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Article

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Entrepreneurship education in TVET institutions and entrepreneurial intentions of female students in Ghana: the social support factor

Abigail Padi^{1*}, Prof. Smile Dzisi² and Prof. John Frank Eshun^{1,3}

Abstract: Technical and vocational education and training (TVET) is increasingly engaging the attention of governments in both developing and developed countries as a mechanism through which skilled graduates are produced for self-employment and for the labour market. This study was undertaken to examine the objective, pedagogy, and assessment procedures of the programme and its effect on entrepreneurial intentions of female students in Ghana, taking into consideration the moderating role of social support systems. The research design used was cross-sectional survey with concurrent mixed methods approach. The sample was 376. A questionnaire and an interview guide were the instruments used for data collection. The quantitative data were analysed using Hayes moderation process analysis while the qualitative data were analysed manually using open coding. The study revealed that entrepreneurship course is able to influence female students' entrepreneurial intentions. Nevertheless, this influence becomes stronger when the students are exposed to social support systems. It is recommended to management of the universities to sustain the course and also periodically review the course by ensuring that it is more practical and need-centred. The government through its agencies can also put in place effective and targeted social support structures that will help starters to take-off with ease.

Subjects: Business, Management and Accounting; Assessment; Sustainability Education, Training & Leadership

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Keywords: Entrepreneurial intentions; Entrepreneurship education; Social Supports; Technical universities; TVET

1. Introduction

Globally, the concept of entrepreneurship has been accepted to be the strongest economic force the world has ever witnessed (Kuratko, 2005). Entrepreneurs throughout the world are engaged in proactive, initiative and innovative activities which are changing the developmental trajectories of nations (Gouws, 2002; Yangben & Seniwoliba, 2014). This makes the entrepreneur a functional person in the economy and the society at large. Quite apart from the personal social roles entrepreneurs play in the economy, they also help individuals and businesses to work more effectively and efficiently through their innovative ideas, which in effect boost performance and business returns. Increased performance and returns will in turn positively impact economic growth and per capita income. Also, entrepreneurship helps in combating unemployment (Alamineh, 2020; Donani et al., 2021; Mensah, 2012). This may be the reasons behind developed and developing countries investing in entrepreneurship education to produce more entrepreneurs.

Entrepreneurship education is seen as one of the tools that can be used to boost the economic contribution of entrepreneurs to global prosperity and development, particularly among women. In all industrialised countries, women own approximately 30 percent of small businesses (Davis, 2012). This may mean that one in ten women in the world is self-employed. Within the context of Africa, we owe much of our food production to women who by large proportions are microbusiness owners. For example; women produce 80 percent of the food in sub-Saharan Africa; between 50 and 60 percent in Asia and 30 percent in Latin America (Yu, 2011). These businesses kindle economic growth and create direct and indirect employment for others. Therefore, there is the need for nations to continue to invest in entrepreneurship education, particularly among women to help enhance their socio-economic status in the society.

In most developing countries such as Ghana, one of the very powerful arguments put forward for the promotion of entrepreneurship education, particularly in Technical and Vocational Education and Training (TVET) institutions, is the belief that entrepreneurship development is the solution to lack of creativity, industrialisation and youth employment in these countries (Kusi-Mensah, 2017; Owusu-Ansah & Poku, 2012). In these countries, youth unemployment, particularly among females (30%), constitutes a formidable challenge for national governments to deal with and poses a lot of socio-economic problems to families and the state (Braithwaite & King, 2006; Padi et al., 2022; Yangben & Seniwoliba, 2014).

Tertiary institutions in Ghana continue to perform their function of training students for the labour market. However, the economy continues to fail in giving employment opportunities for these graduates, a situation leading to significant aggregate unemployment in the country (Kusi-Mensah, 2017). According to Aryeetey (as cited in Owusu-Ansah & Poku, 2012), as many as 50 percent of graduates from various tertiary institutions in Ghana do not find jobs for two years after their national service, and 20 percent of them will not find jobs for three years. In Ghana, graduate unemployment continues to rise, particularly among university graduates. These reasons may be the driven force for the implementation of entrepreneurship education course in our universities to help produce more entrepreneurs or self-employed graduates.

There are a number of reasons for the high unemployment statistics of graduates of tertiary institutions. Over the past decade, the educational sector in Ghana has experienced a phenomenal growth in the number of non—TVET institutions. Simultaneously, the adoption of corporate governance practices and technology have led to the down-sizing of staff in a number of enterprises in Ghana (Donani et al., 2021; Mensah, 2012). According to Owusu-Ansah and Poku (2012), the combined effect of graduate glut on the labour market, and the limited chances of entry into

existing enterprises have had a catastrophic impact on young graduates from the universities and the polytechnics who are seeking employment.

Evidence from the literature seem to suggest that there is an apparent mismatch between the capabilities being developed in the graduates of our tertiary institutions and the actual manpower needs of developing countries (Davis, 2012). In examining the drivers for youth unemployment challenge in Africa, Baah-Boateng (2016) found that a demographic youth protuberance and poor economic growth from both supply and demand sides of the market are the key drivers of youth unemployment in Africa. The findings that emerged from Baah-Boateng's (2016) study suggest higher youth employment rates among females than males and a higher concentration in urban than rural areas. These findings confirm the assertion that youth unemployment remains a major political and socioeconomic challenge in Africa.

The reality is that tertiary institutions in Ghana are producing graduates who do not have the requisite knowledge, skills and competencies needed in the entrepreneurial world and there are no meaningful jobs in the economy (Owusu-Ansah & Poku, 2012). Also, the few jobs that are available do not match the acquired skills of the graduates that the institutions are producing (Kusi-Mensah, 2017). This calls for the need to pay more attention to entrepreneurial education in our technical universities and other TVET institutions to produce young entrepreneurs, starters and new born globals, particularly females.

Similarly, the literature seems to suggest that the lack of entrepreneurship education in the curricula of tertiary institutions should also be seen as a major contributory factor to the high unemployment among graduates (Ibrahim et al., 2015; Peterman & Kennedy, 2013). This is so because entrepreneurship education helps to orient the youth to imbibe meaningful levels of entrepreneurship intentions and also makes it possible for the youth, particularly females, to acquire the requisite skills to be self-employed without undue reliance on an over-burdened government to create jobs for them (Gavigan, 2021; Kusi-Mensah, 2017).

As a result of the perceived importance of entrepreneurship in the economies of societies, especially its ability to reduce unemployment, interest in entrepreneurship education is on the increase. The government of Ghana continues to call for educational systems that will help students possess entrepreneurial competencies to enhance their employability and prepare them for self-employment. It is now mandatory for all Higher National Diploma (HND) and first-degree students in Ghanaian technical universities to take an entrepreneurship course. The aim of these interventions was to help boost entrepreneurial intentions and skills of the graduates to make them more employable. Also, to create entrepreneurial awareness, particularly among female students, so they would consider self-employment as an option in their career developments. This is so because when you make a woman more productive and independent, you are indirectly increasing the socio-economic status of tomorrow's family (Gavigan, 2021).

Upon all these interventions by the institutions and the government, records still show large numbers of graduates still come out of our universities and polytechnics, where entrepreneurship courses exist, in search for employment. This situation in Ghana is making policymakers and researchers to doubt the effectiveness and impact of these programmes on the socio-economic well-being of females (Gavigan, 2021; Kusi-Mensah, 2017). Also, it seems there is little research to assess entrepreneurship education in Ghana, particularly among TVET institutions such as technical universities; not to mention the entrepreneurship intentions of females and the social support systems available to them. This may mean that, there is some level of evaluation deficit in entrepreneurship education.

Much of the literature on entrepreneurship refers to social support as a potential entrepreneur's beliefs and expectations about the assistance and advice that he/she may receive from his/her social groups (Rani, 2012; Sahban et al., 2014). Social support is supposed to help and assist the

potential entrepreneur in setting up a business or running its activities (León et al., 2007). Social supports are building blocks for social and psychological integration of entrepreneurs in the society. According to Sahban et al. (2016), there is a positive relationship between social support system and student's inclination toward entrepreneurship. In relation to gender, Sahban et al. (2016) posit that there is a difference between male and female students in terms of entrepreneurial intention, in favour of males.

2. Purpose of the study

The purpose of the study was to examine the entrepreneurship education in TVET institutions and its influence on entrepreneurial intentions of female students in Ghana, taking into consideration the moderating role of social support factors. Based on this purpose, the following objectives were formulated to guide the study:

- (1) Examine the entrepreneurship education programme (objectives, pedagogy and assessment) of TVET institutions in Ghana.
- (2) Assess the entrepreneurial intentions of females after completing the programme.
- (3) Determine the moderating role of social support factors on the influence entrepreneurship education have on females' entrepreneurial intentions.

3. Conceptual framework

The concept of entrepreneurship can be seen as the process through which individuals or teams create value by bringing together unique packages of resource inputs to exploit opportunities (Alamineh, 2020; Gavigan, 2021; Kuratko, 2005). This can occur in any organisational situation and culminates in a variety of possible outcomes including new enterprises, products, services, processes, markets and technology (Peterman & Kennedy, 2013). It can be seen as a way of thinking, reasoning and acting that is opportunity obsessed, holistic in approach and leadership. According to Kuratko (2005), entrepreneurship results in the creation, enhancement, realisation and renewal of value, not just for owners, but for all the participants and stakeholders. At the core of the entrepreneurship process is the creation and recognition of opportunities.

The argument of the study is underpinned by Theory of Planned Behaviour (TPB) as propounded by (Ajzen, 1991) and discovery and opportunity theory of entrepreneurship. The theory of planned behaviour links beliefs to behaviour. According to La Barbera and Ajzen (2020), the theory posits that behaviours are immediately determined by behavioural intentions, which in turn are determined by a combination of three factors: attitude, subjective norms, and perceived entrepreneurial behavioural control.

TPB assumes that individuals make logical, reasoned decisions to engage in specific behaviours by evaluating the information available to them (Ajzen, 2012). The performance of a behaviour is determined by the individual's intention to engage in it, influenced by the value the individual places on the behaviour, the ease with which it can be performed and the views of significant others, and the perception that the behaviour is within his/her control (Willis et al., 2020). In turn, both attitudes and subjective norms are influenced by evaluations, beliefs, and motivation formed through one's unique individual environments. This means female entrepreneurial intentions, attitudes and behaviours are influenced by their appraisal of the entrepreneurship education and the social support that is available to them.

One of the arguments of the theory is that performance of a behaviour is a joint function of intentions and perceived behavioural control (Ajzen, 1991; Bosnjak, Ajzen & Schmidt 2020). Specifically, in explaining further the argument of TPB, Ajzen (1991) proposed three kinds of beliefs, namely, behavioural beliefs, which are assumed to influence attitudes towards the behaviour; normative beliefs, which constitute the underlying determinants of subjective norms; and control beliefs, which provide the basis for perceptions of behavioural control.

However, the intentions become stronger when more opportunities are discovered or created as indicated by discovery and opportunity theory of entrepreneurship. Thus, opportunities exist objectively independent of female entrepreneurs. This calls for the need to design appropriate social support interventions to help enhance female students' entrepreneurial intentions.

Schumpeter (as cited in Ibrahim et al., 2015) looks at entrepreneurship as innovation and not imitation. An innovator can be seen as an economic and social leader who does not care much about economic profits and only joy she/he gets from being an innovator and being a server to her/his society. This argument drives TVET institutions to continue to create more innovators for the society to ensure continuous socio-economic growth and development. The entrepreneur moves the economy out of the static equilibrium.

The joy of carrying through innovations is the primary motive, the acquisition of social power a subsidiary to it. The entrepreneur is not (necessarily) the one who invents new combinations but the one who identifies how these new combinations can be applied in production. This line of reasoning implies that a business owner is considered an entrepreneur only if he/she is carrying out new combinations. The entrepreneur moves the economic system out of the static equilibrium by creating new products or production methods thereby rendering others obsolete. This is the process of "creative destruction" (creating uncertainty) which Schumpeter saw as the driving force behind economic development (Ibrahim et al., 2015).

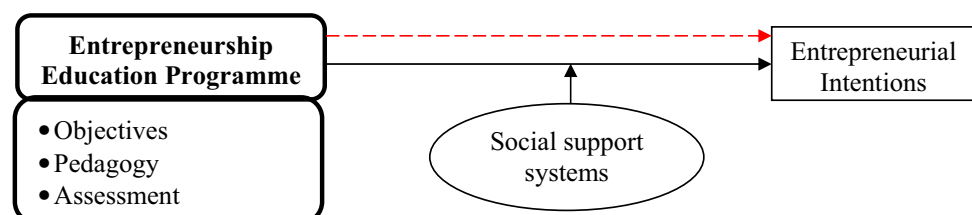
The central theme of the assumptions guiding this study is that intention is the best predictor of behaviour. Therefore, if trained females are able to develop positive intentions toward entrepreneurship they will be in a better position to want to become innovators. However, when there are meaningful network of people (friends, family, and peers) that these trained women can turn to for emotional, social, economic and practical supports, it will help in gingering their drive to become innovators. The argument is depicted in Figure 1.

4. Authors construct, 2022

Figure 1 shows the linkages between entrepreneurship education programme, social support systems and entrepreneurial intentions. The independent variable, entrepreneurship education programme, is made up of three facets: objectives, pedagogy and assessment procedures used in the programme. The dependent variable was entrepreneurial intentions while social support systems serve as moderator.

The argument, as presented pictorially in Figure 1, is that when females are exposed to quality entrepreneurial education programme that is practically oriented, they are likely to develop positive entrepreneurial intentions that will make them innovators. However, this influence becomes real and strong when they have strong and meaningful social support systems. That is, when they have friends, family, and peers who are in the position and are ready to help them emotionally, financially, and economically to start a business or develop their innovative ideas. This intervention will help enhance the positive influence entrepreneurship education programme have on entrepreneurial intentions of female students in the various technical universities in Ghana.

Figure 1. Conceptual framework of the study.



5. Research methodology

The ontological and epistemological orientations of the study were based on pragmatism. The current study saw the reality on the part of students and lecturers of TVET institutions as socio-psychological constructions that form a complex interconnected whole. Thus, understanding such social reality requires an understanding of the context in which that reality is constructed and also from the general perspective from which the society agrees to such reality (Patten 2018). This means, the study combined both the positivism and naturalism paradigms to understand a social reality, which is entrepreneurship education and entrepreneurial intentions.

The adoption of both paradigms created room for the researchers to use both deductive and inductive approaches concurrently because of the contextual nature of social phenomena and the multiple ways in which reality is constructed by students and staff of TVET institutions. Therefore, the position of the study on truth and reality as explained above through engagement with the literature influenced the adoption of the mixed methodology approach for this study.

Since the study focused on addressing an issue in an area where there has been relatively little research, and it also involves a survey of students and staff views on the issues, situations, and processes, the researchers deemed it appropriate to use the concurrent triangulation mixed methods design to triangulate the data.

There has been a growing interest on the part of business researchers concerning concurrent triangulation mixed-method design to collect and analyse data for legitimise knowledge claims (Creswell & Creswell 2018). Using this design made it possible for the researchers to use the qualitative data to confirm, cross-validate, or confirm the quantitative data. Quantitative and qualitative data were collected concurrently and later compared to determine convergence, differences, and combinations. According to Creswell and Creswell (2018), concurrent triangulation mixed methods design is a type of mixed methods design that collects qualitative and quantitative data simultaneously in one phase. This approach, according to Gravetter and Forzano (2018), normally uses the qualitative data to confirm or disconfirm the quantitative data and also to fill the gaps left by the quantitative data, even though both categories of data are collected at the same time. Both data had equal weight and are mixed upon integration. That is data triangulation technique.

Using this design, the researchers were able to overcome the weaknesses in a quantitative study with the strengths of a qualitative study (Creswell & Creswell 2018). The mixed methodology has an array of strengths that appeal to many researchers. To begin with, it can help blend different approaches by allowing the researcher to design research questions within the context and parameters of the study (Cohen et al., 2018). The adopted design again helped the researcher to triangulate each of the faces of the data into a third phase where quantitative data provided general patterns and width while qualitative data reflected upon experience and depth of the study. In addition, this design created room for the findings from the qualitative data to help contextualise and enrich the quantitative findings, increase validity in the interpretation of the data, and generate new knowledge (Creswell & Creswell 2018).

Furthermore, using this design helped the researcher to understand the topic area in greater depth, increase confidence in the findings, and provide more evidence while offsetting possible shortcomings from using a single approach. The adopted design again created room for the researcher to study the phenomena in their natural settings to make sense of or integrate the phenomena in terms of the meanings the subjects give to them. Another justification for using this design was developed, which highlights the need to use the results acquired from one method to either inform or develop the contrasting method (Gravetter & Forzano, 2018).

A mixed-method study answers both issues. Overall, the use of the concurrent triangulation mixed methods design was justified because it provided a comprehensive picture of staff and

student views on the study constructs. However, it is a relatively laborious and time-consuming method.

6. Population, sample and sampling procedure

The target population was all HND students for the 2021/2022 academic year. However, the accessible population was final year female students of three technical universities (Tamale, Kumasi and Takoradi Technical Universities), who have gone through the institutions' entrepreneurship course, and are in their final year. These universities were considered because they are the premium technical universities in the three zones in Ghana: northern, middle and southern zones. Available figures from the Admissions and Records Office of the three institutions put the target and accessible populations at 24,406 and 9,031 respectively. Table 1 shows the population and sample distribution of the subjects.

The sample used for the study was 376, made up of 373 final-year female students and three lecturers. The sample used was based on the recommendation of Krejcie and Morgan's (1970) table for determining sample size for a given population. In order to ensure fair distribution, the proportionality principle (4.13%) was used to select a sample for each university. The various technical universities were grouped into three clusters: northern, middle and southern zones. Each university was selected from a zone purposively.

Emphasis was on universities with large number of enrolled students. In relation to the respondents, the lottery method of simple random sampling technique was used to select them. This procedure created room for equal chance to be given to all the final-year female students. In addition to the final-year female students from each of the universities, three lecturers, one from each university, were also selected purposively. These lecturers were selected because they teach entrepreneurship in their respective institutions, and are in a better position to provide further clarification regarding the entrepreneurship course.

7. Data collection instruments, procedure and analysis

A self-developed questionnaire for the students and an interview guide for the lecturers were the instruments used for the data collection. The questionnaire was made up of 30 items while the interview guide was made up of eight items, all based on the objectives of the study. The questionnaire was pre-tested at Cape Coast Technical University using 45 final-year female students. The choice was based on the fact that the university shared similar characteristics with the three universities used. The reliability co-efficient of the questionnaire was 0.793.

To gather data from the sampled individuals, permission was sought from management of the universities. The consents of the respondents were sought individually using the introductory part of the questionnaire. Participants were informed about the purpose of the research and what objective it sought to achieve. They were encouraged to feel free and air their views as objectively as possible and that they have the liberty to choose whether to participate or not. They also had the option to withdraw their consent at any time and without any form of adverse consequence. Anonymity and confidentiality were guaranteed and the research did not cause harm or mental stress to those who chose to participate. An organisational entry protocol was observed before the data were collected. In order to protect the privacy of participants, especially by not revealing identities or any identifying characteristics, Pseudonyms were used in reporting on participants views. Pseudonyms are often used to de-identify participants and other people, organizations and places mentioned in interviews and other textual data collected for research purposes. The researchers adopted the Use of pseudonym because the focus on the study site was significant since the interviews were done from three different TVET institutions.

The questionnaire print-outs were delivered personally with the help of three field assistants, one from each university. These field assistants were principal research assistants in their assigned university, as a result, have meaningful knowledge of questionnaire administration. With regard to

Table 1. Population and sample distributions											
	Population									Sample (L 300)	
	Level 100			Level 200		Level 300		Sub-Total			Total
	M	F		M	F	M	F	M	F		
Institution											F
Tamale Technical University	2045	1055		2165	1470	2068	1828	6278	4353	10,631	180
Kumasi Technical University	834	392		1075	553	1010	656	2919	1601	4,520	66
Takoradi Technical University	1371	675		2483	1226	2324	1176	6178	3077	9,255	127
Sub-Total	4250	2122		5723	3249	5402	3660	15,375	9031	24,406	373
Total	6,372			8,972		9,062		24,406			

Source: Computed from Admissions and Records Office of the three universities' draft reports for 2021/2022 academic year. Where M = Males and F = Females

Table 2. Respondents views on objectives of the entrepreneurship course				
Objectives of the entrepreneurship course	Agree		Disagree	
	No.	%	No.	%
To provide opportunity for students to identify entrepreneurial qualities and skills	241	64.6	132	35.4
To expose students to concepts in entrepreneurship skills	249	66.8	124	33.2
To create awareness about entrepreneurship and its values	260	69.7	113	30.3

Source: Field survey, 2022 (N = 373)

the interviewing of the lecturers of the programme, they were interviewed face-to-face. The answers of the interviewees were written down which were latter sorted and grouped based on the various themes of the objectives. The qualitative data were analysed manually using themes. In relation to the quantitative data, frequency, percentage, mean, standard deviation and Hayes (2018) moderation process analysis were used to analyse the data.

8. Results and discussion

The first objective of the study examined the entrepreneurship education programme of TVET institutions in Ghana, focusing on the objectives, pedagogy and assessment of it. The first issue considered was to find out whether the students had an idea about the objectives of the programme. The results are presented in Table 2. As indicated in the table, majority of the respondents agreed that the objective of the programme was to provide opportunity for students to identify entrepreneurial qualities and skills (64.6%), expose students to concepts in entrepreneurship skills (66.8%), and create awareness about entrepreneurship and its values (69.7%).

The results from Table 2 seem to suggest that the objective of the programme was to provide general awareness about entrepreneurship and its concepts. The views of the student are in line with the comments of the lecturers interviewed. They all indicated that the purpose of the entrepreneurship course was to provide opportunity for students to identify entrepreneurial qualities and skills, expose students to concepts in entrepreneurship skills, and create awareness about entrepreneurship and its values. According to ELF1, *the aim of the programme is to develop and build the confidences of students with regard to business creation and development so that they can create and start their own business after completion of their programme*. The views of the students and the lecturers are consistent with the submission of Alamineh (2020) who avers that one of the aims of entrepreneurship education is to help participants to learn to understand entrepreneurship. The basic objective of entrepreneurship education is awareness creation. Donani et al. (2021) aver that entrepreneurship education aims at making the audience have a general understanding of entrepreneurship as a phenomenon.

In relation to pedagogy that is the circular content, respondents were asked to indicate the topics they covered during the entrepreneurship education programme. The results are presented in Table 3. As indicated in the table, most of the respondents indicated that the topics they covered during the entrepreneurship education programme were small-scale enterprises (88.5%), business plans (85.1%), and forms of business ownership (82.4%). Also, majority of the respondents indicated that sources of funding (78.9%), risk management (78.2%), feasibility studies (76.6%), marketing skills (76.6%) decision-making and problem solving (73.9%), and recognition of business

Table 3. Topics covered during the entrepreneurship course

Topics covered during the entrepreneurship course	Yes (%)	No (%)
Small scale enterprises	88.5	11.5
Business plans	85.1	14.9
Forms of business ownership	82.4	17.6
Sources of funding	78.9	21.1
Risk management	78.2	21.8
Feasibility studies	76.6	23.4
Marketing skills	76.6	23.4
Decision making and problem solving	73.9	26.1
Recognition of business opportunities	70.9	29.1

Source: Field survey, 2022 (N = 373)

opportunities (70.9%) were some of the topics that were covered during the entrepreneurship course. The topics indicated are general business and entrepreneurship topics. This mirrors Kuratko's (2005) advice that entrepreneurship course content(s) should be developed to take account of, among other things: venture-general knowledge which applies to most start-ups, but not so much to going concerns, and business-general knowledge which applies to most firms, including new ventures.

Also, the pedagogy used in the teaching of the entrepreneurship course contents was looked at. Most of the respondents indicated that the lecture method (95.7%) is the most significant mode of teaching use in teaching entrepreneurship course in their respective universities, followed by reading hand-outs (61.7%) and discussion (53.9). However, majority of the students were of the view that in the teaching of entrepreneurship course, rooms are not created for them to watch videos and films (95.4%), have guest-speakers to talk to them (90.0%) or attend seminars (83.9%). In addition, ELM2 also said: *Primarily I lecture my students and also because text-books are hard to come by, I also prepare hand-outs for them.* These results show similarities with the submission of Kuratko (2005) who posits that the predominant form of pedagogy in entrepreneurship education in most developing societies were lectures, reading assignments, case studies, discussions and business plans.

Again, this confirms the views of many researchers who aver that majority of higher educational institutions' entrepreneurship educational programmes still used traditional teaching methods which include lectures, provision of selected readings, text-books and assignments (Alamineh, 2020; Donani et al., 2021; Mensah, 2012). The advantages associated with the "traditional" methods of teaching might explain their common usage. They are comparatively cheaper in terms of cost, and lectures are excellent for delivering information to a large audience (Alamineh, 2020). The adoption of traditional education methods which focus mainly on theory and didactic approach are not good for teaching entrepreneurship. These methods can be un-entrepreneurial in approach because they are given within the confinement of classroom, which does not cater for experiential learning (Gavigan, 2021). However, most educationalists are of the view that student-centred and active experiential learning some of the best ways to teach entrepreneurship (Donani et al., 2021; Gavigan, 2021).

The study further examined how students are assessed during the entrepreneurship course. Both the students and lecturers indicated that continuous assessment in the form of assignments, individual and group project works, and mid-semester, and also end of semester examinations are used in assessing students' progress or understanding of the course. Also, ELF1 said: *I mainly assess my students through exams and continuous assessment, normally on mid-semester and end of semester bases.* This indicates that the dominant forms of assessment used were through examinations and assignments. This confirms opinion of Kuratko (2005) that the types of entrepreneurship education which seeks to impart knowledge and understanding of entrepreneurship is far likely to employ examinations and tests to assess their students. Kuratko observed that written examinations, individual and group projects, oral presentations and writing of business plans are the top five ways of assessment used.

The second specific objective was to *assess the entrepreneurial intentions of females after completing the programme.* Emphasis was on attitude toward becoming an entrepreneur, subjective norms, perceived behavioural control and entrepreneurial intentions of female students. The results are shown in Table 4. As contained in the table, the female students were of the view that being an entrepreneur would give them great satisfaction (Mean = 4.25, SD = 0.75), it implies more advantages than disadvantages to them (Mean = 4.26, SD = 0.81), and they added that a career as an entrepreneur is very attractive to them (Mean = 4.07, SD = 0.83). The female students added that if they have the opportunity and resources they would like to start a business (Mean = 4.21, SD = 0.81) and that amongst various options, they want to be an entrepreneur (Mean = 4.00, SD = 0.91).

Table 4. Entrepreneurial intention of students

Attitude towards becoming an entrepreneur	Mean	SD
Being an entrepreneur would give me great satisfaction	4.25	0.75
Being an entrepreneur implies more advantages than disadvantages to me	4.26	0.81
A career as an entrepreneur is very attractive to me	4.07	0.83
If I had the opportunity and resources I would like to start a business	4.21	0.81
Amongst various options, I want to be an entrepreneur	4.00	0.91
Subjective Norms	Mean	SD
My colleagues would approve of my decision to start a business	3.29	1.36
My immediate family would approve of my decision to start a business	3.27	1.23
My friends would approve of my decision to start a business	3.11	1.11
Perceived Behavioural Control	Mean	SD
I know all about the necessary practical details needed to start a business	4.21	0.83
If I should try to establish a business I would have a high chance of being successful	3.92	0.90
To start a business and keep it running would be very easy for me	3.98	0.96
If I wanted to, I could easily start and run a business	3.80	0.97
Entrepreneurial intention	Mean	SD
I am determined to create a business in the future	4.33	0.81
I am ready to do anything to become entrepreneur	4.30	0.78
I will make every effort to start and run my own business	4.02	0.90
My professional goal is to be an entrepreneur	3.96	0.88

Source: Field survey, 2022 (N = 373)

The results show that female students in the universities have positive attitude towards becoming an entrepreneur. This calls for the need for them to be supported both socially and financially. Results from Table 4 further shows that all the female students agreed (mean > 3.0) that their colleagues, immediate families, and friends would approve of their decision to start a business. It can be seen that apart from subjective norms, which measure the extent to which society or close relatives would perceive females intention of becoming an entrepreneur, their attitude of becoming entrepreneur, their perceived behavioural control as well as their actual entrepreneurial intentions are high. The reason for such a response might be as a result of the sustained government effort over the past decade to encourage entrepreneurship as well as attention of businesswomen by the press which shows that they are important to society. In support of the findings, ELM1 said:

I think our entrepreneurship course has increased our students' understanding of the importance of entrepreneurship to society and individuals. In addition, ELM2 said: The entrepreneurship course of my university is helping in increasing the ability of our students to identify business opportunities, understand financial preparation for business ventures, and market research for entrepreneurial ventures.

The findings show that entrepreneurship education has had an influence on the intentions of female students. This may mean that entrepreneurship education has an impact on the entrepreneurial intentions of students. The findings corroborate with that of Owusu-Ansah and Poku (2012) who observed a positive impact of entrepreneurship education on students' entrepreneurial intentions and self-employment. Owusu-Ansah and Poku added that entrepreneurship courses have a strong measurable impact on participants. Ibrahim et al. (2015) also aver that entrepreneurship education positively affects entrepreneurial competencies like marketing, accounting, risk-taking and innovation.

The rationale of the third specific objective was to *determine the moderating role of social support factors on the influence entrepreneurship education have on females' entrepreneurial intentions*. Entrepreneurship education was treated as the independent variable while entrepreneurial intention was treated as the dependent variable. Social support factors were also treated as the moderator. Earlier results suggest that social support factors can moderate the influence entrepreneurship education has on females' entrepreneurial intentions (Adejimola & Olufunmilayo, 2009; Peterman & Kennedy, 2013). A Serial-Multiple Moderation 1 was conducted to find out how the effect of the predictors on the dependent variable is explain through causal effect of a moderator to the other. Statistical significance of the tested model in the current research was studied through the software developed by Hayes (2018), the approach based on ordinary least-squares regression, and the bootstrap method. The analysis used 10,000 bootstrap samples using 95 percent confidence level. The summary of the analysis is presented in Table 5.

The results, as shown in Table 5, have revealed that the influence entrepreneurship education have on females' entrepreneurial intentions is explained better when social support factors are considered. Thus, for entrepreneurship education to influence females' entrepreneurial intentions strongly, the relationship needs to be serially moderated by social support factors, $b = .7553$, $BootCI [.6598—.8435]$. As indicated in the table, the total contribution of the independent variables on the dependent variable increased from 19.25 percent to 75.53 percent in the analysis. The model was found to be fit based on the assertion of Hayes (2018) that the Mean Square Error (MSE) of the model should be closer to zero. In the case of this model, MSE obtained was 0.6214 which shows that the model is fit.

The findings suggest that entrepreneurship education programme in the area of objectives, pedagogy and assessment procedures of the programme have significant influential value on entrepreneurial intentions of final-year female students of the various technical universities in Ghana. However, this influence can be described as being not strong since the interventions of social support factors will be required to strengthen it to enhance the effectiveness of the intentions in order to produce innovators and thinkers for the society. This suggests that entrepreneurship education programme alone may not lead to significant increase in the entrepreneurial intentions of female students. For this to happen, the female students must have networks of friends, family, and peers that they can turn to for emotional, social, economic, and practical supports when the need arises.

The findings mean that effective entrepreneurial education has some influence on entrepreneurial intentions of females. However, the influence becomes stronger when the females entrepreneurially oriented, supported socially, equipped with both human and non-human resources necessary for business, guided and counselled, have easy access to capital and modern technology, and operate in a conducive business climate. The findings are in line with the submissions of Davis (2012), Kusi-Mensah (2017), and Gavigan (2021) who all have indicated that effective social

Table 5. Total, direct and indirect effects of entrepreneurship education on entrepreneurial intentions through social support factors

Hayes's (2018) moderation analysis Model: 1

Y: Entrepreneurial intentions

X: Entrepreneurship education

W: Social support factors (SSF)

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps	c_cs
.9478	.0429	22.0930	.0000	.8635	1.0321	.7051	.6993

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps	c'_cs
.1925	.0247	7.7911	.0000	.1440	.2410	.1432	.1420

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.7553	.0474	.6598	.8435
SSF	.6195	.0442	.5314	.7024

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.5619	.0321	.4967	.6235
SSF	.4609	.0297	.4030	.5182

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.5573	.0295	.4957	.6117
SSF	.4571	.0266	.4021	.5068

Source: Field survey, 2022 *p < .05, **p < .01 (N = 373)

support systems have significant influence in increasing the drives of women to enter into business or start a new venture. Through the interventions of social support factors, graduate from TVET institutions such as the various technical universities in Ghana can easily start a business with a born global focus. This means, through the interventions of social support factors, the country can have an increasing number of born globals owned by women.

9. Conclusions and recommendations

Based on the findings, the following conclusions can be drawn: First, entrepreneurship course in the various technical universities in Ghana is taught using traditional teaching methods which include the lecture method which does not give much emphasis on active student participation. This means that entrepreneurship course as currently exists does not involve the students in any experiential learning and that it is teacher-centred. It can also be concluded that the entrepreneurship education course has positive effect in creating positive entrepreneurial intention among female students. However, this influence becomes strong when the needed social support factors are provided for the female students in order for them to become more successful in their entrepreneurial adventure or see the patriarchal industrial environment as conducive. Finally, it may be concluded that, if all the needed attention and assistance is given to the entrepreneurship education of females nationwide, it could help reduce youth unemployment among women significantly, and also help in boosting their socio-economic status in the Ghanaian society.

It is recommended that the entrepreneurship course be sustained since it has the inherent capabilities to reduce youth unemployment and all its attendant social evils. However, for the programme to have a far reaching impact, it is recommended to management of the universities and Head of Departments to periodically review the course by ensuring that it is more

practical and engaging. That is, the approaches to teaching entrepreneurship should change from teacher-centred approach to a more student-centred with demonstration, collaboration, cooperative and pragmatic approaches. Management should ensure that teaching move away from the passive traditional teaching methods where students are lectured to a situation where students are given real and practical business scenarios to deal with and provide remedies. The liaison officers within the various universities should create a business incubator where students will constantly have access to for social support services such as guidance and counselling supports, financial support, nursing of business ideas, effective use of resources and technology in business, and quality management of enterprises. Also, it is recommended to management of the universities to regularly (4–5 years period) review the programme after appraising it, to ensure that it meets the needs and demands of the country. This intervention when implemented fully will ensure quality and relevance of the programme. The government through its agencies (eg. MASLOC and NYEP) can also put in place effective and targeted social support structures that are financial and social in nature to help starters and newborn globals to take-off with ease.

10. Research limitations

The study is limited to a geographical area (Ghana). The authors propose that future studies will widely consider other African countries to improve the scanty literature in the area.

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