

## Diversity in Entrepreneurship Classroom: Pedagogical Implications for Managing Higher Education

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### Abstract

Management researchers and practitioners suggest that higher education institutions need to design entrepreneurial curriculum to prepare today's graduates for job creation. The contents of students' entrepreneurship skills acquisitions might differ according to each institution and the inability to recognise diversity of learners in entrepreneurship classrooms has wider implications for educational administrators. Hence, the objective of this paper is to identify whether entrepreneurship intention comes with different levels for university graduates using the theory of planned behaviour. A cross-sectional survey design and simple random sampling approach yielded 1159 business students from Ghanaian private and public universities. Construct and face validity outcomes for 33 questionnaire items measuring students' entrepreneurship intention were checked with Cronbach's alpha reliability of 0.94. Multiple regression, one-way ANOVA, and descriptive statistics were the data analysis tools. Whilst our findings revealed a progressive entrepreneurship skills acquisition amongst students, there were also statistical differences between these progressions. Collectively, socio-economic background, computer access, and choice of private sector for employment explained 6% variance in entrepreneurship intention. Therefore, we concluded that the practice of grouping individuals for entrepreneurship-training programmes might be counterproductive in meeting unique learning needs and recommended that higher education institutions should recognise learners' differences in entrepreneurial programmes. Hence, formative assessment of budding entrepreneurs' skills levels should be a basis for rotational model practices. Other recommendations for government entrepreneurship programmes, diversity management, and curriculum design are discussed.

**Key Words:** entrepreneurship, theory of planned behaviour, educational management, and access to technology

### Background of the Study

An attempt to solve nation's unemployment phenomenon has been a source of debate for diverse groups. For instance, economists believe that national governments ought to provide their citizens with infrastructure and prudent economic policies (Ramu, 1993); careerists often relied on cognitive and behavioural interventions to correct individuals' faulty thoughts using guidance and counselling services (Thomas & Inkson, 2004; Inkson, 2007). Empirical study established that statistical significant associations exist between entrepreneurship and the number of management courses taken among students (Atef & Al-Balushi, 2014: 3). Secondly, similar findings in Eastern Europe – Russia (Tkachev & Kolvereid, 1999) and Central Europe (Fayolle, Gailly, & Lassas-Clerc, 2006), entrepreneurship education is found to have correlated with students' future entrepreneurship propensity. Similarly, Jain (2011) conducted a meta-analysis of entrepreneurial competences and laments that in spite of numerous research works on the themes of why, when, and how, entrepreneurs are discovered, intensive investigation is still needed to examine both intrinsic and extrinsic variables related to entrepreneurial intention. Researchers agreed that entrepreneurial competences could indeed be learned, at least to some extent (Blenker & Christensen, 2010; Nekka & Fayolle, 2010) with others arguing for entrepreneurship education to enhance the skills of would-be and extant entrepreneurs today ((Rezaei-zadeh, Cleary, O'Reilly, Abdollahi, & Murphy, 2014). Consequently, educational planners and administrators can assist students to develop entrepreneurial skills within the African indigenous knowledge systems (IKS) as advocated by Anguala (2008). The need to promote IKS in the context of 21st century skills calls for developing nations to qualitatively and quantitatively expand their higher institutions to contribute to economic development, providing opportunities for individuals, promotion of cultural diversity, political democracy, and trade has been advocated by scholars (Rena, 2010).

Recently, Ghanaian Government's recent interventions in this regard was the National Entrepreneurship and Innovation Plan (NIEP) with a seed money to create a conducive business-friendly atmosphere for start-ups, small and medium enterprises to generate employment for teeming youth (Ghana News Agency, n.d.). However, a 2015 *Global Entrepreneurship Index* (GEI) showed a weak coefficient scores between 0.28 and 0.61 for Ghana (Ács, Szerb, & Autio, 2015, p. 94), which subsequently led others to question the human resources management capability for job creation (McCown, 2015). Globally, anecdotes that business dominated contents

such as marketing, human resource management, financial management, and economics topics could help youth entrepreneurial skills (Kolvereid & Moen, 1997; Peterman & Kennedy, 2003). However, the voices of instructional designers, higher educational administrators and managers, and curriculum experts seem drowned. Therefore, our thesis position had it that with empirical findings likely to inform formative assessment for youth entrepreneurship education, higher Ghanaian higher education institutions could provide leadership for stakeholders.

The liberalisation and participation of the Ghana's private tertiary education sector over the past decades can be described as heart-warming. But social commentators continue to question employability, access, equity, authentic knowledge, relating theory to practice, and global competitiveness of degree holders from the tertiary institutions to compete for jobs in the labour market (Abu, 2012; Dogbevi, 2007; IMANI, 2013; McCown, 2015). Specifically, (a) How competitive are our university graduates to lead existing and new education businesses with core competences required of them in the global knowledge economy? (b) What indigenous African knowledge systems are influencing the Ghanaian graduates in contributing to productivity? More so, (c) are students becoming employable after leaving school? Such interrogations of the quality of Africa's higher educational institutions have been a frequent occurrence with nation's stakeholders questioning the widening skill gaps of university graduates. For instance, the CEO of the Ghana Employers Association states, "Whereas demand for higher education is growing and enrolment in tertiary institutions has continued to expand the requisite skills needed for industry continues to decline." (Frimpong, 2016, p. 34).

Hence, to answer some of these questions, there has been an increasing advocacy for higher education institutions (HEIs) to promote lifelong learning and 21st century skills within the context of rigorous academic standards. Futurists on education are branding 21st century skills as panacea for enhancing students' authentic knowledge using ICT tools (Kerry et al., 2000). Thus, the ubiquitous advances in technology are generating increase access to education that involves new and underserved communities to improve educational delivery in and outside classrooms and to generate competition amongst universities (Drabier, 2003). Drabier questions the fragmented, compartmentalised, and autonomy of higher education, and concludes that such narrow strategies only lead some higher institutions into dogmatic thinking, thereby are quite slow accepting technology in their curriculum, and stifle innovation in HEIs. Sullivan and Baruch (2009:5161) warned, "Universities that prepared their students for life-time linear employment within one or two firms need to consider strategies to prepare students for alternative, multidirectional career paths." Though anecdotal, Sullivan and Baruch's counsel should be of concern to Ghanaian educational policy makers. Especially, tertiary institutions must reconsider their curriculum designs to account for technology integration allowing multi-skills development, entrepreneurial career choices, and confidence for emergent jobs requiring sophisticated technological innovations and big data analytics.

### **Historical Perspectives of the Entrepreneurship Concept**

This section explores views and debates on what constitute the entrepreneurship construct in the academe. Jinying and Pelagie (2014, p. 107) categorised scholars' attempt to understand entrepreneurship study into three. The first approach focuses on understanding entrepreneurs' personal characteristics, beliefs, and attitudes dominated by social-cognitive theories (e.g. McClelland's (1965) need for achievement; Bandura's (1982) self-efficacy mechanism; and Rotter's (1966) internal-external locus of control). According to the entrepreneurship literature, the second layer of researches in the field involves the exploration of their social environment. Environmental factors such as networking and social groups likely to provide resources for investment dominated the researcher's work as well (Robinson, Stimpson, Huefner, & Hunt, 1991); with the roles of institutions in supporting entrepreneurs' intentions as the third dominant area in entrepreneurship research – the major thesis for this study.

Acemoglu, Johnson, Robinson, and Thaicharoen (2003) cited institutional supports from political, economic, and nations' legal frameworks for successful entrepreneurship take off. Such divergent perspectives on entrepreneurship research set the tone for the current review with similar propositions on the credentials of its researchers, conceptual definitions, historical emergence, theories, and the struggle to attain academic status. Commenting on an institutional report promoting enterprise culture amongst students in UK's higher education institutions (HEIs), Pittaway and Cope (2007: 480) bemoan how several questions including operational definitions of 'enterprise' or 'entrepreneurship' in the HEIs literature remained unanswered. Pittaway and Cope think that the controversy also extends to constructing meanings of employability skills, social enterprise creation, self-employment, venture creation, employment in small businesses, small business management, and the management of high-growth ventures as contemporary entrepreneurship subject is of interest to academics. Also, Lazear (2005, p. 673) submits, "The definition of the entrepreneur is somewhat arbitrary." Probably, the obsession to define the entrepreneurship term partly emerged from the desire to give it 'ivory tower' recognition.

Some scholars' attempt to establish the parameters for the entrepreneurship concept have resorted to historical, classical, and semiotics appreciations guided by their diverse academic fields. Accounting for its linguistic origin, a 17<sup>th</sup> century French Language morphemes, '*entre*' (enter) and '*predrendre*' (to take) translated into English Language as *to undertake* had been offered as the first diagnostic approach to deconstruction of "the entrepreneur" (Kuenyehia, 2012). Indeed, the etymology of the entrepreneurship construct seems to have been shared by its modern applications and definitions as well. For instance, the classical and neoclassical definitions of entrepreneurship have tilted towards the oligarchy business practices and economic model building following the initial works of the founding fathers in the field (Bruyat & Julien, 2000, p. 167). Cantillon, Turgot, Say, and Schumpeter (all economists) laid the foundation stones for today's definition of entrepreneurship. The dominant attribution of the classical definition of "the entrepreneur" attributed to the Austrian economist Joseph Schumpeter's (1883-1950) is in contention (e.g. Kuenyehia, 2012). Authors such as Bula (2012) posthumously accorded this enviable recognition of the first economist to have acknowledged entrepreneurship concept to Richard Cantillon's (1755) manuscript.

According to Bull and Willard (1993), in his classic work, Cantillon described the entrepreneur as an individual with the role of all exchanges and circulations in the economy. In the same fashion, Bruyat and Julien (2000: 167) rated Schumpeter as fourth in the genealogy pecking order and quoted Cantillon in his definition as well - "The entrepreneur is someone who assumes the risk and may legitimately appropriate any profits." Differentiating the entrepreneur from an equity owner, Turgot and Say agreed with Cantillon's risk taking propensity behaviour and added that the entrepreneur is also responsible for assembling and managing resources for the production process. Perhaps, the definitions of the founding fathers (with economists backgrounds), tend to assume expansionist paths that seem to trust production resources to organisations' innovative minds and illustrates the epoch of industrial revolution that partially ignored the important role of today's service industry after the World War II in the US and other parts of the globe (Gaither, 1996, p. 12). Coupled with market forces at its embryonic stage, the field of entrepreneurship has seen importation of economic models with Schumpeter (1934), Kirzner (1997) and Shane and Venkataraman (2000) as advocates of innovation-opportunity criterion.

A similar historical account of 'the entrepreneur' concept has been attributed to the writings of another French economist Jean-Baptiste Say in the early 19<sup>th</sup> century who emphasised its productivity maximisation (Drucker, 1985, p. 21; Kuenyehia, 2012, p. 19; Bula, 2012). Drucker questioned Say's definition on the ground that the economist's definition is silent on the identity of the entrepreneur thereby igniting more confusion over defining 'entrepreneur' and 'entrepreneurship' leading giants like Schumpeter (1934) to explain that the role of managing an enterprise is an innovative venture. In addition, Drucker does not require entrepreneurs to cause change, but sees them as exploiting the opportunities that change (in technology, consumer preferences, social norms, etc.) creates. Drucker thinks that the entrepreneur always looks for change, responds to it, and exploits it as an opportunity. Surely, the notion of 'opportunity' has become the focus of current definitions of entrepreneurship where innovative thinking are said to eradicate obsolete production methods in different industries. In turn, even newer and more efficient advances eventually destroy these innovations (Ireland, Hitt, & Sirmon, 2003).

The controversies surrounding the definition of entrepreneurship is legitimate with the assertions that a minimal level of consensus is required on the definition of what a scientific field "is and is not" on its main themes in spite of existing disagreements on the fringes (Bruyat & Julien, 2000, p. 166). In the Ghanaian case, conception of the entrepreneur [as entity] by Kuenyehia (2012) focuses on case study of successful Ghanaian entrepreneurs. Therefore, in the opinion of this study, the debates and fierce criticisms of themes and theories in entrepreneurship literature swiftly evoking academic debates could be a healthy development for intellectual engagement in the entrepreneurship field. A common pattern reflecting in the definitions offered by researchers seem to reiterate the entrepreneurship phenomenon based on the individual (the entrepreneur), the project (business), the environment, and also the connection between them over time with the concept of '*newness*' seen in Schumpeter (1934) and Peter Drucker's (1985) views. Contemporary view also holds that entrepreneurial career has several perspectives (Bruyat & Julien, 2000; Lumpkin & Dess, 1996; Ireland, Hitt, & Sirmon, 2003; Dobrev & Barnett, 2005). Social constructionists' view holds that prior social experience (Hargadon & Douglas 2001) is a necessary requirement in entrepreneurial career decision-making. Chiles, Bluedorn, and Gupta (2007) opposed the homogeneous social order and advocated for divergent thinking towards markets, and rational expectations to construct new markets. In addition, Chiles et al. emphasise entrepreneurs' subjective expectations and future orientation for prospective clientele. Probably, the newness view in the entrepreneurship literature reflects the notion that the entrepreneur must constantly be scanning his/her environment. Thus, engage in scenario planning, responding to environmental stimuli such as interest rates, subsidies, information networks, competitors, new entrants, markets, etc. also, a portrayal of an entrepreneur as a human being capable of innovation, learning and influencing his or her environment. To expatiate on the environmental scanning posture that constantly reflects in the entrepreneurship construct definitions, one might not differ significantly by drawing parallel on the premise that such view merges the construct with the academic discipline of strategic

management and SWOT (strength, weakness, opportunities, and threats) models (Thompson Jr., Strickland III, & Gamble, 2005). Hence, this study adopts the view that entrepreneurship represents the composite activities of assembling creativity, innovativeness, and offering strategic leadership in all spheres of human endeavour with the objective of finding solutions to a chaotic process. Thus, the ability to solve problems inherent in work systems, society, and personal life all represent entrepreneurial spirit in the context of this study - in short, finding equilibrium in a state of disequilibrium. Therefore, the entrepreneurship concept is broadened here to include individuals at workplaces who are providing adaptive solutions to challenges and creating wealth for the common benefits of all (social entrepreneurship).

Attempts to attain universal label for the entrepreneurship term has been seen in recent times. A recent Global Entrepreneurship Index (GEI) scores Ghana between 0.28 and 0.61 coefficients on five skills in a 2015 survey (Ács, Szerb, & Autio, 2015, p. 94). The skills are opportunity perception (.61); start-up (.20); risk acceptance (.36); networking (.28); and capital support (.60). Other measures of the 2015 GEI score Ghana on technology absorption (.16); competition (.42), and extremely low on human capital (.07); product innovation (.12); process innovation (.18); high growth (.23), and going international with its entrepreneurship innovations (.17). Perhaps, such indices pose a gloomy picture for Ghana's economic growth and job creation in the knowledge age. The role of human capital for economic growth cannot be underestimated, yet a developing country like Ghana continues to perform poorly on such indices. Such weak performance in human capital development has led stakeholders in recent times to question the employability of Ghanaian and African youths (McCown, 2015).

Nevertheless, it is instructive to account for caveats involved when conducting cross-cultural comparative studies of entrepreneurship surveys due to structural variations and access to secondary data. Such caveats echoed by entrepreneurship reviewers who intimate that international comparative studies of "entrepreneurship is rare, hampered by barriers such as difficulty in gaining access to entrepreneurs in other countries, high expense," and unavailability of reliable data (Mueller & Thomas, 2000, p. 53). Hence, country specific findings on entrepreneurship construct based on Ajzen and Fishbein's (1980) theory of planned behaviour might offer hope for higher education curriculum design and the African academy.

### **Entrepreneurship and the Theory of Planned Behaviour**

The theory of planned behaviour (TPB) originally proposed by Icek Ajzen underpinned this study. Ajzen's (1991) TPB is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) to account for the original model's limitations in dealing with behaviours over which people have incomplete volitional control. Ajzen proposed that intentions are motivational drivers that guide individuals towards how rigid and willing they are to achieve their goals. Performance achievement depends on how strong an individual's intentions are towards a goal. Intentions occupy a central theme in TPB. Indeed, TPB shares its principal concept of perceived behavioural control with theory of achievement motivation (Atkinson, 1964) and perceived self-efficacy (Bandura, 1982) yet, with slight variation in individual's anticipated resources management in the case of TPB.

According to Hobbis and Sutton (2005: 8), the TPB has been widely applied in empirical studies to identify the predictors of people's covert and overt behaviours. In his review of the TPB, Ajzen (1985) acknowledges the inherent limitation in the model that indeed, intentions of planned behaviour are only feasible with access to requisite opportunities and resources such as skills, money, time, and environmental support. He describes availability of such resources as the individual's actual control over his or her behaviour. Wide range of domains such as animal learning, level of aspirations, person perception, attribution, performance of psychomotor, and cognitive assignments have all seen applications of the TPB.

The TPB proposes three foundations of intentional behaviour. Thus, the intention to undertake a particular behaviour is likely to be influenced by (i) the individual's attitude, (ii) his/her subjective norms, and (iii) the constructed control mechanisms directing the intended conduct. Jinying and Pelagie further explains that in general the stronger the individual's intention to engage in behaviour, the more he/she is likely to perform it. Indeed, much of the research into intentions focused on proximal behaviours but not long-term goals. TPB has been used to explain entrepreneurs' behaviours (Krueger & Carsrud, 1993; Tounes, 2006; Boissin, Chollet, & Emin, 2008; Jinying & Pelagie, 2014). For instance, Sieger, Fueglistaller, and Zellweger (2011) used TPB in their study of university students' intentions of entrepreneurship activities after graduation. According to Hobbis and Sutton, (2005: 9), the underlying theme of the TPB emphasises behavioural change that accounts for individuals' attitudes, perceived norms (individual or social), and perceived behavioural control. Therefore, such a theory would be of immense help to career guidance and counsellors, HRM practitioners, and entrepreneurship coaches in managing the cognitive intentions of would-be entrepreneurs. In the context of the current study, students' entrepreneurial propensity (intention) in Ghanaian public universities was explored as the main experimental variable using multivariate approaches. In addition, the study examined students' personal

background and institutional factors as antecedents. The choice of TPB for the study of students' intention to undertake entrepreneurial tasks and the acquisition of innovative skills for job creation could be explained within institutional support, personal responsibility to plan a career, and achieving goals. Therefore, two main research questions guided the study:

1. Will students differ on their levels of entrepreneurship intention?
2. How will students' economic background, access to computers, and preferred sector of employment differentiate students on their entrepreneurship skills acquisition?

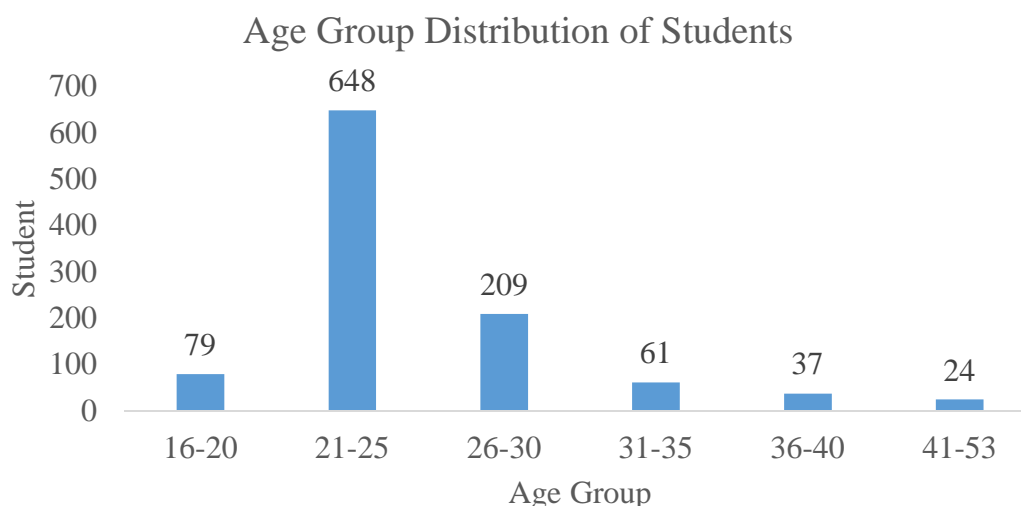
## Method

This segment describes the research design, population, sampling techniques, and the instrumentation. Reliability and validity reports for the questionnaire are reported with the variables descriptions in this section.

### Population, Sampling, and Participants

Stratified sampling approach was employed to select 1159 final year undergraduates from five Ghanaian universities studying from seven business education programmes (financial accounting, marketing, human resource management, general management, banking, health administration, and secretarial). According to research methodologists, sampling frames can be grouped into categories with the goal of have a representations for comparison (Cohen, Manion, & Morrison, 2007; Babbie, 2010). Cohen et al. suggest that researchers are not obliged to select equal samples from groups and this approach is most suitable for homogenous groups (p. 112). Business faculties from public and private universities were of interest to us in this study. Hence, three government assisted universities with business education faculties were selected with two private universities selected.

The choice of homogenous samples was also informed by earlier studies on students with business skills being able to explore entrepreneurship opportunities comparable to their non-business counterparts (Geldhof, et al., 2014; Ajzen & Fishbein, 1980). Predominantly, financial accounting students were 59% (n = 685) followed by human resource management students (14%; n = 166), and banking students being the least representatives with 1% (n = 15). According to universities, 84% (n = 969) of respondents were from government funded and 16% (n = 189) privately managed. Gender distribution of the samples has 58% (n = 674) males and 42% (n = 481) females – a 17% (n = 193) difference. A reversal trend was observed in participants' between 16 and 30 years constituted 90% (n = 846) from public universities with 10% (n = 90) from the two private institutions. On the contrary, 58% (n = 71) of private universities compared with public universities students' 42% (n = 42) were between 16 and 30 years. Figure 1 further illustrates the youthful characteristics of our samples with 21 to 30 years groups dominating.



**Figure 2: Age distribution of final year students in this study.**

By extension, it seems our data suggests that whilst public universities are more likely to attract applicants from the senior high schools, their private counterparts could be dealing with adults and working class students with implications for programme marketing, curriculum designs, and pedagogical approaches.

## Research Design

The purpose of collecting data for descriptive purpose using questionnaires is referred to as survey research design (Jackson, 2009: 87). Our goal in the current study was to establish students' levels and predict factors more likely to explain variance in entrepreneurship intentions administering closed-ended questions to undergraduates from five university campuses. Due to the large sample size involved, we found questionnaire most appropriate to eliciting quick and reliable information as alluded to others (Johnson & Christensen, 2008; Creswell, 2012). The key predictor variables manipulated for answering the two research questions were students' socio-economic background (where they grew up), access to personal computers on campus, and choice of sectors they would prefer to work and were matched against entrepreneurship skills development (dependent variable). On the other hand, within-subjects manipulations were used to determine students' levels of entrepreneurship development for variance analysis.

## Instrumentation

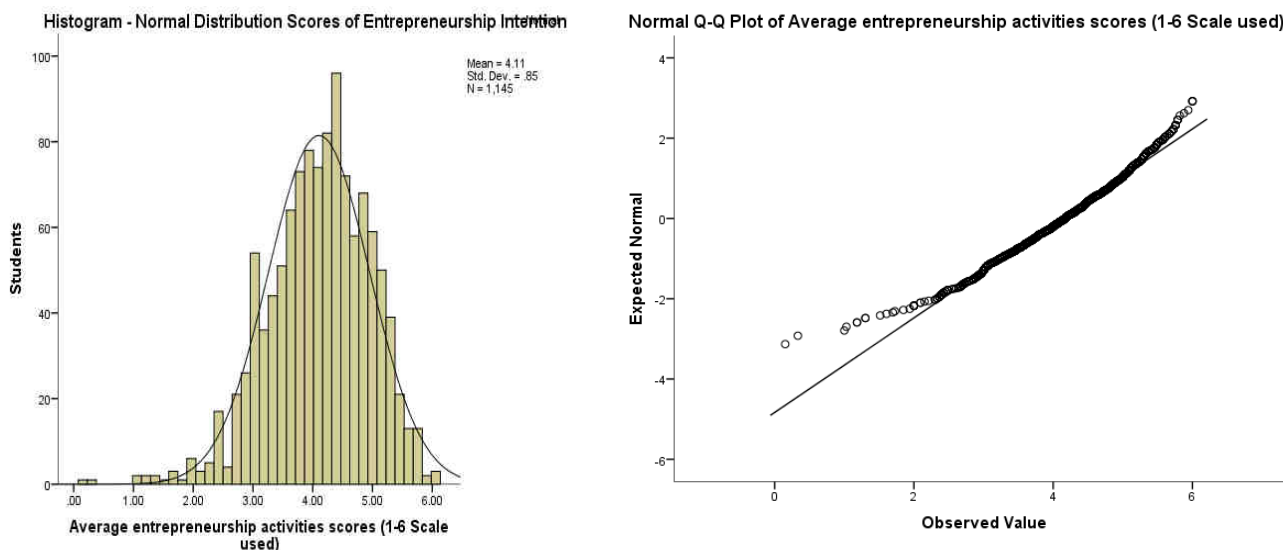
Jackson (2009) submits that survey items must be reliable and valid in a survey designs. On criteria for reliability in research, Field (2009) suggests that scores above 0.7 can be considered as highly achieving internal consistency amongst items. With 33 questionnaire items constructed to measure business students' entrepreneurship intention, Cronbach's alpha reliability score of 0.94 was realised, exceeding Field's recommendation. In addition, the study adhered to the caveat of wholesale adoption of entrepreneurial intention instruments in different cultures without exploratory and confirmatory factor analysis procedures, which led Couto, Mariano, and Mayer (2013) to suggest that cultural variations are present in entrepreneurship intention measures using factor analysis techniques in Brazilian context. Consequently, the adopted instrument for this study also employed exploratory factor analysis (EFA) techniques to achieve construct validation and retained dominant items above 0.5 coefficients recommended by (Field, 2009). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy statistics proposed by Kaiser (1970) and Bartlett's test for sphericity that measures the ratio of squared correlations between variables and the squared partial correlation between variables computed for individual and multiple (overall) variables in a study (Field, 2009) was highly significant ( $\chi^2(528) = 16859.05, p = 0.001$ ).

## Procedure

To ensure ecological validity and independent of scores (assumption for the use of parametric statistics), students independently answered questionnaires in during lectures (classrooms). No incentives were given to students during data collection process. In addition, ethics of voluntary participation, no deception, and gatekeeping protocols were observed in this study. Demographic information on age, university, and gender were obtained with their entrepreneurship intention level scores as the dependent variable (DV). On a six-point Likert's scale (*never* = 1, *almost never* = 2, *sometimes* = 3, *fairly often* = 4, *very often* = 5, and *always* = 6), students responses on the DV were grouped into *Level 1* (low awareness); *Level 2* (moderate group); and *Level 3* (highly entrepreneurship students) using 'Recode Into Different Variables' under Transform menu in IBM-SPSS version 23. Based on Research Question 1, we hypothesised that there will not be statistical significant difference between the three levels of students' entrepreneurship intention.

Means, SD, and one-way ANOVA was used for the two main research questions of the study. Descriptive statistics help use describe our constructs (Field, 2009). However, ANOVA is used to test multiple independent variables measured with categorical scale against a metric scale dependent construct (Jackson, 2009: 261; Howell, 2010). Fundamental assumptions associated with the use of ANOVA (inferential statistics) were adhered to with independence of scores, use of metric scale, normality, linearity, and error variances assumptions observed. Figure 2 shows that assumptions of normal and linear distributions of scores were seen.

However, the homogeneity of equal variances hypothesis was not met in this study (Leven's (2, 1142),  $p = .0001$ ). Therefore, we proceeded to interpret the equal-variances not assumed for our ANOVA result (see Table 1). The next section presents the findings to the research questions in this study.



**Figure 3: Normality and linearity chart for the entrepreneurship intention**

## Results

The study hypothesized that pedagogical approach to entrepreneurship training by grouping trainees for same curriculum delivery could be an anomaly since there might be progression, economic background, computer access, and preferred sector of work differences for educational administrators' considerations. This section presents the results of three research questions deduced from our research objectives. We sought to establish the statistical significance between levels of entrepreneurship skills acquisition (dependent variable) and discriminate between individual demographic variables with entrepreneurship intention using inferential and descriptive statistics in hypothesis testing.

### Research Question 1 Results

Instead of conventional practice of grouping students in entrepreneurship education programme, we proposed in Research Question 1 to establish whether students varied on entrepreneurship intentions skills acquisitions in the Ghanaian setting. Descriptive statistics showed that overall, 1145 students indicated their scores on entrepreneurship intentions factor ( $M = 4.11$ ,  $SD = 0.85$ ,  $SE = 0.03$ ,  $CI = 4.06, 4.16$ ). Thus, with the mean of 4, the data showed that our samples *fairly often* considered entrepreneurship initiatives. With outliers likely to influence mean scores (Field, 2009), we proceeded to examine the groupings of students' entrepreneurship skills acquisition. The results showed *low awareness* ( $M = 3.27$ ,  $SD = .57$ ,  $SE = .03$ ,  $CI = 3.21, 3.32$ ); *moderate* ( $M = 4.42$ ,  $SD = .28$ ,  $SE = 0.01$ ,  $CI = 4.40, 4.45$ ); and *highly awareness* ( $M = 5.27$ ,  $SD = 0.25$ ,  $SE = 0.18$ ,  $CI = 5.24, 5.31$ ) groupings existed in students' entrepreneurship intention stages.

Consequently, we proceeded to subject the descriptive statistics in Research Question 1 to significant testing with  $H_01$  that students' entrepreneurship intention levels will not significantly differ. The alpha value of 0.05 was used as criterion of rejecting or retaining our null hypothesis. The one-way ANOVA outcomes in Table 1 revealed a statistical significant differences ( $F(2) = 1768.16$ ,  $p = 0.001$ ) between students' levels. Hence, we rejected  $H_01$  in favour of  $H_A1$  (implied). We concluded that students' mean scores varied progressively from low to high entrepreneurship activities and concluded that pedagogical practices failure to recognise diversity of learners could be a problem.

**Table 1 : ANOVA Results for Students' Entrepreneurship activities Levels**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	624.171	2	312.085	1768.155	.000
Within Groups	201.567	1142	.177		
<b>Total</b>	<b>825.737</b>	<b>1144</b>			

Source: Survey data 2018

We followed the significant ANOVA results with Games-Howell's post-hoc comparison using independent sample t-test (see Table 2). There were statistical significant differences between students at low and moderate ( $p = 0.001$ ); low and high ( $p = 0.001$ ); and moderate and high ( $p = 0.001$ ) entrepreneurship levels in this study. The follow up results to the Ho1 demonstrated that indeed, students' scores on entrepreneurship skills acquisition differed from one level to another, which has implication for pedagogy and curriculum design for entrepreneurship education in higher education.

**Table 2: Post-Hoc Tests for Entrepreneurship Intention Levels**

(I) Level of entrepreneurship intention	of (J) Level of entrepreneurship intention	Mean Difference (I-J)	SE	Sig.	95% CI	
					Lower Bound	Upper Bound
Low	Moderate	-1.15360*	.02980	.000	-1.2236	-1.0836
	High	-2.0059*	.03269	.000	-2.0814	-1.9278
Moderate	Low	1.15360*	.02980	.000	1.0836	1.2236
	High	-.85099*	.02235	.000	-.9036	-.7984
High	Low	2.00459*	.03269	.000	1.9278	2.0814
	Moderate	.85099*	.02235	.000	.7984	.9036

\*. The mean difference is significant at the 0.05 level. Games-Howell's test

### Results of Research Question 2

Multiple regression analysis predicted students' entrepreneurship skills acquisition from three predictors' - *economic background* ( $M = 3.13, SD = 1.23$ ), *computer access* ( $M = 3.71, SD = 1.22$ ), and *private sector employment* ( $M = 3.80, SD = 1.21$ ) mean scores. The predictors were measured on a 5-point Likert scale (1= *strongly disagree* to 5= *strongly agree*). The data exploration for linearity assumption also showed all the three predictors had significant positive relationship with the outcome factor in this study - economic background ( $r = 0.11, p = 0.0001$ ), computer access ( $r = 0.16, p = 0.0001$ ), and private sector employment ( $r = 0.16, p = 0.0001$ ) recorded significant but weak associations as predictors.

Table 3 shows that collectively, the three predictors revealed a negative significant relationship between access to computer and economic background ( $r = -0.16, p = 0.001$ ) – i.e., as students economic status improves, the probability of computer access is likely to improve. Therefore, we have confidence in our data predicting the outcome variable for Hypothesis 2.

**Table 3 : Model Summary Results for Hypothesis 2**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	SE of the Estimate	Change Statistics				F	Durbin-Watson
					R <sup>2</sup> Change	F Change	df1	df2		
1	.247 <sup>a</sup>	.061	.058	.80279	.061	21.836	3	1009	.000	1.817

a. Predictors: (Constant), I prefer to work in the private public sector., I grew up from home with difficult economic background, I have access to computers for my work as a student

b. Dependent Variable: Average entrepreneurship activities scores (1-6 Scale used)

The results of the regression revealed that the three predictors collectively explained 6.1% of variance ( $R^2 = .061, F(3, 1009) = 21.84, p = 0.001$ ) in the outcome factor. Our study also witnessed 0.003 shrinkage in  $R^2$ -value with  $\Delta R^2 = 0.058$ , if the entire population had participated in this study. The ANOVA computation to the regression model was statistically significant ( $F(3) = 21.84, p = 0.0001$ ).

Even though the regression model and the ANOVA outcomes were statistically significant, they did not account for individual error variances explained in our data. Hence, we turned to the  $\beta$ -values as post-hoc tests to account for each predictor's contribution to explaining circumstances surrounding business students' entrepreneurship skills acquisition in a higher education environment. The three predictors significantly explained students' entrepreneurship skills acquisition. Students' economic background showed over 14% ( $t = 4.57, p = 0.001, \beta = 0.141, CI(0.054, 0.136)$ ), computer access had 15% ( $t = 4.76, p = 0.001, \beta = 0.151, CI(0.060, 0.145)$ ), and private sector employment with 13.5% ( $t = 4.30, p = 0.001, \beta = 0.135, CI(0.050, 0.134)$ ).

Therefore, we rejected the null Hypothesis 2 and concluded that business students' economic backgrounds, access to personal computers, and choice to work for private organisations have statistical influence on entrepreneurship intention activities in the current study. The next section discusses the practical



significance of the findings in this study with conclusions and recommendations for pedagogy, curriculum design, and educational administration and management outlined.

## Discussion

The entrepreneurship characteristics studies in higher education seems to be receiving attention in the past decades with works on types of management courses and skills students acquired and other personal attributes (Atef & Al-Balushi, 2014; Tkachev & Kolvereid, 1999; Fayolle, Gailly, & Lassas-Clerc, 2006). Whilst others believed that entrepreneurship study presents unique means to identify talents for job creation (Geldhof, et al., 2014), others focused on success stories of entrepreneurs (Kuenyehia, 2012) to the neglect of predictive studies and interventions. Personal attributes such as age (Damon & Lerner, 2008; Sergeant & Crawford, 2001), gender (Geldhof, et al., 2014), and authoritative parentage (Schmitt-Rodermund, 2004) influence on entrepreneurship traits. Therefore, the current study sought to extend the traits approach to unearthing entrepreneurship intention traits among university students with the proposition that students' differ on their interest levels. Specifically, the current study sought to examine levels of entrepreneurship intention, socio-economic background, access to computers, and preferred sector of employment will influence Ghanaian graduates' entrepreneurship intention scores. The outcome showed statistical significant differences exist between students' level of entrepreneurship skills acquisition in this study. Our results seems to align with the findings from Eastern Europe – Russia (Tkachev & Kolvereid, 1999) and Central Europe (Fayolle, Gailly, & Lassas-Clerc, 2006) that entrepreneurship education is found to have correlated significantly with students' future entrepreneurship intentions. Therefore, we support the views of Rezaei-zadeh, Cleary, O'Reilly, Abdollahi, and Murphy (2014) that entrepreneurship education has the potential of enhancing the skills of would-be and extant entrepreneurs today.

Perhaps, the novelty of the current study was the successful classification of students' entrepreneurship levels (low, moderate, and high). The ANOVA model also significantly validated the three level categorisation – and indication of diversity management in entrepreneurship education space. Educational administrators and curriculum experts should assist students from low, moderate, and high entrepreneurship awareness levels in their quest to develop entrepreneurial skills within the African indigenous knowledge systems (IKS) - as advocated by Anguala (2008). Finally, Ghanaian government's Youth Entrepreneurship Programme and academic departments offering entrepreneurship education could consider diversity management interventions and refrain from collective approach to training delivery.

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