definition for EA as being about knowing what it means to be an entrepreneur with a tendency towards nurturing entrepreneurial behaviour or self-employment. It has been established that EE is also expected to develop an EI defined as a self-acknowledged belief in starting a new business (Kautonen et al., 2015; Sagie and Elizur, 2016) among adult learners and to equip them with knowledge and skills to be entrepreneurs. Relatively, “[Entrepreneurial intention] EI includes the original concept and the plan to formulate and start new ventures as per entrepreneurial choice” (Obschonka et al., 2018).

Nevertheless, to come up with innovative business ideas, entrepreneurs have also developed certain skills, attitudes, and behaviours, which enable them to perform their roles (Ayalew and Zeleke, 2018). EA has also emerged as a key factor for economic growth and social transformation (Stamboulis and Barlas, 2014). Moreover, Abun et al. (2018), David and Lawal (2018); Esfandiar et al. (2019); Gujrati et al. (2019), Liu et al. (2019), and Norziani et al. (2015) all found in their studies that, the EA had a significant effect on the EI of college students. In developing countries, the role of EE for development is centripetal in the creation of self-employment opportunities and easing unemployment woes.

Previous studies (for example, Nghia, 2019) have also confirmed how commonplace unemployment among university graduates has become a challenge in both developed and developing countries. In India, one of the largest high education systems in the world (second only to China), only 25 to 30 percent of graduates are employable” (Tilak, 2020), implying that 60 - 75 percent are unemployable. These statistics provide sufficient evidence to support the assumption that something went amiss in the curriculum development or in higher learning graduates’ EA development. In fact, the content in the curriculum ought to provide real-world experience for enhancing intentionality through increased perceived desirability (attitude) and feasibility (Peterman and Kennedy, 2017). These aspects may bring about EI, which eventually can minimise the unemployment rate among higher-learning students, specifically adult learners. Generally, the oversupply of higher learning institutions’ graduates has swamped the job market, dwarfing the job opportunities available. However, the role of educational institutions remains crucial in developing an EA (Silva and Nobre, 2018).

On their part, Ayalew and Zeleke (2018) found that ignoring fostering the correct attitude to entrepreneurship as a career choice can impact on the students’ EI. The authors established that students with different attitudes can react differently on the expected self-employment behaviour. The attitude can be either positive or negative towards self-employment depending on their background and other personal traits. Positive attitudes towards self-employment among students could allow them to start their own business ventures in their post-graduation period. Conversely, negative attitude would not make

them to become predisposed towards self-employed.

This scenario raises a pertinent question on the contribution of EE to fostering EA amongst adult learners that can translate into their EI. This concern also includes the potential bearing on the learners’ individual attitude that evolves from numerous activities conducted during the EE teaching. The relationship between these activities can also create specific attitudes in individuals encompassing the ability to manage certain behavioural traits and their expectations of behavioural results (Nowinski et al., 2019) and entrepreneurial life skills after benefiting from such education. Adult learning institutions have for so long attracted substantial sums with more time devoted to developing curricula aimed to stimulate entrepreneurial behaviour among adult learners (URT, 2020). As such, EA is an important antecedent of EI. Nevertheless, a significant effort has been directed towards executing EE as a module in formal education programmes specifically in adult learning institutions to stimulate and enhance the adult learners’ entrepreneurial potentials. Acquisition of these potentials would allow them to apply entrepreneurial skills, knowledge and competencies in starting up and managing their own business ventures. This venture creation can make them become self-employed upon completion of the programme at a time when formal jobs were at the premium.

Regardless of all these exertions, including strategic curriculum development, human resources and material resource, and projects activities made by higher learning institutions specifically the IAE in Tanzania, “many graduates progressively continue seeking white-collar jobs with only a few developing their career by creating jobs opportunities through entrepreneurial venture creation” (Okechukwu and Ogbu 2020). In short, without preparedness and orientation, many graduates ended up lacking the intention of taking up self-employment under entrepreneurship. The current study, therefore, explored the degree to which Tanzania’s adult learning institutions teach EE as part of efforts aimed to steer the adult learners’ EA for them to engage in business start-ups after they had completed their studies.

Problem Statement

As a developing country, Tanzania contends with the problems associated with fostering the perceived appeal and practicality needed for EA and IE emanating from EE in higher learning graduates. Presently, data suggest that 56.6 percent of human resource practitioners dismiss many of the Tanzania graduates to be too incompetent to compete for jobs in the East African labour market (Mwita, 2018; Mgaiwa, 2021; Ndijuye and Tandika, 2022). In other words, such Tanzania graduates generally lack skills or obligated failed to acquire positive attitude towards self-employment in their own ventures. The worst-case scenario is that they even lacked requisite competencies for applying in the few formal jobs available. This trend partly has to do with the graduates’ grossly underdeveloped EA for EI potentials as

personal attributes relative to the EE content taught. Moreover, each year about 900,000 Tanzanian graduates compete in the labour market for only 50,000 to 60,000 job openings generated by the government (*The Citizen*, 2017). Ideally, the graduates either lack sufficient entrepreneurial skills or harbour a negative attitude towards EE, hence leading to poor EI.

Understanding the role of EE in boosting motivation, which induces behavioural changes is crucial in education provision among adult learners in Tanzania's formal higher learning institutions to generate job-creators instead of job-seekers. This assumed importance of EE raises a pertinent question regarding its contribution to imparting EA capable of nurturing EI amongst adult learners. The current study, therefore, explored the degree to which Tanzania's adult learning institutions teach EE as part of efforts aimed to steer the adult learners' EA for them to engage in business start-ups after they had completed their studies.

Theoretical underpinning

Ajzen's (1985 and 1991) Theory of Planned Behaviour (TPB)—simply the TPB Model—has three attitude variables that affect EI: Attitude toward the behaviour (PA), Subjective norms (SNs), and perceived behavioural control (PBC). Since its inception, different fields have widely applied the TPB Model in predicting social behaviour. Recently, the rise in entrepreneurship research in the world raised its application in the field. Attitude includes an individual's evaluation of the benefits of engaging in a particular behaviour. Under the TPB, level of EI related to the behavioural intention of entrepreneurs (attitude towards the trait); level of EE related to the normative belief and compliance motivation (subjective norms); level of EI related to EA and perceived facilitating conditions (behavioural control). To improve the understanding of entrepreneurial behavioural intention, the framework of the TPB guides the current study. These variables aid the comprehension of the intention of adult learners' behaviours in the current study. There are two major sources of intention under TPB: Desirability (motivation to act for the intended behaviour), as in the current study refers to the EA of an individual; and the feasibility of the given behaviour (Krueger et al., 2000).

The TPB is applicable to the analysis of an individual adult learners' EI. Yet, EI is an individual's subjective norms related to attitude or feelings towards a willingness to start one's own business venture, which includes the "willingness to venture" mental state and behavioural tendencies (Radhitya et al., 2020). In the context of EE taught to adult learners, the TPB offers a critical and appropriate framework for explaining adult learners' EA. The goal of EE is not only for adult learners to embark on a business but also to realise EA for formalising EI by coming up with innovative ideas.

EE taught influences the attitude or feeling towards entrepreneurship (Yijun et al., 2021). Usually, individuals equipped with the essential ingredients of EE would

demonstrate positive EA effect on EI. The current study employs TPB premises to the use of EA as a substitute for behaviour, which is a relevant instrument for understanding the development of EI through EE. Notably, because attitudes or feelings can over time change, knowledge can change behaviour and facilitate the emergence of entrepreneurial intent stemming from learning outcomes (Hu and Ye, 2017). Moreover, learning different behaviours capable of changing attitudes/feelings tends to affect EIs.

The variables in theory are superimposed onto the new model formulation that generates different predictions by attesting to the module contents taught and pedagogical approaches used in adult learning institutions. Additionally, attesting to whether adult learners' EI and EA can emerge among adult learners after being exposed to such education is crucial. The resultant model further facilitates the understanding of EA among adult learners and the degree of attendant EI. The reformulated model for the current study also adopted ideas from Hong et al. (2020), and Muhammad et al. (2020). The EE in this study describes the scope of curricular or module content and applicable pedagogical approaches aimed to provide adult learners with necessary entrepreneurial competencies, knowledge, EA and skills in fostering an entrepreneurial career (Yuan et al., 2020).

Entrepreneurial Education and Intention

Saifullahi (2020) found a significant positive influence of EE on IE. Similarly, Saraih and Ali (2019) found a positive relationship between EE and EI. In addition, Saraih et al. (2019) found EE to be significantly related to EI at $\beta = 0.55$ and $p = 0.00$; with moderate adjusted R^2 (30.0%). The study had applied linear regression analysis to analyse the association between the independent variables and dependent variables in the study. Dogan's (2015) study also found a significant positive correlation between the students' success levels in the entrepreneurship class and their entrepreneurial intention. On the other hand, Hsiung (2018) claimed that there was a lack of understanding on the extent to which students' perceptions of the quality of EE impacted on their EI. This study, therefore, aimed to determine the influence of EE on EI among adult learners in Tanzania's higher learning institutions, specifically the adult learning institution. To achieve this objective, the study formulated hypothesis H_1 :

Entrepreneurial education has a significant influence on adult learners' entrepreneurial intention.

Entrepreneurial Education and Attitudes

Previously, Staniewski and Awruk (2018) identified 17 motivational factors of entrepreneurship related to entrepreneurial attitudes. These factors are flexibility, fearlessness, preference for difficult tasks, independence, confidence in success, dominance, eagerness to learn, goal-

setting, compensatory effort, status orientation, pride in productivity, engagement, competitiveness, flow—focus on task, internality, persistence and self-control. Staniewski and Awruk (2018) further underlined key attitudes to include flexibility, fearlessness, confidence and persistence. Consequently, a successful entrepreneur ought to these motivation attitudes. Amos et al. (2017), on their part, used the Analysis of Variance (ANOVA) to establish that entrepreneurship education explained 15.9 percent of EA and the model was significant at ($F = 44.551, p < 0.05$). The standardized coefficients also showed the effect of EE to be positive and significant ($\beta = 0.398, t = 6.675, p < 0.05$) on EA. Based on such information and outcome, the study formulated hypothesis H₂:

The adult learners' entrepreneurial education has a significant influence on entrepreneurial attitude.

This hypothesis was developed based on a theoretical and empirical literature reviewed to situate and guide the current study.

Entrepreneurial Attitudes and Intention

Saifullahi's (2020) study on part of the EA and EI indicated that the more university students develop positive attitude to entrepreneurship, the more their EI increase by 33 percent. In other words, EA has a significant positive influence on EI at ($\beta=329; t=5.311; p=0.000$). These findings further indicate that EA positively increases the students' intention to launch their own business ventures after graduation, which could allow them to contribute to the education of the spiralling number of unemployed graduates in the country. In addition, the result also proved that the students' EA strongly contributed to their EI. Furthermore, Nguyen's (2017) study on entrepreneurial intention among international business students in Vietnam confirmed that EA and perceived behaviour control are positively related to EI. The study had used the exploratory factor analysis and multiple regressions to examine the responses from 372 final-year students. Interestingly, Zhang et al. (2015) confirmed the reverse in many empirical studies where their findings indicated EA failed to generate a significant impact on EI. Furthermore, Amos et al (2017) findings on EI indicate that R² was 0.188. In other words, 18.8 percent of the variance in EI was explained by variation in EA. Moreover, the ANOVA results of the same study further found the model to be statistically significant at ($F = 54.725, p < 0.05$) with the standardized coefficients showing that the effect of EA on EI is positive and significant.

Furthermore, David and Lawal (2018), Esfandiar et al. (2019), Abun et al. (2018), Gujrati et al. (2019); Liu et al. (2019), and Norziani et al (2015) all found that EA has a significant bearing on the EI of university students. In addition, Pulka et al. (2015) found EA to be a good predictor of EI. Ismail et al. (2013) conducted a study using the entrepreneur attitude orientation (EAO) model to predict the self-employment intentions among public and private universities' undergraduates in Malaysia. The

research established that personal control, self-esteem, and innovation had a significant and positive relationship with self-employment intention. Meanwhile, the study had found no significant relationship between business achievement and self-employment intention. Based on empirical evidence, the current study posits the following hypothesis H₃:

Entrepreneurial attitude has a significant positive influence on entrepreneurial intention.

Arbitrative role of EA between EE and EI

A study by Amos et al., (2017) found a significant relationship between entrepreneurship education and attitude as a mediating variable ($\beta = 0.398, t = 6.675, p < 0.05$) between EE and EI. Munawar et al.' (2020) study also indicated that the EE positively influenced the students' EA and EI. Nevertheless, the mediating role of EA was also statistically significant between the EE and EI. Subsequently, the study came up with hypothesis H₄:

The adult learners' entrepreneurial attitude has a significant arbitrating influence between entrepreneurial education and intention.

This hypothesis was developed based on information from theoretical and empirical literature review aimed to contextualise and guide the current study.

Hypotheses

In summation, the study, therefore, sought to test the following hypotheses to achieve its set objectives:

H₁: *Entrepreneurial education has a significant influence on adult learners' entrepreneurial intention*

H₂: *The adult learners' entrepreneurial education has a significant influence on entrepreneurial attitude*

H₃: *The adult learners' entrepreneurial attitude positively influence entrepreneurial intention*

H₄: *The adult learners' entrepreneurial attitude has a significant arbitrating influence between entrepreneurial education and intention.*

Conceptual framework

Empirical evidence confirmed that attitude is one of the most significant predictors of entrepreneurial Intention and EE can enhanced EA. Thus, to ascertain the influence of the direct relationship between EE and EI or EE and EA or EA and EI, as well as the indirect influence of EE on EI under the arbitrating role of EA, the author conceptualised the TPB framework. The construct EE taught can inform the development of recognising opportunities, evaluating opportunities, how to start opportunities, and entrepreneurial organisation (Zhao et al., 2005; Trevelyan 2009). The study adopted the course content and pedagogical approaches tested in Amos et al. (2017). Moreover, the EE skill set can have a bearing on EA by boosting self-confidence and adaptability Bandura (1997,

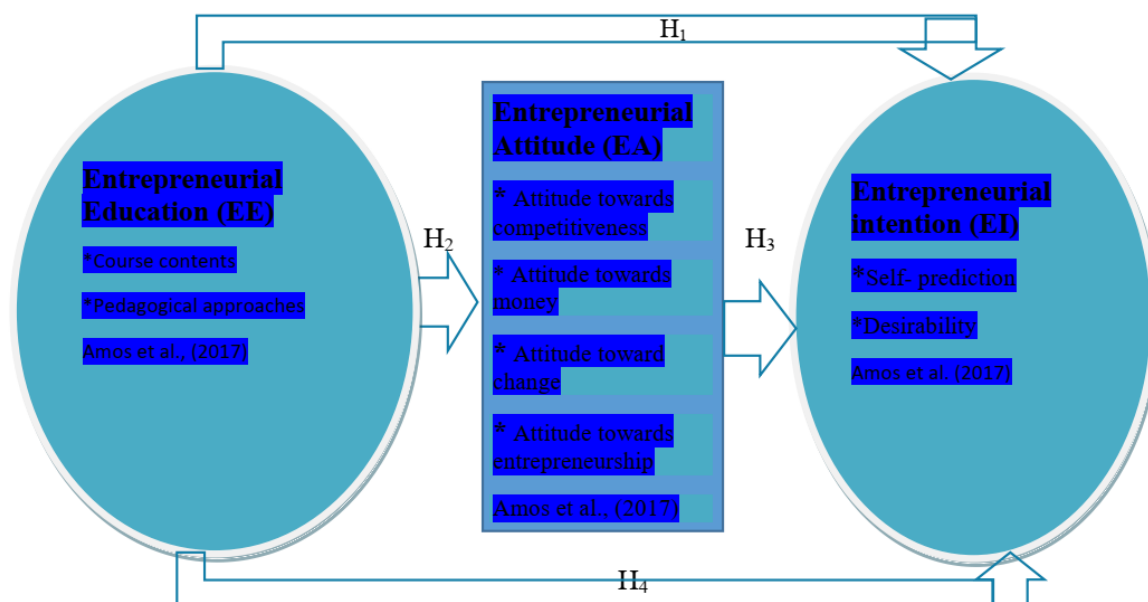


Figure 1: Conceptual framework

Source: Author's adaptation of ideas from literature review (2023)

1986). Finally, the EA enhanced through EE would increase EI through feelings and desire to start a business, attitude/courage toward risk-taking since EA is a good predictor of EI (Pulka et al., 2015). Attitude towards competitiveness, Attitude towards money, Attitude towards change, and Attitude towards entrepreneurship tested in Amos et al. (2017) study were adopted to measure the EA. Thus, EA anticipated to moderate knowledge transfer between EE and IE, which measured by Self- prediction, and Desirability adopted from Amos et al. (2017) study as illustrated in Figure 1.

MATERIALS AND METHODS

This quantitative study was informed by the post-positivism philosophical assumptions. The research design adopted facilitated the collection, measurement, analysis, and interpretation of data as well as the reporting of findings and conclusion of the study. Essentially, the study analysed data on the influence of the independent variable (EE) on the dependent variables (EI). In this regard, the post-positivism philosophy stipulates: "Hypothesis could not be rejected" and instead the "hypothesis [is] accepted" or "hypothesis could not be accepted" but the "hypothesis [is] rejected". To achieve the stated objectives and associated hypotheses, the study sought to determine the cause-and-effect relation based on the TPB model, which the study sought to prove or disprove.

The study focused on adult learners whose programmes offered entrepreneurship skills as a module, which served

as a unit of analysis aimed to test for the multi-faceted nature of the influence derive from the EE taught on adult learners' EI they received during the course. Conceptually, the entrepreneurship skills' module in the context of this study refers to a number of distinct but interrelated units informing a programme. The module therefore combined to constitute a course unit that provides various skill sets for building abilities and qualities that enable someone to embark on a business grow successfully over time. This research applied the quantitative design to measure different types of variables, Test hypotheses about relationships between variables, involves manipulating an independent variable and measuring its effect on a dependent variable, McCombes(2023).

This study was conducted at the IAE in Tanzania, the institutes comprising three campuses and 42 centres scattered all over the country. Dar es Salaam city is the IAE headquarters that monitors and supervises all the learning and teaching activities conducted in its campuses and centres countrywide. The teaching activities range from conventional students to distance learners. The IAE was chosen for being the oldest institution in the provision of adult education with many adult learners from different socio-economic backgrounds. The IAE is an autonomous institution established by Parliamentary Act Number 12 of 1975 under by the then Ministry of National Education, now the Ministry of Education, Science, and Technology. To-date, the Institute remains the premier Learning, Research and Training centre in Adult Education for Certificate, Diploma and Degree programmes as well as

Table 1. Distributions of Adult learners' Entrepreneurial Programmes Sample

Gender	Convention Students			ODL-September intake Students	Total
	BACE	BAECD	ODACE	ODACE	
Male	8(0.5)	59(3.4)	53(3.07)	528(30.6)	648(37.5)
Female	5(0.3)	112(6.5)	92(5.3)	869(50.4)	1,078(62.5)
Total	13(0.8)	171(9.9)	145(8.4)	1,397(81.0)	1,726(100)

The number in parentheses are percentages, BACE: Bachelor in Adult and Continuing Education, BAECD: Bachelor in Adult Education and Community Development, ODACE: Ordinary Diploma in Adult and Continuing Education.

Source: Field data 2022/2023

post-primary education learners. The IAE services have been extended to the grassroots level through regional centres established in 26 regions of Mainland Tanzania.

Using convenient sampling technique, the study generated a sample of 245 adult learners from a study population of 1,726 IAE learners whose programmes contained entrepreneurship skill modules as summarised in Table 1.

The sample size (n) computed based on Dillman (2000), who suggested that the sample size from a given population (N) is computed using the following formula:

$$(n) = \frac{[(N)(P)(P - 1)]}{(N - 1) \left(\frac{B}{C}\right)^2 + P(1 - P)}$$

Hence

$$(n) = \frac{[(1,726)(0.5)(1 - 0.5)]}{(1,726 - 1) \left(\frac{0.05}{1.96}\right)^2 + 0.5(1 - 0.5)}$$

$$(n) = 245$$

Instrumentation and Validation

Before field research, a pilot study preceded the main study with 100 questionnaires distributed to conventional adult learners at the IAE. In all, 91 duly filled out questionnaires were received, representing a return rate of 91 percent. After testing and analysis, the study used the Corrected Item-Total Correlations (CITCs) method to remove 12 questions that had accounted for a correlation coefficient of less than 0.5. The final questionnaire comprised 27 questions out of the 39 adopted questions. The study used a questionnaire with only closed-ended questions to collect data from the participants. The instruments in the current study were enlarged based on theoretical framework and relevant previous empirical literature review. To determine the respondents' reactions to EE, EA and IE, the study adapted 13, seven and seven instruments, respectively, from Amos et al. (2017) as shown in the Table 2.

A sample items for the construct EE covered the entrepreneurship course aimed to enhance the understanding of how to generate innovative ideas. Other dimensions for content included the Table 2. (Amos et al.,

2017), including having a Cronbach's α for EE 0.954 (see Table 3).

In the current study, the EE stands for the independent variable relating to EA or EI, which targeted understanding how much EE (module content and pedagogical approaches) offered to adult learners, and the influence of the adult learners' EA to trigger EI at the end of course. The construct was measured using a 5-point Likert scaling ranging from 1= Strongly disagree, 2=Disagree, 3=Neutral, 4= Agree, and 5 = Strongly agree by providing the respondents with 13 items relating to EE (module content and pedagogical approaches). For each statement/item, the respondents were required to circle an appropriate number within the scale. Previous researchers used this scale to predict the EE of students (Handayati et al.,2020; Amos et al., 2017). For this study, the independent variable identified good or poor module content and pedagogical approaches in the EE taught using Confirmatory Factor Analysis (CFA).

The dependent variable EI represents adult learners' courage toward risk taking, feelings and desire of whether they are eager to be engaged in entrepreneurship ventures—starting own business in the future (after learning completion). The study measured the EI of adult learners by seven items adopted from the study by Amos et al. (2017). A sample items for construct EI composed the first four items based on self-prediction and other three items based on desirability (Table 2). The construct EI was measured on a 5-point Likert scaling ranging from 1= Strongly disagree, 2=Disagree, 3=Neutral, 4= Agree, and 5 = Strongly agree by providing the respondents with seven items relating to adult learners' EI. For each statement/item, the respondents were required to circle a number within the scale. Several researchers used this scale to predict the EI of students (Handayati et al., 2020; Amos et al., 2017; Mahmood et al., 2019; Wang et al., 2021). The construct EI has a Cronbach's α 0.896 (see Table 3).

The last variable was an arbitrating variable: EA plays a mediating role between EE and EI, with a Cronbach's α = 0.826 (see Table 3). The variable EA plays a dual role (dependent and independent at the same time). It is a dependent and independent variable relating to the EE and EI, respectively. The variable was measured using seven items adopted from Amos et al. (2017). One of these items dedicated to Attitude to competitiveness states: "It annoys

Table 2. Adapted instruments from Amos et al. (2017)

Construct	Item	Assertive
Entrepreneurial Education (EE)	EEC1	The entrepreneurship course increases my understanding of generating innovative ideas.
	EEC2	The entrepreneurship course increases my understanding of financial preparation for entrepreneurial ventures.
	EEC3	The entrepreneurship course increases my understanding of market research for entrepreneurial ventures.
	EEC4	The entrepreneurship course enhances my ability to identify a business opportunity.
	EEC5	Entrepreneurship course enhances my skills to allocate resources (e.g. money, personnel, time)
	EEC6	Views of external speakers inspire my entrepreneurial mind.
	EEP1	The instructor frequently gave the class case studies
Entrepreneurial Attitude (EA)	EEP2	Guest speakers/lecturers were often invited to give lectures.
	EEP3	Group discussions were commonly used during lectures.
	EEP4	The lecturer would give the class individual project work
	EEP5	The lecturer would give the class group project work
	EEP6	The lecturer would use real-world situations (Simulation) in teaching.
	EEP7	There were frequent field visits to established and growing business.
	EA1	It annoys me when other people perform better than I do.
Entrepreneurial Intention (EI)	EA2	If you have high income, that is a sign that you have had success in your life.
	EA3	It is important for me to make a lot of money.
	EA4	I find working in stable and routinized environments boring.
	EA5	A career as an entrepreneur is totally unattractive to me.
	EA6	If I had the opportunity and resources, I would love to start a business.
	EA7	I would rather be my own boss than a secure job.
	EI1	I am ready to do anything to be an entrepreneur.
EI2	I will make every effort to start and run my own firm.	
EI3	I have the intention to start a firm someday.	
EI4	I have very serious thoughts of starting a firm	
EI5	I desperately want to work for myself	
EI6	The idea of owning my own business is very appealing to me.	
EI7	Working in my own business would be very personally satisfying.	

Table 3. Reliability and Validity Analysis

Constructs	Cronbach's α	AVE	Composite Reliability (CR)	EE	EI	EA
EE	0.964	0.728	0.896	0.861		
EI	0.982	0.652	0.946	0.412	0.868	
EA	0.935	0.626	0.921	0.168	0.312	0.824

EE: Entrepreneurial Education, EI: Entrepreneurial Intention, EA: Entrepreneurial Attitude, Values with diagonals are the square root of AVE, Value under diagonals are correlations: ($p < 0.001$)
Source: Field Data (2023)

me when other people perform better than I do". The other two items focused on the Attitude towards money. Nevertheless, one item was grounded on Attitude toward change stating: "I find working in stable and routinized environments boring". The last three items concentrated on the attitude towards entrepreneurship (see Table 2). The construct EA was measured on a 5-point Likert scaling ranging from 1= Strongly disagree, 2=Disagree, 3=Neutral, 4= Agree, and 5 = Strongly agree, by providing the respondents with seven items relating to adult learners' EA. For each statement/item, the respondents were required to circle an appropriate number within the scale. The questionnaire was distributed from August 2022 to January 2023.

The data were collected using both online survey distributed via e-mail and WhatsApp for Open and Distance Learning adult learners and self-administered surveys for conventional adult learners. This method was appropriate since it assured the greatest convenience and response rate. The researchers applied permission to access the information from adult learners at the IAE. Participation in this study was voluntary, the engaged adult learners were enlightened of their anonymity, and their participation was not connected with any material gain. It was about 95 percent of the questionnaire were collected from respondents and used for further data analysis.

The data collected were cleaned, coded and analysed using a quantitative approach. The structural model

Table 4. Confirmatory Factor Analysis (CFA)

Constructs	Items	Measurements	<i>std.β</i>	SE	Z	P
Entrepreneurial Attitude	EA1	It annoys me when other people perform better than I do.	0.876	-	-	-
	EA2	If you have high income, that is a sign that you have had success in your life.	0.941	0.600	19.202	***
	EA3	It is important for me to make a lot of money. I find working in stable and routinized environments boring.	0.882	0.581	18.201	***
	EA4	A career as an entrepreneur is totally unattractive to me.	0.810	0.581	18.201	***
	EA5	If I had the opportunity and resources, I would love to start a business.	0.904	0.608	19.002	***
	EA6	I would rather be my own boss than a secure job.	0.819	0.670	18.890	***
	EA7		0.820	0.692	18.030	***
Entrepreneurial Education	EE1C	The entrepreneurship course increases my understanding of generating innovative ideas	0.918	-	-	-
	EE2C	The entrepreneurship course increases my understanding of financial preparation for entrepreneurial ventures.	0.799	0.032	23.801	***
	EE3C	The entrepreneurship course increases my understanding of market research for entrepreneurial ventures.	0.882	0.331	22.602	***
	EE4C	The entrepreneurship course enhances my ability to identify a business opportunity.	0.804	0.039	22.661	***
	EE5C	Entrepreneurship course enhances my skills to allocate resources (e.g. money, personnel, time).	0.700	0.046	20.216	***
	EE6C	Views of external speakers inspire my entrepreneurial mind.	0.924	0.042	20.412	***
	EE7P	The instructor frequently gave the class case studies.	0.806	0.042	23.614	***
	EE8P	Guest speakers/lecturers were often invited to give lectures.	0.930	0.043	20.943	***
	EE9P	Group discussions were commonly used during lectures.	0.801	0.029	22.018	***
	EE10P	The lecturer would give the class individual project work.	0.922	0.043	23.821	***
	EE11P	The lecturer would give the class group project work	0.891	0.032	24.432	***
	EE12P	The lecturer would use real-world situations (Simulation) in teaching.	0.712	0.041	22.436	***
	EE13P	There were frequent field visits to established and growing business.	0.899	0.039	20.578	***
Entrepreneurial Intention	EI1	I am ready to do anything to be an entrepreneur.	0.870	-	-	-
	EI2	I will make every effort to start and run my own firm.	0.903	0.070	18.728	***
	EI3	I have the intention to start a firm someday.	0.862	0.074	18.611	***
	EI4	I have very serious thoughts of starting a firm	0.874	0.062	19.212	***
	EI5	I desperately want to work for myself	0.886	0.064	18.962	***
	EI6	The idea of owning my own business is very appealing to me.	0.867	0.063	19.432	***
	EI7	Working in my own business would be very personally satisfying.	0.874	0.060	18.981	***

*** Significant (p < 0.001)

Source: Field Data (2023)

assessed 5,000 bootstrapping methods using the AMOS 20.0 software package that facilitated the testing of the proposed hypotheses. The data were then subjected to confirmatory factor analysis (CFA) and structural equation modelling, with the results helping to answer the research questions of the study. The software was used to cater for the dual role of the moderator variable (EA).

RESULTS

The study used the statistical software package AMOS 20.0 to analyse the validity and reliability of the three potential variables that are EE, EA, and EI. From the reliability analysis of the questionnaire, the Cronbach α coefficient and composite reliability (CR) of the three construct dimensions have been presented in Table 3 regarding the computing of the validity test, the values of factor loadings. Table 4 presents the confirmatory factor analysis (CFA) entailed using the AMOS 20.0, software package and the findings.

Moreover, results in Table 3 indicate that three measurement constructs have a reasonable reliability results because all the values of Cronbach's α exceeded 0.70 threshold and the composite reliability exceeded of Hair et al.'s (2013, 2020) recommended benchmark. In this regard, the variable to achieve the reliability when the composite reliability (CR) value is higher than 0.70, and Cronbach's Alpha (α) value needs to be greater than 0.70. The results indicated that the (α) for EE, EI and EA are 0.964, 0.982 and 0.935, respectively. Similarly, the CR values of the EE, EA, and EI variables are 0.896, 0.946 and 0.921 greater than 0.70, respectively.

In the meantime, the most conventional approach to assessing discriminant validity is Fornell-Larcker (1981), and criteria (Ibrahim and Shariff, 2016). From this perspective, the discriminant validity was assessed by comparing the square root of AVE for each construct with the correlations presented in the correlation matrix Table 3. The validity test displays the values of the average variance extracted (AVE) were satisfactory (greater than 0.5) and ranged from 0.626 to 0.728. The square roots of AVE were greater than the values of its corresponding rows and columns. Alternatively, the square root of AVE value above the diagonal is greater than the correlative coefficient between the dimensions below the diagonal, indicating that the scale has a good discrimination validity (Table 3). Definitely all the variables achieve the reliability criteria, implying that they fulfilled the reliability test. In addition, all the items factor measured loadings ranged from 0.700 to 0.941 (all $p < 0.001$). Table 4 indicates that the scale has a good convergent validity:

For the goodness-of-fit index, the results have been presented in Figure 2, which indicates that,

$$\chi^2 = 832.620, \frac{\chi^2}{df} = 2.433, GFI = 0.868, CFI = 0.946, TLI = 0.944, IFI = 0.941, RFI = 0.890, NFA = 0.942, RMSEA = 0.060 \text{ and } SRMR = 0.047$$

Therefore, the values of measurement model constructs were all satisfactory to allow the structural model analysis

to be conducted.

Structural Model

The structural model was assessed using the 5,000 bootstrapping method with the aid of the AMOS software. The findings based on the structural model are as presented in Figure 2. The figure affirms the satisfactoriness of all the results as previously describe under the "Measurement Mode" section. Subsequently, the researcher tested the proposed hypotheses based on the study findings presented in Table 5 and Figure 2.

Entrepreneurial Education and Intention

The study findings illustrate that the EE taught (module content and pedagogical approaches) had a direct positive and significant influence on adult learners' EI ($\beta = 0.166$, $Cr = 4.132$, $p < 0.05$) (Table 5). As such, we accept H_1 : *Entrepreneurial education has a significant influence on adult learners' entrepreneurial intention*. The findings imply that these variables tend to vary directly (i.e., as the EE taught is better in terms of its module contents and pedagogical approaches used by lecturers) resulting in the progressive development of adult learners' EI (venture creation).

Entrepreneurial Education and Attitude

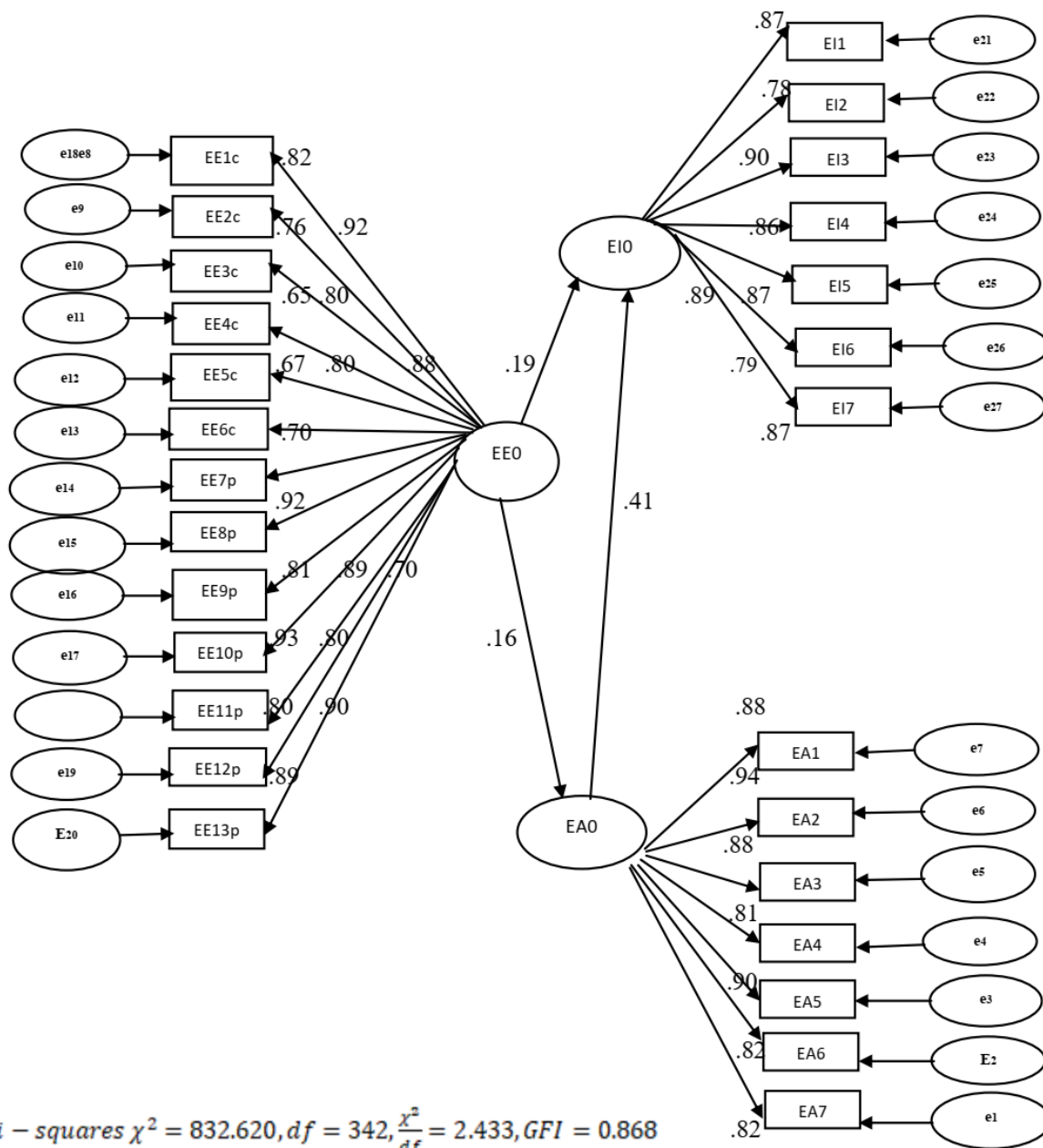
The study found that EE taught (module contents and pedagogical approaches) had a direct positive and significant influence/effect on the EA ($\beta = 0.186$, $CR = 3.721$, $p < 0.001$) (Table 5). Therefore, the study accepted H_2 : *The adult learners' Entrepreneurial Education has a significant influence on entrepreneurial attitude*. The findings imply that the variables tend to vary directly, for example, the better EE module content taught and pedagogical approaches used by lecturers increases the chance for adult learners' attitude building up toward entrepreneurship.

Entrepreneurial Attitude and Intention

Further analysis indicates that the adult learners' EA had a direct positive and significant influence on EI ($\beta = 0.306$, $CR = 4.240$, $p < 0.05$) (Table 5). The findings support and affirm H_3 : *The adult learners' entrepreneurial attitude is positively related to entrepreneurial intention*. The findings suggest that the variables tend to vary (i.e., the higher EA among the adult learners is associated with high chance of EI (venture creation/starting own business)).

EA arbitrating influence between Entrepreneurial Education and Intention

Consistently, testing for the indirect influence of EA in the relationships between EE and EI, the Bootstrap test applied at a 95% confidence interval with 5,000 bootstrap samples. Structural equation modelling (SEM) in AMOS version 20



Chi - squares $\chi^2 = 832.620, df = 342, \frac{\chi^2}{df} = 2.433, GFI = 0.868$

CFI = 0.946, TLI = 0.944, IFI = 0.941, RFI = 0.890, NFI = 0.942

RMSEA = 0.060, SRMR = 0.047

Figure 2: Structural Model

offers indirect influence tests using approaches to determining significance. The researcher followed the guidelines by Biesanz et al. (2010), and Hayes and Scharkow (2013) determined whether the indirect influence was significant. The results presented in Table 6 indicate that EA had a positive and significant indirect influence on the relationship between EE and EI ($\beta = 0.115, p < 0.01$) Table 6. These results validate H₄:

The adult learners' entrepreneurial attitude has a significant arbitrating influence between entrepreneurial education and intention.

DISCUSSION

Regarding H₁, the findings illustrate that the EE taught (module content and pedagogical approaches) has a direct

Table 6. Indirect Effects

Path coefficient and Hypotheses	Std Estimation	SEM - Bootstrapping 5,000 samples with 95% Confidence interval				P-value
		Bias correlated percentile		Percentile		
		Lower	Upper	Lower	Upper	
Standardised direct Influence EE → EI	0.189**	0.066	0.335	0.051	0.311	0.000
Standardised indirect Influence EE → EA → EI	0.115**	0.060	0.412	0.142	0.432	0.000

EE: Entrepreneurial Education, EI: Entrepreneurial Intention, EA: Entrepreneurial Attitude, SEM: Structural equation modelling, Standard Significant **p < 0.001

Source: Field Data (2023)

significant positive influence on EI of adult learners ($\beta=0.166$, CR = 4.132, $p < 0.05$). The results in Table 5 supported hypothesis H₁: *Entrepreneurial education has a significant influence on adult learners' entrepreneurial intention*. Moreover, this finding is similar to results from previous studies (Cui et al., 2019; Handayati et al., 2020) who found that EE provided basic knowledge on entrepreneurship that made students capable in the new business startup process. The results further provide new insights into Tanzania's EE, which helps adult learners to acquire appropriate knowledge and experience on how to initiate and manage a business venture after graduation. These results also indicate that the respondents strongly agreed with the statements regarding entrepreneurship education at the IAE. Also, the results were interpreted to mean that the EE course content and pedagogical approaches are adequate and capable of creating EI. Thus, the EE enabled the adult learners, specifically in the course content (in order of each aspect contribution) as follows: To influence the adult learners' entrepreneurial mind through views of external speakers; and to foster their capacity of both generating innovative ideas and conducting market research for entrepreneurial ventures. Moreover, the programme course content tends to enhance the adult learners' ability to identify business opportunities, understanding both financial preparation for entrepreneurial ventures and skills for allocating resources (e.g. money, personnel, time). The EE in terms of pedagogical approach boosts the adult learners' IE through guest speaker/lecturer invitations, class individual project work, frequent field visits to established and growing businesses, group project work, class case studies, group discussions during lectures and real-world situations (simulation) in teaching.

The study findings are also congruent with Saifullahi's (2020) research on the relationship between EE and EI, whose result found that ($\beta=0.335$; $t=4.772$; $p=0.000$). In this regard, the more the university students had access to quality EE, the more likely they were to have an intention to venture into a new business venture, whose prospects increased by 34 percent. In addition, the current study

support previous findings in the Malaysian context, where Hanieh et al.'s (2020) study indicated a direct relationship between the EE and EI, path coefficient value is 0.359; CR is 6.441 with a p-value 0.000. Thus, the EE positively influences EI. The current study's findings also supports Amos et al. (2017) whose study found a positive and significant relationship at ($\beta = 0.365$, $t = 6.019$, $p < 0.05$) between entrepreneurship education and entrepreneurial intention whose effect was direct. The implication is that entrepreneurship education course content is adequate and can create entrepreneurial intentions, hence making the entrepreneurship education curriculum content on offer effective and comprehensive enough to impart "know what", "know who", "know why" and "know what" skills in the context the Technical and Vocational Education and Training (TVET) institutions of Kenya.

In addition, the findings of the current study concur with Ahmed et al. (2017) who established a direct impact of the EE on EI. Furthermore, our findings concur with those of Wang et al. (2021), Westhead and Solesvik (2016), and Sun et al. (2017) whose studies in the Asian and Western contexts found that EE effectively drove the EI of students for them to become entrepreneurs. Implicitly, EE had a direct positive and significant influence on EI. The study findings also suggest that an individual's subjective attitude/perceptions towards one's willingness to start one's own business depends on the quality of the module content and pedagogical approaches the lecturers applied. Indeed, the better the module content and pedagogical approaches in use, the better the adult learners' EI inculcated; otherwise, the reverse is also true. Despite the congruence in the results observed from the empirical trend; however, there is no perfect module content and pedagogical approaches. As such, the entrepreneurial curriculum content and pedagogical approaches should be based on the learning needs of the adult learners.

Meanwhile, the study has established that the EE taught (module content and pedagogical approaches) had a direct positive and significant bearing on the EA ($\beta = 0.186$, CR = 3.721, $p < 0.001$). These findings support hypothesis H₂ to the effect that the direct positive influence of the EE

introduced in the IAE programme in terms of the content (competencies, knowledge, and skills) and pedagogical approaches tends to raise the EA among adult learners. The study findings also suggest that an individual's subjective attitude towards starting a business depends significantly on the content and pedagogical approaches applied in an entrepreneurial course. Indeed, the better the module content and pedagogical approaches used, the better the adult learners' EA; otherwise, the reverse is also true. Furthermore, the study findings reinforce the prior findings by Amos et al. (2017) whose results suggest that entrepreneurship education explains 15.9 percent of the variance in attitude and the standardized coefficients show that the effect of attitude is positive and significant ($\beta = 0.398$, $t = 6.675$, $p < 0.05$).

In addition, the findings support those of Kisubi et al. (2021) who demonstrated that entrepreneurship education significantly affects entrepreneurial attitude ($\beta = .482$, $p < .001$) among undergraduate students in Uganda. Moreover, the current study findings are consistent with the earlier works of Hattab (2014) who found that EE has a positive impact on the students' EA. Similarly, Tshikovhi and Shambare (2015) found that high level of entrepreneurship education among South African students created favourable attitudes towards entrepreneurship. Other studies to have had come up with similar findings include Alharbi et al. (2018), Fayole and Gailly (2015), and Nabi et al. (2017).

Furthermore, the results of the current study provide new insights into adult learning institutions' EE, which support the adult learners' acquisition of knowledge and skills on how to create entrepreneurial attitude towards creating business ventures. This finding also supports the theoretical contribution of the TPB (Ajzen 1985, 1991), premised on entrepreneurial behaviour being explained in terms of the level of EI related to the behavioural intention, attitudes of entrepreneurs (attitude and feelings or desire toward the behaviour). In this case, the EE taught tend to affect the attitudes or feelings towards the EI. Since attitudes or feelings of adult learners seemed to change over time with the acquisition of knowledge, learning outcomes affected entrepreneurial intent (Hu and Ye, 2017). Thus, EA can be well thought-out as a wealthy aspect enabled by EE, which can stimulate the growth of EI among adult learners by enhancing self-confidence, skills and knowledge about venture formation within EE (module) taught.

Further analysis indicate that the adult learners' EA had a direct positive and significant influence on EI ($\beta = 0.306$, $CR = 4.240$, $p < 0.05$) (Table 5). This outcome validates H_3 : *The adult learners' entrepreneurial attitude is positively related to entrepreneurial intention*. The study findings suggest a positive influence of the adult learners' EA as an important cog in fostering individual confidence in EI. To further promote EI among adult learners their EA require ample attention. Specifically, the lecturers and module developers should understand the needs of their learners (adult learners-centred). The current study findings are congruent

with those found in Saifullahi (2020) whose results on EA and EI yielded ($\beta = 0.329$; $t = 5.311$; $p = 0.000$). The results of the study indicate that the university students increasingly developed a positive attitude towards entrepreneurship, their EI increased by 33 percent. Generally, Saifullahi (2020) indicates that the EA has 14 percent influence on EI.

In addition, the current study findings concur with Amos et al.'s (2020) study that found a significant relationship between attitude and EI ($\beta = 0.434$, $t = 7.398$, $p < 0.05$). Therefore, EA can be well thought out as a wealthy aspect endowed by individuals, which can arouse the growth of EI among adult learners by enhancing self-confidence. Moreover, the current study findings support the work of Shi et al. (2020) who asserted that EA is the most important factor that affects EI rather than creativity, followed by the perceived behavioural control, and then the subjective norms. Moreover, the findings are in line with Nursyirwan et al. (2022) who found a significant impact on the attitudes towards entrepreneurship with EI. In other words, the higher the EA, the more the EI would increase.

Nevertheless, the current study findings are further congruent with those of Ayalew and Zeleke (2018), whose results indicated a statistically significant relationship between EA and self-employment intention using the Hosmer-Lemeshow (HL) goodness fit statistic with chi-square = 7.545 at 5% level (i.e., P value = 0.475). In addition, the current study findings are congruent with those of Kisubi et al. (2021) whose findings revealed that EA significantly affected EI ($\beta = .623$, $p < 0.01$). On the other hand, the current study findings contradict those of Zhang et al., (2015) who had confirmed that EA failed to generate a significant impact on EI.

Finally, the current study indicates that EA had a positive and significant indirect arbitrating bearing on the relationship between EE and EI ($\beta = 0.115$, $p < 0.001$), which validates H_4 : *The adult learners' entrepreneurial attitude has a significant arbitrating influence between EE and EI*. Of course, the findings suggest that notwithstanding the EE pointing to inculcating EI intellect among adult learners, they should also be instilled with a constructive EA capable of further enhancing the existing relationship between EE and EI. Therefore, individuals who acquired a higher level of EA can be predisposed to have an entrepreneurial mindset that could result in initiating new ideas in the form of business venture creation. This finding concurs with prior researchers such as Anwar et al. (2022) whose findings revealed that the EA had positively and significantly moderated relationships between EE and EI with a standardized coefficient interaction effect) at 0.142. In addition, the study findings concur with those of Murad (2019) who established that EA had a positive and significant mediating role between the EE, motivation and career intention of the Jiangsu University students.

Conclusion and Recommendations

Overall, in the provision of entrepreneur education (EE),

subjecting learners to a broad range of diverse learning experiences requires different classroom pedagogical approaches, which also happen to be particularly successful drivers of entrepreneurial intentions (EI) among adult learners in the context of Tanzania. In this endeavour, entrepreneurial attitude (EA) plays an arbitrative role. In essence, enhancing the adult learners' EA levels could raise their level of self-confidence and awareness, which then stimulates their EI. Thus, the intended entrepreneurial skills taught in the IAE have to help build the capacity of adult learners to identify opportunities and transform them into meaningful propositions. In this regard, this research has highlighted the pivotal role of Ajzen's (1985 and 1991) three TPB attitude variables—attitude toward the behaviour, subjective norms, and perceived behavioural control—play in affecting EI. It follows, therefore, that EE changes an individual's intention under the arbitrative effect of EA related to entrepreneurship, particularly among adult learners.

Significantly, the study findings suggest the following. To begin with, the results underscore well-lit the significance of EE and EA as predictors of the adult learners' intention to participate in entrepreneurial venture formation in their post-graduation period. As such higher learning institutions, specifically adult learning institutions, should support adult learners in developing a positive EA through the provision of more empowering EE content.

Secondly, the study has offered some practical and theoretical implications for module developers to design and integrate module content and pedagogical approaches that are practical-oriented and, conveniently, adult learner-centred. The result from hypothesis H₄ implies that EE influences EI through increased positive EA among adult learners. Because of this moderating influence of EA, module developers should further consider incorporating experienced guest speaker/lecturer invitations, class individual project work, frequent field visits to established and growing businesses, group project work, class case studies, group discussions during lectures and real-world situations (simulation) in their pedagogical approaches in a bid to further foster and enrich the EA.

Thirdly, the adult learning institutions must continue enhancing the content of EE taught by expanding the teaching materials frontiers in entrepreneurship. Subsequently, enhanced interactions pertaining to EE could boost the adult learners' EA. Furthermore, the Tanzania government should create a better entrepreneurial environment for higher learning institutions, specifically adult learning institutions. It could do so by setting up a social entrepreneurship support programme, organising, soliciting and granting business capital, and allocating free business zones where IAE graduates and other entrepreneurs can easily set up startups in business ventures without undue conditions that could otherwise bog them down. Addressing these issues in a concerted and sustained manner can further develop adult learners' attitude toward competitiveness, entrepreneurship, money, and change.

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Ethical Considerations

The Institute of Adult Education granted ethical research clearance for the study and the use of the required data vide letter with reference number: IAE/CA.462/575/38.

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Data availability

The data used in this study are available from the corresponding author upon reasonable request. However, the data are not available for public consumption because of the need for anonymity for the sources of information to avoid compromising the privacy and identity of the respondents.

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