



# **Challenges and Strategies towards Entrepreneurship Education and Learning among Ghanaian Built Environment Students**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Entrepreneurship is now considered as a major contributor to global economic growth. Internationally, entrepreneurship or enterprise-based modules are increasingly being incorporated into non-business courses. Entrepreneurship education is believed to foster entrepreneurial learning, and help individual students develop a set of skills and competencies that can facilitate and support their entrepreneurial activities. Despite the profound benefits of entrepreneurship education, it is still not fully blown in Ghana. This study sought to identify challenges in the entrepreneurship education process and to propose strategies to enhance effective entrepreneurial learning. The study employed a mixed research design by means of preliminary literature review and subsequently a survey using the structured questionnaire approach. The data collected was

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analysed using the One-sample T-test. The analysis revealed eight (8) challenges to entrepreneurship education and twelve (12) strategies to enhance entrepreneurial learning amongst built environment students. This paper reports the investigation results of challenges and strategies of entrepreneurship education and learning among built environment students. The findings of this study are very useful for improving entrepreneurial activities in Ghana as well as Africa in general.

*Keywords: Entrepreneurship; learning; built environment students; challenges; strategies.*

## 1. INTRODUCTION

Entrepreneurship is seen as a key driver to any country's economy (Odora, 2015). It is now widely accepted by policy-makers, businesses and academics that innovation and entrepreneurship are essential for the survival of both large and small businesses and for value creation (Stevenson and Jarillo, 1990 and COM, 2006 in Watkins-Mathys, 2008). According to Watkins-Mathys (2008), there is a strong indication that educational programmes in entrepreneurship have a positive effect on developing individuals' entrepreneurial attributes, raising awareness of career options in entrepreneurship and inculcating a positive attitude towards entrepreneurship.

UNESCO-UNEVOC [1] observed that, while one of the main goals of education is to prepare students for industry, many education institutions in Ghana have poor linkages to the world of work. Entrepreneurial learning promotes entrepreneurship and is about providing people with an entrepreneurial mind-set. Through entrepreneurship education, people can learn to be innovative as well as develop the skills needed to successfully manage growth in small and medium-sized businesses. Blenker et al. [2] and Kirby [3] argue that, even though entrepreneurship education has been stimulated and supported in many ways in formal education during the recent years, yet there are also scholars who claim that the present educational system at the university level cannot develop students' motivations, and skills related to innovations and entrepreneurship. Donohue [4] reports that, entrepreneurial education is not just about training people to be business founders, though that is vital, and we need them. It goes further than that, and is about equipping all young people to be better employees - more resourceful, creative and self-sufficient presences in the workplace. It is about helping young people unlock their innate capabilities, and providing a pipeline of exciting new talent to existing businesses, as well as

inspiring the next generation of start-up founders.

More importantly, construction industry has been considered as an industry that drives a country's social and economic establishment (Fugar & Agyakwah-Baah, 2010; Winch, 2010). The industry is responsible for providing and maintaining physical assets which are beneficial to the nation to achieve social and economic goals (Winch, 2010). Studies of Setiawan, et al., [5] indicate that due to the project based nature, high competition and business risk characteristics of the construction industry, entrepreneurship is considered very important for sustaining and improving the performance of industry players. Although, there are several entrepreneurship programs in the field of business administration, there are only a few that build upon basic studies in science, technology and medicine, where the real opportunities for creating new high-growth firms are apparently larger. Consequently, a focus on entrepreneurship programs closely related to science, engineering and medicine should be promoted (Sjolander et al., 2005; Agbim et al., 2013). Hence, the rationale in this paper is to explore the challenges and strategies towards entrepreneurial learning among built environment students in Ghana.

The paper briefly highlights the general entrepreneurial education ideology and further scopes down to Ghana. Findings of pertinent challenges in entrepreneurship education and strategies to enhance entrepreneurial education and learning is thoroughly discussed.

## 2. ENTREPRENEURSHIP EDUCATION

Entrepreneurship education is a relatively new academic discipline. It is multidisciplinary in nature, having strong emphasis in economics, covering business disciplines like management, marketing, and finance; and closely linking with other disciplines like psychology, sociology, anthropology, teacher and business education. It

goes beyond textbooks teachings and involves a wide spectrum of life ideas drawing practically from life experiences [6]. Although its development is quite recent, the phenomenon has been recognized as a key factor in economic growth of any nation (*Ibid*). Entrepreneurial education is often categorized into three approaches (Heinonen & Hytti, 2010). Teaching “about” entrepreneurship means a content-laden and theoretical approach aiming to give a general understanding of the phenomenon. Teaching “for” entrepreneurship means an occupationally oriented approach aiming at giving budding entrepreneurs the requisite knowledge and skills. Teaching “through” means a process based and often experiential approach where students go through an actual entrepreneurial learning process (Kyrö, 2005). This approach is often termed action-based entrepreneurial education.

Entrepreneurship education in higher education does not mean a straightforward aim to contribute to the development of the amount of enterprises, but to the individuals’ entrepreneurial behaviour or activity as well (Gibb 2005). European Commission (2012) reports that Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals who have the knowledge, skills and attitudes necessary to achieve the goals they set for themselves to live a fulfilled life. Therefore, entrepreneurship education focuses on knowledge, skills and attitudes of students which all together make up the entrepreneurship key competence. Entrepreneurship education is not necessarily directly focused on the creation of new businesses, although graduate start-ups are one of a range of possible outcomes (*Ibid*). It goes further than that, and is about equipping all young people to be better employees - more resourceful, creative and self-sufficient presences in the workplace [4].

Entrepreneurship education can therefore be defined as the purposeful intervention by an educator in the life of the learner to impart entrepreneurial qualities and skills to enable the learner to survive in the world of business (Isaacs et al., 2007). Alberti, et al. [7] define entrepreneurship education as the structured formal conveyance of entrepreneurial competencies - concepts, skills and mental awareness used by individuals during the process of starting and developing their growth oriented ventures. For the purpose of this study, Entrepreneurship education is defined as the

process of providing individuals with the ability to recognize commercial opportunities and the knowledge, skills and attitudes to act on them (Jones & English, 2004). In Entrepreneurship education literature, two names appear as synonyms for entrepreneurship education – entrepreneurship teaching and entrepreneurial learning. The former consists of two components (European Commission 2002) – the transfer of entrepreneurial attitudes and skills developing relevant personal characteristics which are not directly linked to the business context (e. g. creativity, risk-taking, responsibility), and specific training on how to create a new firm (e. g. technical and business skills). While there has been much debate as to whether entrepreneurship can be taught, most commentators believe that at least some elements associated with the subject can be developed and enhanced through effective education and training (Clark et al., 1984; Saeed, 1996; Henry et al., 2003). From this debate emerged the difference between the ‘art’ and ‘science’ of entrepreneurship, where the science refers to that which is teachable, and the art refers mainly to that which is not (Saeed, 1996; Jack & Anderson, 1998). In this regard Entrepreneurship education and training is therefore an attempt to develop those attainable facets associated to entrepreneurship.

The “science” of entrepreneurship is considered to be teachable, even by way of more traditional methods. Characteristically, courses in entrepreneurship include well-thought-out training to provide the entrepreneur with technical and personal entrepreneurial skills (for example financial management, marketing) (Hisrich & Peters, 1998) complemented with informal support (for example mentoring, counselling, networking) in order to provide valuable elements of vicarious and social experience for the (potential) entrepreneurs (De Faoite et al., 2004). The very crux of creation and innovation, which is the ‘art’, does not appear to be teachable in the same way. It is highly subjective and is a skill that cannot be taught directly because it is vitally experiential nature (Jack & Anderson, 1999). The ‘art’ of entrepreneurship is mainly learned in the business environment through inductive, practical and social experience, less so in the educational setting [8]. The underlying challenge of entrepreneurship education, thus, is in the facilitation of learning to support the entrepreneurial process, even in the classroom setting.

## 2.1 Entrepreneurship Education in Ghana

It is a well-established fact across the world that entrepreneurship courses have positive impact on the employability of graduates, on society and the economy [9]. Consequently, in several advanced countries, entrepreneurship education is offered right from the primary school level through secondary school to the tertiary level of education (Blenker et al., 2011). In Nigeria for instance, entrepreneurship is a mandatory course for students of Higher Education Institutions (HEIs) (Omoniyi & Osakinle, 2011).

In Ghana, however, same cannot be said. Entrepreneurship education seems to be pursued, largely, in HEIs with a number of polytechnics, professional institutes and universities offering one or few entrepreneurship courses and/or programmes. In a bid to solving the graduate unemployment canker in Ghana in recent times, and in response to government's call to tertiary institution to help find solutions to graduate unemployment, a number of tertiary institutions in Ghana including Universities and Polytechnics are offering entrepreneurship as a module in their curricula to create awareness, and recommend self-employment as an alternative and a better lucrative career path. Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, for instance is now running entrepreneurship development programme with Business Incubator and Enterprise Centres (Adarkwa, 2010). It is interesting to note that no one knows the impact these initiatives are having on unemployment as there are no statistics on graduate business start-ups; and the graduate unemployment queue continues to get longer and longer [10]. According to Owusu-Ansah and Poku [9], entrepreneurship education at Business school of KNUST is creating entrepreneurship awareness and encouraging students to include "self-employment in their career intentions and aspirations' options as well as inculcating a positive attitude towards business start-up".

## 2.2 Entrepreneurial Education and Training Objectives

It is clear from the above definitions that entrepreneurship education is critical in today's economy as it contributes to entrepreneurial knowledge and skills which leads to job creation and helps considerably to reduce poverty. Entrepreneurship education leads to the improvement of the level of knowledge about

how to launch and manage a new business venture. Besides, it enables students to gain experience in a real business context, foster favourable attitudes towards entrepreneurial activities, It also develops perception of self-efficacy of students, raises the level of students' entrepreneurial intentions, and stimulates students to choose an entrepreneurial career Odora (2015).

## 2.3 Challenges to Entrepreneurship Education Ghana

According to Natasha and Herrington [11] the Global Entrepreneurship Monitor 2012, South Africa statistics, captured that the perceived rate of entrepreneurship opportunities for Sub-Saharan African youth is at an average of about 70%. Ghana, being part of the categorized countries stands a chance to entrepreneurship development. In spite of the pursuance of entrepreneurship education in the universities, professional institutes and polytechnics there is low patronage from students within the built environment. Entrepreneurship is crucial especially in the universities of technology since there is a higher innovation potential from their researches and studies. The built environment comprises the architecture, planning, construction, quantity surveying and others associated with infrastructure or the provision of human settlement. Although, the creation of new knowledge-based or social enterprises is seen as vital to maintaining competitiveness in a globalizing world and to address social and environmental issues effectively (Small Business Service 2005), Products of the built environment rarely embrace entrepreneurship. In the 21st century "graduates are expected not only to be job-seekers, but also and above all to be job-creators" (Miclea 2004).

Effective education is key in the development of every country and the world at large. It therefore requires much input to enable the achievement of the set objectives of education and training. Studies. Entrepreneurial education suffers if there are inadequate funds to fully explore all areas to enhance the teaching and learning process related to entrepreneurship education (Akintola et al. 2002). Entrepreneurship education and training programmes have very short duration in comparison to other educational programmes. The objectives of EE could be much appreciably achieved if much time is allocated to the study, due to its complexity and involvement linked to the multifunctional task of

operating a business (Garavan 1994). The use of old training tool constraints effective education process (Akintola et al. 2002). The non-availability of good and updated education and training materials and tools impedes entrepreneurial education. The level of commitment towards entrepreneurial education and training on the part of both the students and the educator is low. While the students are grade minded the educators also appear to be burdened on academic stuffs leaving the other elements of entrepreneurship [12]. Educators also Lack the required qualifications which enables them to effectively handle

entrepreneurial programmes in relation to their educational background and their experiences (Loh Rahim et al. 2015). The objectives of the EE are usually misunderstood and misinterpreted which affects the delivery of the actual intended entrepreneurial training. Globally, entrepreneurship education and training research is unable to draw a direct causal link connecting the enhanced knowledge with the subsequent performance of enterprises [13]. The lack of adequate research development in entrepreneurial areas affects EE since it does not support the provision of adequate leaning materials (Karimi et al. 2010).

**Table 1. Summary of challenges facing the built environment**

<b>Challenges</b>	<b>Delineation</b>	<b>Source</b>
Educational Funding	Lack of funds to sponsor EE processes and activities. Weak Financial strength.	Akintola et al. 2002, Loh Rahim et al. 2015
Student mindset	Student focus on academic grades affecting their ability apply knowledge to venturing into business.	Hamidon, 2015
Entrepreneurial development centers	lack of entrepreneurship development centers to provide knowledge to people who want to start an entrepreneurial venture	Karimi et al. 2010
Programme duration	Entrepreneurship education and training programmes have very short duration in comparison to other educational programmes.	Garavan 1994,
Educator competence and experience	Non- availability of well trained and experienced educators in the entrepreneurship field.	Loh Rahim et al. 2015, Karimi et al. 2010
Provision for practical work	Lack of experiential learning, work related or action related learning which enhances practical ability leading to inefficient EE.	Loh Rahim et al. 2015
Educational institutions and industry link	Poor linkage between the educational institutions and the industries.	Akintola et al. 2002, Gribben 2006, Valerio, et al. 2014
Fear of risk	Prevalence of a culture or environment oppositional to risk taking.	Wise Sambo, [14]
Dedication of educators	Lack of proper commitment towards achieving the full objects in entrepreneurship education and training.	Hamidon, [12]
Training materials	Lack of good and quality training materials coupled with the use of ageing or obsolete training tools.	Akintola et al. 2002, Karimi 2010
Commitment of Educators	Lack of proper dedication to the entrepreneurial course.	Hamidon, [12]

### 3. METHODOLOGY

The paper adopts mixed method approach in data collection. At the first stage, qualitative approach was used to identify the relevant challenges and strategies to learning of entrepreneurial among built environment students that is through a literature survey (Osman et al., 2008). The second stage involved designing of questionnaire, using a five-point rating scale, the respondents were asked to rate the level of severity of the challenges identify, using five-point scale ranging from 1= least, 2=lower, 3=high, 4= higher, 5= highest. Similarly, to each strategy identify to effective entrepreneurial learning was also rate using a five-point rating scale for the levels of importance range from 1= not important, 2 = less important 3 = moderately important, 4 = important, 5 = most important. In all 124 questionnaires were administered purposively to built environment students who are currently doing their masters in *MSc. Construction Management, MSc. Procurement Management, MPhil. Building Technology, MSc. Architecture, MSc. Road and Transportation Engineering and MSc. Settlement Planning*. Out of 124 questionnaires distributed, 84 were retrieved representing response rate of 68%. This sample was chosen because graduate students are in a better position to give more credible responses to the questionnaire due to their perceived exposure to industry and have gone through an entrepreneurial education during their first degree. Data generated from the survey was further analysed by the use of one sample t- test, which was aimed at employing statistical test for the mean value of the distribution of factors identified and check level of significance of the identify factors. Consequently, an arbitrary mean was fixed at an appropriate level of 3.5 (c.f Ling, 2002 and Ahadzie, 2007).The significance level was also set at 95% in accordance with predictable risk levels (c.f Collis and Hussey, 2003).

### 4. RESULTS AND DISCUSSION

From *Tables 2 & 3* all the variables have mean values above the test mean of 3.5, it is reasonable therefore to conclude that they constitute challenges and strategies that would influence the entrepreneurial learning among built environment students. In addition, from the results in *Table 2 & 3* most standard deviations had a recognised percentage that are less than 1.0 beckoning that, there was little variability in

the data collected and consistency in agreement among the respondents.

Moreover, from *Tables 2 & 3* all the p-value for one-tailed test had almost all the factors recorded a value less than 0.1, which shows a strong indication they are statistically significant challenges and strategies for the learning of entrepreneurship. However, two of challenges recorded value greater than 0.1 mean that it was not statistically significant to respondents. Hence, this indicates that respondents were of the opinion that these challenges might not affect the learning of entrepreneurship among built environment students.

#### 4.1 Challenges to the Entrepreneurial Learning

From *Table 2, Poor linkage between educational institutions and industry* ranked the most significant challenge with a mean score (4.35) and standard deviation less than one indicating the existence of agreement between responses. *Inadequate provision for practical work* ranked 2<sup>nd</sup>, with a mean score (4.07) well above the hypothesized mean and a standard deviation (0.900) also less than one. Ranking 3<sup>rd</sup> was *Inadequate funding to support entrepreneurship education* with a mean score of 4.07 standard deviation of 0.954. *Academic staffs are not dedicated to the production of entrepreneurial graduates* and *No recognition is given for excellence in Entrepreneurship education* ranked 8<sup>th</sup> and 9<sup>th</sup>, with mean scores of 3.79 and 3.64 respectively and standard deviations below one. However, *No recognition is given for excellence in Entrepreneurship education* was discarded as a challenge because it was not statistically significant because the p-value exceeded 0.100. *Current level of educator competence is inadequate* had a low mean score of 3.44 therefore ranked 10<sup>th</sup>. Also, it recorded a standard deviation of 1.057, indicating that there is no consensus between the responses of respondents concerning this variable. It was also discarded on the grounds that it was not a significant challenge.

##### 4.1.1 Poor linkage between educational institutions and industry

Across the world there is a huge expansion of courses in both private and public universities; however, Kuratko [15] opines that, there remains the challenge of teaching entrepreneurship more effectively. Primarily, one of the ideas propelling

education is to make ready students for industry, many education institutions have poor linkages to the world of work [1]. According to Unemployed Graduates Association of Ghana, UGAG [16], yearly, several graduates from the country's tertiary institutions estimated to be in the region of 70,000 come out of school searching for jobs; over 88,000 graduates nationwide are unemployed, which makes about 50.8 percent of graduates from the universities, polytechnics and other tertiary institutions. It is therefore not surprising that, *Poor linkage between educational institutions and industry* is the major challenge to entrepreneurial learning as ranked by the correspondents and leads to massive unemployment.). A successful programme, according to Nwaokolo (2003), will enable a student either get a job or create a job and employ others. Subsequently, there will be lower per capita income making national income low.

#### 4.1.2 Inadequate provision for practical work

Commonly in West Africa, hypothetical teaching is mostly used, notwithstanding that, it has placed less emphasis on the learners' practical skill acquisition [17]. He further postulates that, skill acquisition is one of the certain means

through which the juvenile can find ways to the labour market, whether in the private or public. In spite of the fact that, a broad scope of choices are obtainable, many tertiary and training institutions conduct training in only one useful area [18]. Interestingly, these institutions offer little entrepreneurial skills training, which are a disservice to the SME sector they serve [19]. Commonly, entrepreneurship education is a complete action that would make a positive contribution to developing the entrepreneurial orientation of people. Practical needs of educational institutions, as recognized by Friedrich et al., [20] are an attribute to a deficiency of exposure to entrepreneurial skills and motivational skills, as also espoused by Ladzani and Van Vuuren [18] and Hytti [21]. Practical work prepares the students for acquiring jobs and improving the economy. Hence the respondents' perceived inadequate provision for practical work as severe challenge. Mensah [22] opines that, the design and delivery of these conventional courses appear to focus highly on content with less emphasis on role-oriented practice and lesser development of skills necessary for creativity and innovation. Hence the respondents' perceived *inadequate provision for practical work* as severe challenge.

**Table 2. Summary of T-Test Showing Rankings and Significance**

No	Challenges	Mean	Std. deviation	Ranking	Sig. (1-tailed)	Statistically significant
1	Inadequate funding to support entrepreneurship education	4.07	.954	3 <sup>rd</sup>	.000	Yes
2	Poor mind-set of students toward entrepreneurship	3.85	.843	6 <sup>th</sup>	.000	Yes
3	Lack of well-equipped Entrepreneurial development centres	4.02	.864	4 <sup>th</sup>	.000	Yes
4	Lack of good quality training/instructional materials	3.95	.863	5 <sup>th</sup>	.000	Yes
5	Current level of educator competence is inadequate	3.44	1.057	10 <sup>th</sup>	.304	No
6	Inadequate provision for practical work	4.07	.900	2 <sup>nd</sup>	.000	Yes
7	Poor linkage between educational institutions and industry	4.35	.847	1 <sup>st</sup>	.000	Yes
8	A culture that is averse to risk taking	3.83	.980	7 <sup>th</sup>	.002	Yes
9	No recognition is given for excellence in Entrepreneurship education	3.64	.887	9 <sup>th</sup>	.100	No
10	Academic staff are not dedicated to the production of entrepreneurial graduates	3.79	.958	8 <sup>th</sup>	.004	Yes

#### 4.1.3 Inadequate funding to support entrepreneurship education

Globally, the creative process [23] of capital generation and transformation between distinct forms of capital to carry out entrepreneurship education lies at the bosom of the entrepreneurial learning process. According to Davies [24], introducing entrepreneurship as a discipline especially in tertiary institutions is problematic due to funding mechanisms. In this view, Unachukwu [6] postulates that in entrepreneurial education there is a demand for significant funding for tutorship in operable terms. Consequently, the funds could be used to commence and expand business ventures to make ready flourishing entrepreneurs [25,6]. Moreover, deep-rooted businessperson easily gets access to loans for starting new ventures or growing on-going businesses. In view of this, opinion of funding is of peculiar relevance and permits a thorough and widespread systematic consideration of the process of entrepreneurship education. Not surprisingly, Inadequate funding to support entrepreneurship education ranked third by the respondents, stressing that, the linkage between educational institutions and the industry as well as the provision for practical work cannot be ignited to set in motion the success of entrepreneurship education unless there is adequate funding.

#### 4.1.4 Lack of well-equipped entrepreneurial development centres

In recent years, Okpara and Mengistie [25] investigated into the status of small business entrepreneurship and the study revealed that the prime problems in entrepreneurial activity include infrastructural deficiencies. Interestingly, Nigerian education in parallel with Ghanaian education demonstrates that the expenditure for acquiring equipment by Ghanaians, especially vernal graduates is rather high. Correspondingly, these graduates cannot afford the equipment [6]. Advancement in all spheres of industrial activities relatively depends on the development of entrepreneurship as well as its centres. Surprisingly, the Entrepreneurial development centres also confesses of its ill-equipped. Unachukwu [6] opines that, this hinders development of entrepreneurship, as technology is intimately attached to entrepreneurship. As observed by Odu [17], facilities like workshops, studios, equipment and laboratories are egregiously deficient in our educational institutions. He further argues that, the difficulty

in the procurement of facilities does not augur well for the practical acquisition of skills by learners. Eventually, students end up not acquiring skills to go into the labour market. The demand for the provision of affordable technologies is significant. It was therefore not surprising this constraint was ranked fourth by the correspondents.

#### 4.1.5 Current level of educator competence is inadequate

Recent research conducted by Blenker, et al. (2006) demonstrated that, traditional forms of teaching at universities have shown themselves quite inappropriate with respect to enhancement of motivation and competencies among students towards innovation and entrepreneurship. In spite of the fact that, entrepreneurship education has been guaranteed in many arguments in formal education recently, hitherto, educational system at the university level currently cannot evolve students' motivations and skills related to innovations and entrepreneurship as charged by some scholars [2,3]. Similarly, a survey by the Accelerating Campus Entrepreneurship (ACE) Initiative [26] agrees that, indeed *Current level of educator competence is inadequate remains a bane to entrepreneurial learning*. Amoako (2010) opines that Ghana's education since independence has continued to be predicated on the colonial style of education. Thus, the focus of educationist have not been to train people who can innovate, create, invent and more importantly employ themselves when there is the need to, instead of relying on government or someone else to employ them. Consequently, Henry, et al., (2005) in Heinonen and Akola [27] argues that, less research has been done on whether and how competencies can be taught, even though much work has been done to improve the understanding of the skills and capacities that support successful entrepreneurship. Amazingly, the results bespeak this as not a prima challenge. Presently in Ghana, *Current level of educator competence is inadequate* is not a significant challenge to entrepreneurial learning as pointed by the respondents. However, this is inconsistent with Unachukwu [6] postulation current level of educators is challenge. Consequently, poor performance of this form of economic development is as a result of the degree of educator quality being shorthanded is not proper reflection in term of entrepreneurial learning.

## 4.2 Strategies for the Enhance Effective Entrepreneurial Learning

From Table 3, *Arrange interactive sessions between students and industry practitioners* was ranked as the first important strategy with a mean score of 4.52 with a corresponding level of significance at 0.000, making it a statistically significant strategy to the improvement of entrepreneurial learning amongst built environment students. It also recorded a standard deviation of 0.649, indicating the existence of agreement between responses. *Seminars and workshops* ranked 2<sup>nd</sup>, with a mean score 4.42 well above the hypothesized and a corresponding level of significance at 0.000, making it a statistically significant strategy to the improvement of entrepreneurial learning

mean. It also recorded standard deviation of 0.662 which is less than one. Ranking 3<sup>rd</sup> was *Mentoring scheme/personal coaching of entrepreneurial* with a mean score of 4.38 with a corresponding level of significance at 0.000, making it a statistically significant strategy to the improvement of entrepreneurial learning. It also recorded a standard deviation of 0.599, indicating the existence of agreement between responses. *Introduce tutors or mentors who constantly challenge student's thinking with unfamiliar tasks that create critical learning situations* was ranked as the 4<sup>th</sup> important strategy. It recorded a mean score of 4.35 and a standard deviation of 0.668, with a corresponding level of significance at 0.000, making it a statistically significant.

**Table 3. Summary of T-Test showing rankings and significance**

No	Strategies	Mean	Std. Deviation	Ranking	Sig. (1-Tailed)	Statistically Significant
1	Performance criteria should be specified and for the students and must be well monitored	4.02	.891	8 <sup>th</sup>	.000	Yes
2	Make problem-based projects group assignments and tie academic performance to group performance	3.94	.841	11 <sup>th</sup>	.000	Yes
3	Allow the use of self-selecting venture teams	3.95	.993	10 <sup>th</sup>	.000	Yes
4	Business simulations and role-playing	4.12	.701	7 <sup>th</sup>	.000	Yes
5	Create regular milestones and/or objectives that are exceptionally challenging, having limited timescales	3.87	.788	12 <sup>th</sup>	.000	Yes
6	Introduce tutors or mentors who constantly challenge student's thinking with unfamiliar tasks that create critical learning situations	4.35	.668	4 <sup>th</sup>	.000	Yes
7	Mentoring scheme/personal coaching of entrepreneurial students	4.38	.599	3 <sup>rd</sup>	.000	Yes
8	Arrange interactive sessions between students and industry practitioners	4.52	.649	1 <sup>st</sup>	.000	Yes
9	Company visits and excursions	4.29	.769	5 <sup>th</sup>	.000	Yes
10	Seminars and workshops	4.42	.662	2 <sup>nd</sup>	.000	Yes
11	Student oral presentations and multi-media exercises	4.00	.864	9 <sup>th</sup>	.000	Yes
12	Entrepreneurs as lecturers and/or guest speakers	4.24	.845	6 <sup>th</sup>	.000	Yes

#### 4.2.1 Arrange interactive sessions between students and industry practitioners

There is increasing consensus that effective entrepreneurship education is not book-based but should be more interactive and real-world based. Dana [28] suggests that the entrepreneurial learning style requires active participation as opposed to 'chalk and talk' instruction. Setiawan et al., [5] opines that the application of the strategy will sustain and improve the performance of the industry. Notwithstanding, interactive sessions have positive impact on the employability of graduates [9]. Consequently, all the respondents ranked this as the major strategy.

#### 4.2.2 Seminars and workshops

Worth knowing, at various sessions in organised seminars and workshops, learning contents like acquiring business-specific knowledge; learning business mechanics; learning about context, customers, and the competition; studying people; studying leadership principles; reflecting on company values; and discovering how to create learning organizations are demonstrated to students (MacPherson, 2009). More importantly, students should be exposed to training in technology, opportune to have internship training in entrepreneurship and reinforced on the concept of risk taking. *Seminars and workshops* proved statistically significant, relatively deserving the 2<sup>nd</sup> major strategy as agreed by the respondents in the built environ.

#### 4.2.3 Mentoring scheme/personal coaching of entrepreneurial students

Research conducted in the mid and late-nineties demonstrates that, students can be challenged by a learning coach, mentor or tutor [29,30] This confirms the assertion by Donohue [4] that young people can be equipped to be better employees. As these mentors/personal coaches have been through spheres of entrepreneurial education, they provide the support for helping the students unlock their innate capabilities. It was therefore not surprising this strategy was ranked third by the respondents.

#### 4.2.4 Create regular milestones and/or objectives that are exceptionally challenging, having limited timescales

Students still apply established knowledge to the problem at hand [31], but critical moments are

created where this taken-for-granted knowledge is challenged, thrown-out, or re-interpreted. Such discontinuities are not exact simulations because students do not have financial exposure but such approaches do replicate the uncertainty, ambiguity, and stress associated with discontinuity. Creating an environment that involves discontinuities, critical events or crises [32] are more problematic. Discontinuities can be created by asking students to meet particular objectives or challenges, which create time pressures. As students plan within these limited periods, Honig [33] argues that, they demonstrate increased mastery, knowledge and comprehension that would assist them in the process of starting a new firm. Correspondingly, the respondents all together ranked this as the least promising strategy. Therefore, courses in entrepreneurship should therefore be complemented with informal support (for example mentoring, counselling, networking) in order to provide valuable elements of vicarious and social experience for then (potential) entrepreneurs as argued by (De Faoite et al., 2004). Pittway and Cope (2007) argue that in simulating entrepreneurial learning through experiential learning, use tutors or mentors to constantly challenge thinking and create social learning opportunities through learning coaches. Collins and Robertson (2003) argued that 'Entrepreneurial learning occurs through social interactions rather than through written word of formal instructions'.

## 5. CONCLUSION

This study investigated Entrepreneurship education and learning among Built Environment Students in Ghana and to identify crucial challenges that need to be properly analysed and finally providing strategies to curb the challenges. The study highlights that *Poor linkage between educational institutions and industry, inadequate provision for practical work and current level of educator competence is inadequate* have great impact on the amount of unemployed graduates oozing out of the educational institutions and opposes as challenged to Entrepreneurship education in Ghana. The surveyed further revealed that entrepreneurial education and learning can be improved by: *arranging interactive sessions between students and industry practitioners, Seminars and workshops, Mentoring scheme/personal coaching of entrepreneurial students and creating regular milestones and/or objectives that are exceptionally challenging, having limited*

*timescales*. The statistical analyses of the survey responses indicate that the data have good homogeneity, meaning that there is good data consistency and agreement between built environment postgraduate students on the importance of the identified factors.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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