

Entrepreneurship education in Ghana – the case of the KNUST entrepreneurship clinic

Entrepreneurship
education in
Ghana

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Received 27 February 2017

Revised 5 May 2017

12 June 2017

Accepted 21 June 2017

Abstract

Purpose – Entrepreneurship education thrives on the pillars of experiential education. Using the case of the Kwame Nkrumah University of Science and Technology in Ghana, the purpose of this paper is to examine the entrepreneurship clinic (EC) as a viable pedagogy for the promotion of experiential education in entrepreneurship.

Design/methodology/approach – The paper relies on insider action research to analyse, within Joplin's five-step model, the case of the EC at the Kwame Nkrumah University of Science and Technology (KNUST), Ghana.

Findings – The analysis showed that the KNUST clinic comprises five main activities including preparation, orientation, selection and matching, coaching and monitoring and evaluation. In relation to Joplin's five-step model, the first three stages of the clinic provide focus for the clinic while the remaining two stages – coaching and monitoring and evaluation – entail activities that are geared towards action, support, feedback and debrief. Through the clinic, thousands of tertiary students have been trained in entrepreneurship and new venture creation; some selected participants have been coached while others have had the opportunity to qualify for business incubation.

Research limitations/implications – Although the paper discusses some achievements of the clinic in relation to enrolment and fundraising, it does not assess the impact of the clinic on the entrepreneurial competencies, intentions and initiatives of participants, hence, these issues are recommended for future research.

Practical implications – The paper demonstrates that it is feasible to implement the EC methodology, irrespective of the cost and time implications that are often associated with experiential educational methodologies. However, support from university management, funding raising from internal and external sources and technical support from industry and government agencies are key to the sustainability of clinics.

Originality/value – The paper adds novelty to the entrepreneurship education literature by bringing to the fore how a university in an emerging African economy is implementing and managing the EC pedagogy.

Keywords Education, Entrepreneurship, Development, Experiential, Clinic

Paper type Case study

Introduction

Entrepreneurship is recognised globally as a critical economic development strategy for job and wealth creation. Notably, innovation and knowledge spillover theories and related empirical studies, such as those by Schumpeter (1934/1983), Acs *et al.* (2009), Decker *et al.* (2014), confirm the role of entrepreneurship in economic development through widespread innovations by entrepreneurs and entrepreneurial start-ups, that generate employment and wealth, especially, for the innovating economies. For instance, entrepreneurship has been an integral part of Malaysia's economic policies and is said to have played a significant role in the country's attainment of a middle income status and the reduction of poverty rate in Peninsular Malaysia from 49.3 per cent in 1970 to 16.5 per cent, in 1990 (Bin Yusoff *et al.*, 2015; Rahim *et al.*, 2015).

Due to the strategic role of entrepreneurship in economic development, entrepreneurship, enterprise development and entrepreneurship education and training (EET) have been embraced by major global development organisations, including the United Nations, the



World Bank, the International Labour Organisation (ILO) and the World Economic Forum (Bhat and Khan, 2014; Mundy and Verger, 2015). The World Bank and the ILO, for example, have signed onto the youth employment network and have designed specific EET programmes aimed at addressing youth and female unemployment in selected countries (Avura and Ulzen-Appiah, 2016; Bhat and Khan, 2014). The UK, Malaysia and Nigeria are examples of countries that have, in varying degrees, deepened their efforts at entrepreneurship education within the past two decades.

The UK, by the year 2000, had affirmed business and entrepreneurial development as one of the four strategic goals for British universities and this was backed by the introduction of the Higher Education Innovation Fund, a significant third funding stream to English higher education institutions (HEIs), that supports, among other things, the development of entrepreneurial and enterprising staff, students and graduates (Kitagawa and Lightowler, 2013; QAAHE, 2012). In its quest to become the most enterprising economy in the world, the UK government, in 2008, introduced a new enterprise policy framework which highlights the need for enterprise education from primary to tertiary education (Jones, 2014; QAAHE, 2012). Similarly, Malaysia introduced the Higher Education Entrepreneurship Development Policy (HEEDP) in 2010 to foster entrepreneurial thinking and action among students and graduates as a catalyst for the achievement of economic transformation from a middle to a high income country. A distinguishing feature of the Malaysian approach to EET at the tertiary level is the quest of the HEEDP to establish an entrepreneurship institute in every higher education institution in Malaysia (Rahim *et al.*, 2015; Bin Yusoff *et al.*, 2015). In a similar vein, Nigeria's Federal Ministry of Education, since 2007, has made entrepreneurship education compulsory in all HEIs in Nigeria, mainly, to stimulate employment and reduce poverty (Akhuemonkhan *et al.*, 2013; Oguntimehin and Olaniran, 2017).

In contrast to Nigeria, entrepreneurship education is not mandatory for all HEIs in Ghana. Moreover, contrary to the UK and Malaysia that have specific policies and funding streams in support of EET in HEIs, Ghana is yet to introduce a national entrepreneurship education policy or fund. As a result, HEIs have had to rely on internally-generated funds, competition for national MSME and youth entrepreneurship funds and, in some instances, donor funding, for their EET programmes or courses. Ghana's focus has mainly been on entrepreneurship training and financing for the small enterprise sector, which constitutes 92 per cent of all businesses in Ghana and employs 65 per cent of the urban labour force (Asomaning and Abdulai, 2015; Enninful *et al.*, 2016).

Literature indicates that Ghana's small business sector grew in size as an aftermath of the World Bank's structural adjustment programme, in the 1980s, which left in its wake a large pool of retrenched government sector workers who resorted to informal, necessity-based entrepreneurship as a means of earning a living for survival (Adom, 2016; Hilson and Potter, 2005). As part of measures to manage the transition from a highly state-driven economy to a private sector-led economy, characterised by a larger small enterprise sector, the Government of Ghana, in 1983, established the National Board for Small Scale Industries to promote the growth and development of the sector. Some current initiatives, aimed at enterprise development, include the Support Programme for Enterprise Empowerment and Development, Rural Enterprise Project and the Enhancing Growth in New Enterprise (Forkuoh *et al.*, 2015; Obeng *et al.*, 2014).

Since the late 2000s, government's effort at addressing poverty and unemployment has embraced youth-oriented entrepreneurship initiatives due to high youth and graduate unemployment. Available statistics show that about 250,000 young people enter the Ghanaian labour market annually. Out of that figure, only two per cent are able to secure jobs in the formal sector while the rest strive to survive in the informal sector or remain unemployed. Graduate unemployment has also been on the ascendancy reaching 40 per cent

in 2011 as against 14.7 per cent in 1987 (Baah-Boateng, 2015; Zakaria *et al.*, 2014). In order to address the unemployment situation, the government of Ghana launched the National Youth Employment Programme (NYEP) in 2006.

The NYEP was restructured into the Ghana Youth Employment and Entrepreneurial Development Agency (GYEEDA) in 2012, and in 2015, GYEEDA was also reconstituted into the Youth Employment Agency (YEA) under Act 887 of the Republic of Ghana. The core mandate of the YEA is to empower young people to contribute meaningfully to the sustainable socio-economic development of Ghana. Other interventions include the Local Enterprise Skills Development Program, Youth in Agriculture Programme, Ghana Centre for Entrepreneurship, Employment and Innovation (GCEEI) and Competency Training for Fresh and Unemployed Graduates Programme (Asamoah, 2015; Osei-Assibey, 2014; Avura and Ulzen-Appiah, 2016). The government of Ghana, in its 2017 budget statement announced its intention to pursue a National Entrepreneurship and Innovation Plan.

In addition to the aforementioned interventions, some tertiary institutions in Ghana, including polytechnics and universities, have introduced entrepreneurship programmes and courses with varied goals such as developing the entrepreneurial mindsets of students, stimulating the establishment of entrepreneurial start-ups, creating an enterprising workforce and a qualified pool of enterprise development experts and scholars (Denanyoh *et al.*, 2015; Mensah, 2013). Other HEIs have established entrepreneurship centres and business incubators. Typical examples include the Centre for Entrepreneurship and Small Enterprise Development of the University of Cape Coast and its business incubator called the University of Cape Coast Business Incubator; and the Kumasi Business Incubator (KBI) of the Kwame Nkrumah University of Science and Technology (KNUST). In 2012, the KNUST instituted an entrepreneurship clinic (EC) which is an entrepreneurship education pedagogy that involves offering practical and experiential training to students in an interactive learning environment (Hinton and Howe, 2015; Tawfik *et al.*, 2012). The KNUST EC is justified on the account that the university is the pioneering institution in Ghana that is expected to engage in science and technology-based research and related activities that can lead to innovation.

However, the implementation of experiential entrepreneurship education often comes with several challenges including costs and time, for instance, in developing new curriculum, acquiring the necessary infrastructure to create the right learning environments, exposing students to the entrepreneurial eco-system, and providing seed capital, if venture creation is an objective. In educational institutions where the cost implications of experiential entrepreneurship education pose a challenge, emphasis is often placed on the static or theoretical aspect at the expense of experiential education (Akhuemonkhan *et al.*, 2013; Fenton and Gallant, 2016).

This paper demonstrates how, in spite of resource constraints, the KNUST in Ghana, has been able to implement an experiential education pedagogy in the form of an EC. The rest of the paper consists of review of relevant literature and discussion of the KNUST clinic as an experiential education, using Joplin's five-step model (Joplin, 1995). Other issues discussed in the paper are the organisation and logistics of the clinic and related outcomes, as well as key challenges of the clinic. The paper ends with conclusions and policy implications.

Literature review

This section of the paper comprises a review of the meaning, purpose and rationale of entrepreneurship education and, in so doing, provides justification for its delivery in an experiential manner, for example, as proposed by Joplin in her five-step model of experiential education (Joplin, 1995). The review ends with an exposition on EC as a viable pedagogy for the provision of experiential entrepreneurship education.

Entrepreneurship education and why it should be experiential

Entrepreneurship education is a form of education in which the recipients of the education are equipped with entrepreneurial competencies with the aim of making the recipients more conscious of the context of their environment and better predisposed towards seizing opportunities in the pursuit of social and economic activities (Elmuti *et al.*, 2012; Malach and Malach, 2014). Specifically, entrepreneurship education is a structured, formal conveyance of entrepreneurial competencies (Alberti *et al.*, 2004; Young, 1997) and involves the process of providing individuals with the ability to recognise commercial opportunities and the insight, self-esteem, knowledge and skills to act on them (Jones and English, 2004).

Shepherd and Douglas (1997) propose that the essence of entrepreneurship education is the ability to envision and chart a course for a new business venture. Shepherd and Douglas' (1997) assertion creates a clear distinction between entrepreneurship education and enterprise education. Enterprise education, according to the Quality Assurance Agency for Higher Education (QAAHE) (2012) of the UK, involves equipping students with an enhanced capacity to generate original ideas and skills to implement them, whereas entrepreneurship education focusses on the development and application of an enterprising mindset and skills in the specific contexts of setting up a new venture, developing and growing an existing business, or designing an entrepreneurial organisation.

On the basis of the foregoing discussion, it can be deduced that entrepreneurship education and enterprise education intersect at the point of knowledge and skills acquisition for idea generation and implementation, when the goal of venture creation or upgrading is taken out of the equation. In other words, enterprising skills are generic in nature and can affect the employability of students as well as the ability of students to pursue entrepreneurship, defined by Timmons and Spinelli (2007) as a way of thinking, reasoning, and acting that is opportunity obsessed, holistic in approach and leadership balanced. In a similar way, the European Commission (2012) identifies vision, pursuit of change, creativity and innovation as some of the key precepts of entrepreneurship which must be possessed by all persons undergoing education. The rationale for the Commission's viewpoint is that entrepreneurial knowledge is considered relevant for personal, social and work life.

Therefore, besides the goal of preparing students for self-employment as entrepreneurs, entrepreneurship education should equip students with entrepreneurial skills and values relevant for the pursuit of intrapreneurship, that is the act of behaving entrepreneurially in the organisations that employ them (Barringer and Ireland, 2008; Zimmerer and Scarborough, 2009). In order for persons to behave entrepreneurially or succeed as entrepreneurs, they must possess the requisite entrepreneurial competencies (Barringer and Ireland, 2008; Mitchelmore and Rowley, 2013), often captioned as entrepreneurial knowledge (Antončič *et al.*, 2005). According to Antončič *et al.* (2005), entrepreneurial knowledge refers to the concepts, skills and mentality that are critical to enterprise formation and development. The acquisition of entrepreneurial knowledge takes place through entrepreneurial learning which is the active and cognitive process that individuals employ as they acquire, retain and use entrepreneurial knowledge through education (Minniti and Bygrave, 2001; Moustaghfir and Širca, 2010; Young, 1997).

Malach and Malach (2014) observe that experiential education is one key philosophy and methodology that is widely acknowledged to facilitate entrepreneurial learning due to its ability to convey substantive, theoretical knowledge and intangible learning experiences best absorbed through active participation. Experiential education, according to Breunig (2005), is a philosophy and methodology in which educators purposefully engage with learners in direct experience and focussed reflection in order to increase knowledge, develop skills and clarify values. Thus, contrary to cognitive theories of learning that are rooted in the acquisition, manipulation and recall of abstract symbols, experiential education makes possible experiential learning through transactive interactions between learners and

educators situated within the larger system level issues of education, including the socio-economic elements in the learning environment (Itin, 1999; Kolb, 1984).

Experiential learning can be traced to Dewey's concept of pragmatism which places action as a link between thought and application; a concept developed upon the basis that education "is a process of living and not a preparation for future living" (Dewey, 1897/1972, p. 87 as cited in Beaudin and Quick, 1995; Joplin, 1995). On a similar basis, Kolb (1984) argues that there should be a relationship between the classroom and the future work for which the classroom is apparently preparing the learner (Kolb, 1984). Drawing upon the works of theorists such as Dewey (1897/1972, p. 87 as cited in Beaudin and Quick, 1995) and Kolb (1984), Beaudin and Quick (1995) indicate that experiential learning is applicable to three areas of educational endeavours, namely, field-based experiences, prior learning assessment and experiential classroom-based learning. In order to facilitate experiential learning, experiential education must consist of carefully chosen experiences that are structured to ensure that learners take initiative, make decisions and are accountable for the results (Itin, 1999).

Joplin's five-step model of experiential education (Joplin, 1995) embraces the aforementioned elements of experiential learning, namely initiation, decision making and accountability. The model is a continuum that provides educators with the tools for achieving experiential education as well as reflection, without which experiential education is incomplete (Beaudin and Quick, 1995). It can be likened to Kolb's four-stage model of action research comprising, planning, acting, observing and reflecting and its variant version by Race (1993) made up of wanting, doing, feedback and digesting (Healey and Jenkins, 2000). A distinguishing feature of Joplin's model is that it gives explicit prominence to the provision of the requisite support and feedback throughout the learning process. Joplin's five-stage model comprises focus, action, support, feedback and debrief (Fenton and Gallant, 2016).

According to Joplin (1995), focus constitutes subject definition and preparation for addressing the challenge that will be presented in the action stage. In focussing, a critical role of the facilitator is to present the task to the learner and to isolate the attention of the learner for concentration. Focus could be achieved through learning contracts or group discussions where learners present their expectations, desires or needs (Joplin, 1995; Torock, 2009). This phase in the model can be likened to the planning phase of Kolb's cycle in educational practice whereby action plans and learning contracts are developed (Healey and Jenkins, 2000).

Action consists of placing the learner in a stressful situation where he or she is unable to avoid the problem presented (Joplin, 1995). Beaudin and Quick (1995) explain that action is at the core of experiential learning and it entails learning by doing, involving direct mental, physical or emotional contact with the phenomenon under study. According to Dewey (1934/1964 as cited in Beaudin and Quick, 1995), knowing or learning occurs through the interpretation of events that are encountered. Action, therefore, places responsibility on the learner and provides the learner with the opportunity to implement ideas through case studies, simulations, portfolio assessments, internships and student business start-ups (Beaudin and Quick, 1995; Joplin, 1995). In order to achieve effective action, facilitators must have great faith in learners while learners must also have faith in themselves (Lee *et al.*, 2014).

Support, in Joplin's (1995) model, constitutes verbal, written or physical activity, which ensures that learners have the necessary information to motivate them for effective learning (Lindsay and Ewert, 1999; Torock, 2009). Robinson and Malach (2007) explain that support could take the form of positive reinforcement to reaffirm the learner's cognitive knowledge. Both action and support are similar to three phases of Gilbert's mathematics, namely skills demonstration by the instructor, guidance of students in skills trial and skills release or application (Street and Johnson, 2014).

Feedback involves providing information to participants about their performance, and could take the form of comments on the work and mannerisms of students while debrief comprises sorting and ordering of information based on personal perceptions and beliefs as well as provision of information of what has to be done next to connect the cycle back to the first step of focus (Joplin, 1995; Fenton and Gallant, 2016). Debrief is the fifth stage in Joplin's model. During debrief, actions that have previously been taken are subjected to questioning, integration and or evaluation to give the learner the opportunity to learn from experience (Roberts, 2006). Joplin (1995) intimates that in experiential education, debrief has to be made public, for instance through discussions and class presentations, to ensure that the learner's conclusions are verified and evaluated against a greater body of perception. The scope or duration of experiential learning can be "mini" or "maxi", in that, it can take a few seconds or years to complete (Roberts, 2006).

From the foregoing review, it is evident that the nature and purpose of entrepreneurship education necessitate the adoption of experiential educational delivery methods. A delivery method that is gaining much currency is the EC.

EC

EC is an entrepreneurship education pedagogy that involves offering practical and experiential training to students in an interactive learning environment (Hinton and Howe, 2015; Tawfik *et al.*, 2012). It is employed to fulfil the dynamic or practical aspect of entrepreneurship education and serves as a complement to static education or the acquisition of theoretical knowledge in entrepreneurship (Roberts, 2006; Robinson and Malach, 2007). Todorovic (2007) and Robinson and Malach (2007) explain that the static component of education provides students with knowledge whereas the dynamic part seeks to offer students the opportunity to acquire skills, attitudes and values relevant to the application of the knowledge in practical ways.

ECs constitute a pedagogy of critical diagnosis of business ideas and development of the ideas by participants of the clinic with guidance and support from seasoned entrepreneurs and other practitioners (Sukumaran *et al.*, 2007; Venkattakumar *et al.*, 2016). The interaction between clinic participants and practitioners, including entrepreneurs, exposes students or learners to the entrepreneurial eco-system; a system defined by Stam (2015, p. 5) "as a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship". Networks of entrepreneurs, leadership, finance and support services, are at the centre of the entrepreneurial eco-system and interaction with these elements of the system is an essential means for students to nurture an entrepreneurial spirit, and to acquire practical entrepreneurial skills and values (Jones and Lainez, 2014).

ECs can be likened to boot camps and business incubation in that all the approaches are essential tools for entrepreneurship development (Sukumaran *et al.*, 2007; Tomiyama and Lüthje, 2014). They also facilitate experiential learning and have the ultimate goals of stimulating and harnessing innovation, business start-ups, employment generation and eventual socio-economic growth and development (Lalkaka, 2001; Hanumara *et al.*, 2013). Moreover, mentoring, coaching and exposure to the entrepreneurial ecosystem, through networking opportunities, are common to the various approaches (Hackett and Dilts, 2004; Pauwels *et al.*, 2015).

Nevertheless, whereas ECs and boot camps mainly concentrate on the idea development side of the entrepreneurial process, business incubation assumes the additional role of facilitating the implementation of viable business ideas, with a special focus on nurturing growth-oriented enterprises, by making the startup experience relatively easy, flexible and affordable (Bodnar *et al.*, 2014; Pauwels *et al.*, 2015). As a result, Theodorakopoulos *et al.* (2014) argue that community strength, identity health and boundary space quality are three key factors that influence the quality of business incubation. These qualities are made possible

through the provision of affordable working space and shared facilities, characteristics which are not typical to ECs. Moreover, ECs are known to last for relatively shorter periods of a few days or a few weeks while business incubation would usually last between three to six months and two to three years or more (Bruneel *et al.*, 2012; Chandra and Chao, 2016).

Another distinguishing feature is the relatively recent development of the concept EC as compared to business incubation which dates back to 1959, marked by the establishment of the Batavia Industrial Centre in New York (Raheem and Akhuemonkhan, 2014; Theodorakopoulos *et al.*, 2014). The concept of ECs, as indicated by Höffler and Leutner (2007) and Todorovic (2007), has been embraced in tertiary education. Particularly there has been an upsurge, over the past decade, in the use of ECs in law schools, while literature on law-related ECs continue to increase (Dangel and Madison, 2015; Phillips, 2015). According to Jones and Lainez (2014), some of the factors driving this trend are downward shifts in the economy that have necessitated revamping of the economy, academic reports extolling the benefits of experiential learning and student demands for hands-on experience and opportunities.

Another area that has seen growth in the adoption of the clinic concept is agriculture extension. India, in particular, has been an ardent promoter of agri-clinics since 2002 when the Indian Government launched the establishment of agri-clinics and agri-business centres (ACABC) to supplement public extension efforts for agricultural development (Armorikar *et al.*, 2016; Venkattakumar *et al.*, 2016). However, the ACABC model appears to embrace both the clinic concept and incubation by providing training and financial support to graduates with agriculture qualification to fine-tune their entrepreneurial ideas and to implement the ideas through the establishment of agri-ventures that, purposely, offer advisory and extension services to farmers (Bairwa *et al.*, 2014; Chandra and Chao, 2016).

ECs are often multidisciplinary in nature. Sukumaran *et al.* (2007), for instance, demonstrate how the Rowan University, in the USA, sought to find technological solutions for the developing world through an EC dubbed “entrepreneurs without borders”. In the clinic, business and engineering student majors were expected to collaborate in the identification, evaluation and exploitation of entrepreneurial opportunities that required the redesign or development of products for enhancing the quality of life of the people. The business students were mandated to conduct a survey of the developing world while the engineering students were commissioned to develop the technology, based on the outcome of the survey (Sukumaran *et al.*, 2007). The multidisciplinary approach to clinics promotes team work or partnerships and a sense of ownership which have been identified, by Beck (2005), as some of the elements of clinic success.

The impact of clinics, in the entrepreneurial eco-system, can be manifested in the socio-economic advancement of a community or nation, for instance, through the capacity of clinics to promote the generation of viable and transformative ideas whose eventual implementation produce advanced and competitive innovations for personal and the national good, creation of jobs that reduce employment deficits and the establishment of social enterprises that offer economic advancement to the underprivileged in society (Beck, 2005; Hinton and Howe, 2015). For example, Hanumara *et al.* (2013) indicate that clinics have resulted in technological licences and start-ups and academic-clinical partnerships provide the means for students, faculty and industry to rapidly and economically evaluate a wide range of challenges and design possible solutions in an era where most practitioners do not have the time, funding and skills to turn ideas into solutions.

Methodology

This paper is rooted in the interpretivist paradigm and adopts the case study approach to research, specifically insider action research, to discuss why and how the EC pedagogy has been embraced at the KNUST. Case study research involves in-depth study of a particular

individual, programme or event for a defined period of time (Leedy and Ormrod, 2010). Case studies, as reiterated by Flyvbjerg (2006), aid in the systematic production of exemplars that form the foundation of an effective academic discipline. Coghlan (2003, p. 459) explains that, “Action research tends to be opportunistic in that the situation being studied is one that is already occurring or being planned, and is not set up specifically for the purpose of the research”.

The paper identifies with the views of Flyvbjerg (2006) and Coghlan (2003) due to the fact that in 2012 when the KNUST EC was instituted, entrepreneurship educators were in search of effective methods of teaching entrepreneurship and that one could hardly spot Ghanaian cases of literature on ECs, or boot camps which are a closer version of ECs. Thus, although the KNUST clinic was not specifically set up for the purpose of research, the promoters of the clinic saw the need to engage in constant and systematic documentation of facts and figures in order to share the KNUST experience as a means of contributing to practice and the evolving literature on ECs. These realities conform to the duality criterion of case research, namely the duality of being situationally grounded while seeking a sense of generality through theory elaboration (Johnson, 1997; Ketokivi and Choi, 2014).

Case studies assume the nature of insider research when the researcher, or one or more of a group of researchers, is a member of the case study unit or organisation (Brannick and Coghlan, 2007; Nolen and Vander, 2007). Brannick and Coghlan (2007) define insider research as research by complete members of organisational systems in and on their own organisations. One of the authors of this paper is an employee of the KNUST, was a lead initiator of the KNUST clinic and has been actively engaged in the management of the clinic since its inception in 2012.

Insider action case research was employed in this study to, first and foremost, obtain in-depth information which other forms of research, such as questionnaire surveys, would ordinarily not be able to capture, and to, second, lay bare key facts that have not yet been captured by outside researchers (Ollila and Williams-Middleton, 2011). As argued by Flyvbjerg (2006), case research affords the researcher(s)’s proximity to reality and a learning process which will often constitute a prerequisite for advanced understanding of the phenomenon under study. However, case research, like other qualitative research approaches, is often criticised wrongly as a less rigorous and a less credible approach to research (Flyvbjerg, 2006). According to Baxter and Jack (2008) and Greene (2014) the credibility of case research and action research can be improved through strategies such as triangulation of data sources, data types and researchers allowing for the exploration of views from multiple perspectives.

Therefore, the qualitative data for this study comprised five-year experiences and observations of the lead investigator as well as desk review of official documents of the clinic in relation to the research objectives, namely, to discuss the organisation and logistics of the KNUST EC and to analyse the clinic vis à vis the Joplin’s five-stage model of experiential education. Qualitative data were analysed through interpretation of themes (Cooper and Schindler, 2011; Vaismoradi *et al.*, 2013). Analysis of the clinic in relation to Joplin’s model (Fenton and Gallant, 2016), places this paper in the category of elaborative case research as opposed to theory generation or theory testing case research (Ketokivi and Choi, 2014). Moreover the collaboration, between the lead investigator and the second researcher – who is a member of a different institution – allowed for the exploration of views from multiple standpoints, thereby reducing selective retention and enhancing the descriptive validity of the research (Brannick and Coghlan, 2007; Greene, 2014).

The KNUST EC

The KNUST EC concept was mooted by the provost of the College of Art and Social Sciences of KNUST, together with the management team of the Centre for Business

Development (CBD) of the KNUST. In line with the university's strategic vision of contributing to sustainable development in Africa, through the advancement of knowledge in science and technology (Kwame Nkrumah University of Science and Technology, 2005; Sawyerr, 2004), the KNUST EC was set up in 2012 to help address graduate unemployment and innovation deficit in Ghana. Specifically, the clinic seeks to enhance the entrepreneurial competencies of students and to nurture viable business ideas.

The clinic also serves as a conduit for pre-incubation support and for selecting students with advanced business ideas for admission into the KBI, of the KNUST. It is crafted and executed, taking into consideration various suggestions from best practices, the world over, and having learnt from the challenges and failures of previous mass entrepreneurship education on university campuses. The challenges included, but not limited to, lack of industry or private sector involvement, inadequate sponsorship and non-involvement of student leaders in the planning and implementation of activities (Katz, 2003; Kuratko, 2005; Nyadu-Addo, 2008).

Organisation and logistics

The KNUST EC is managed by a committee and is chaired by the head of the CBD of the KNUST. The management committee consists of selected lecturers, with expertise in EET, from the KNUST Business School, representatives from the six colleges of KNUST and leadership of the Student Representative Council (SRC) of KNUST. The clinic is organised at the beginning of the second semester, usually from February to March of each academic year, when academic pressure is not too high. The duration of the clinic is five to six weeks. As noted by Roberts (2006), the duration of experiential learning can be of a few seconds or years. In order to ensure sustainability of the clinic, the management team consistently embarks upon intensive fundraising activities. As a result, the clinic has received support from various individuals and institutions. Some of the sponsorship include:

- (1) direct monetary support varying from \$1500-\$3000 USD each from the six colleges of the KNUST, in the first year of the clinic;
- (2) financial contributions, varying from \$3000 to \$5000 USD, from corporate bodies; and
- (3) \$40,000 USD grant from the HFC Bank Ltd for a five-year period, which started in 2014, making the bank a flagship sponsor of the KNUST EC. The first instalment of \$20,000 USD has been paid into the KNUST Entrepreneurship Development Fund, established by the CBD in 2014.

Other external support include access to a pool of experts through the assistance of the Private Enterprise Federation of Ghana. Some of the supporting organisations are the Association of Bankers, Association of Ghana Industries and the Ghana Chamber of Commerce and Industries.

Process/stages and outcomes

The KNUST EC is structured into five sequential steps of activities made up of preparation, orientation, selection and matching, coaching/clinic sessions and monitoring and evaluation (see Figure 1). The structure of the clinic is discussed in relation to the Joplin's five-step model consisting of focus, action, support, feedback and debrief (Joplin, 1995; Robinson and Malach, 2007).

The clinic begins with preparation (Figure 1). Preparation entails recruitment of participants, collation of their business ideas and appointment of facilitators and coaches. Each year, prior to the recruitment exercise, the management committee advertises the clinic, for two months, through print and electronic media including announcements on the homepage of the CBD, text messages to all students of the university and radio and

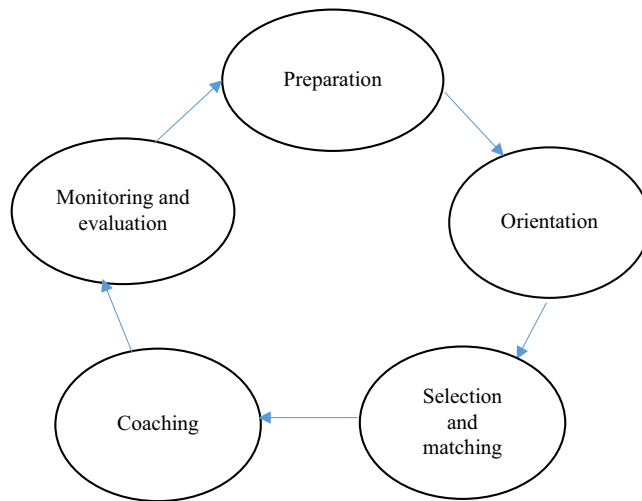


Figure 1.
The KNUST
entrepreneurship
clinic cycle

newspaper advertisement. Moreover, the block nature of the clinic requires full and active participation of learners. As a result, before the commencement of each year's clinic, the organisers of the clinic seek permission from all provosts, of the colleges of KNUST, to set aside the period of 3:00-6:00 p.m., on Fridays, for the clinic. The expectation is that there will be no academic or extra-curricular activities during the stipulated clinic hours, to ensure maximum participation by all applicants.

The clinic is open to all final year students from the KNUST, private universities in Kumasi and the Kumasi Polytechnic. The recruitment exercise focusses on final year students upon the assumption that by their final year of study, the students would have had an introductory course in entrepreneurship and, as a result, had built their entrepreneurial mindsets and possibly a simple business plan. Nevertheless, the clinic welcomes non-final year students with a strong passion in starting their own business. As part of the application process, applicants are required to submit their business ideas and challenges, individually or in groups, to the website of the CBD and the KBI of the KNUST. On the basis of the pool of ideas and challenges, the management committee appoints facilitators. Facilitators, including speakers and coaches, are furnished with the ideas and challenges to factor into seminar presentations and subsequent coaching of selected participants (Figure 1). In this way, the EC becomes student centred and personal, and promotes emotional investment in line with the elements of a good teaching method and the requirements for attaining focus, through learning contracts, as explicated by Joplin's five-step model (Beck, 2005; Höffler and Leutner, 2007).

The second major activity of the clinic, as elaborated in Figure 1, consists of a six-week orientation seminar in which all applicants undergo an introductory course in entrepreneurship and new venture creation as a means of equipping them with basic enterprising and entrepreneurial competencies and to put all participants on a similar pedestal for effective participation in subsequent phases of the clinic, when selected (Joplin, 1995; Street and Johnson, 2014). Contrary to field-based experiential clinics such as Rowan University's "entrepreneurs without borders" (Sukumaran *et al.*, 2007), the KNUST clinic follows the experiential classroom-based learning approach (Beaudin and Quick, 1995) and as a result, is able to admit a large number of participants for the seminar. Entrepreneurs and other practitioners facilitate the seminar by taking participants through practical ways to prepare, start and sustain successful businesses (Lindsay and Ewert, 1999; Street and Johnson, 2014).

In order to expose participants to an appreciable level of the dynamics in the wider entrepreneurial ecosystem (Jones and Lainez, 2014; Stam, 2015), the seminar also offers them the rare opportunity to meet and network with experts from diverse sectors of the eco-system, as dictated by the pre-requisites for the development of the ideas or proposed ventures of participants. Some of the experts whose services have been employed, since the inception of the clinic, are entrepreneurs, bankers, venture capitalists, tax consultants and business development service practitioners as well as officials from government agencies, chambers of business and industry, micro-finance agencies, researchers, ICT firms, advertising agencies and major media houses. After the six weeks seminar, participants are given the opportunity to apply for a five-day group-based coaching. In line with the primary purpose of nurturing viable business ideas, the main criteria for selection are the perceived commercial value and market attraction of applicants' business ideas.

Eventually, 60 projects or ideas are selected for the next stage of the clinic. Some selected projects are group based. Such groups are maintained if the members possess the requisite complementary skills for the pursuit of the group's idea. Participants without groups are guided in the group formation process to ensure heterogeneity and skills complementary for the pursuit of their common agenda. Thereafter, on the basis of the business ideas, coaches are assigned to the various groups. Coaching takes place in specially created syndicated rooms in the CBD and the KBI.

In the respective syndicated work groups, participants are tasked by their coaches to perform activities of the day which entail trying their hands on case studies aimed at building the confidence of participants in handling practical scenarios and to fine-tune their business ideas. Coaches also have the responsibility to address questions from participants, clarify any ambiguity associated with the coaching session and interrogate group members as they observe group activities and listen to group discussions. All these activities facilitate action or learning by doing and the provision of support in line with Joplin's experiential model which stipulates that learners should be engaged in the subject matter in a physical, mental or emotional manner and must be provided with the necessary security and personally relevant information (Beaudin and Quick, 1995; Fenton and Gallant, 2016).

During the seminar and the coaching sessions, participants are provided information about their performance at the end of each major task, day and week, while an overall feedback is provided at the end of the clinic cycle. The feedback is given to encourage reflection on tasks performed and to prepare participants for the next task for the day and the task for the next meeting, as required in experiential teaching methods (Fenton and Gallant, 2016). The clinic sessions are also engrained with debriefing activities in the form of recap of lessons learnt, experiences gained and presentation of projects to experts for interrogation and suggestions for improvement. As per Joplin's five-stage model of experiential learning, debriefing is the stage where true learning is expected to occur through reflection on what occurred in the action phase and creation of connections between the new experience and past experiences and or application of the new experience in the next experiential learning cycle (Roberts, 2006; Torock, 2009).

After the coaching, the best 25 projects are selected, through interview, to undergo incubation in the KBI. The criteria for selection include clarity of entrepreneurial objectives for the next three years, evidence of commitment to the project, willingness to engage and manage business for a profit, readiness to start a project within the shortest possible time, potential for commercialisation and marketability of the idea and possession of the basic knowledge, skills and entrepreneurial qualities required for the project. The selection interview also takes into account attitudes observed during the coaching and the willingness of a tenant to submit to the rules of the KBI. The ability of participants to meet the selection criteria is paramount to the tenets of business incubation put forward by Theodorakopoulos *et al.* (2014) to comprise community strength, identity health and boundary space quality.

The dynamic and integrated nature of experiential education necessitates monitoring and evaluation for effective and efficient outcomes as well as for informed planning of subsequent clinic cycles (Lindsay and Ewert, 1999; Torock, 2009). Therefore, once the clinic kicks off, weekly meetings are held by the management committee to evaluate each week's activities on the basis of attendance and participation. The committee also meets, from time to time, to deliberate on past activities and to arrange for resource persons, publicity, sponsorship and organisation of the next clinic.

The foregoing analysis shows that the KNUST EC follows a five-step procedure in the execution of its mandate. The first three stages – preparation, orientation, selection and matching – coincide with focus, which is aimed at creating student-centred learning contracts as illustrated in Joplin's five-stage model of experiential learning (Lindsay and Ewert, 1999). The fourth and fifth stages of the clinic involve coaching or actual clinic sessions and monitoring and evaluation, respectively. These last two stages offer selected participants the opportunity to fine-tune their business ideas and to develop practical entrepreneurial knowledge, skills and attitudes. Particularly, the coaching is embedded with activities that facilitate action, support, feedback and debrief.

Through the orientation workshop, the clinic has, over the five years of its existence, trained 22,586 people in diverse fields of new venture creation including business start-up techniques, financial literacy and marketing management. It has also been a constant source of recruitment of potential entrepreneurs for the KBI while some graduates of the clinic have successfully launched their own businesses in fields such as online merchandise of cloth, especially the indigenous cloth called "kente" which is often used at special functions, herbal medicine, software development, multi-media, printing and advertising.

Challenges of the clinic

Entrepreneurship education in Africa is an emerging phenomenon that is bedevilled with several challenges such as limited policy support for its wider introduction and inadequate funding and infrastructure (Akhueomonkhan *et al.*, 2013; Mensah, 2013). The KNUST EC is no exception. Since its inception in 2012, the management committee has been grappling with a number of hindrances, notable among them are inadequate funding and difficulty in recruiting students and getting recruited students to fully participate in the clinic. Fundraising from internal sources has not been adequate enough to manage the clinic. Therefore, the fundraising team has widened its scope of operation by contacting external sources to seek sponsorship for the clinic. The team has also resorted to a win-win approach by committing to assist in the promotion of the brands of sponsors on the university campus.

Another major challenge is student recruitment. This challenge was particularly pronounced in getting the first group of participants. As a result, the organisers of the clinic have been adopting multiple approaches in attracting and encouraging individuals to fully participate in the activities of the clinic. Some of the approaches used so far include advertisement on popular social media, bulk text messages to all students before every clinic session, use of posters and banners, fliers, radio and newspaper advertisement and interaction with students at their lecture halls. In spite of these efforts, enrolment figures have assumed a downward trend since 2014. Total annual attendance for the past five years were 5,453, 6,010, 4,355, 3,563 and 3,205 in 2012, 2013, 2014, 2015 and 2016, respectively.

The management committee has also not succeeded fully in ensuring that all university faculty respect the official clinic hours. Some faculty still conduct lectures at clinic hours, preventing student participants from attending the clinic. Getting seasoned entrepreneurs and resource persons, to take some time off their busy schedule, to present or facilitate clinic sessions at stipulated dates and times, is also a challenge. However, through persistent appeals and dialogue, qualified resource persons are secured for every session of the clinic.

Conclusions and policy implications

This paper has illustrated the KNUST EC as an experiential entrepreneurship education, using Joplin's five-stage model of experiential education as a basis for elaboration. The clinic occurs through preparation, orientation seminar, selection and matching, coaching or actual clinic sessions, and monitoring and evaluation. The first three stages of the clinic provide focus for the clinic while the remaining two stages, namely coaching and monitoring and evaluation, entail activities that are geared towards action, support, feedback and debrief, as stipulated by Joplin in her five-stage model. Some of the eventual outcomes, since the inception of the clinic in 2012, are over 20,000 students trained in entrepreneurship and new venture creation, 300 coached business projects and 100 projects submitted for incubation at the university's business incubator – the KBI.

Nevertheless, the clinic faces a number of challenges, namely inadequate funding and dwindling student recruitment and participation. Persistence of the challenges could thwart the progress of the clinic and its critical functions of providing the labour market with an enterprising and entrepreneurial workforce and feeding the KBI with nascent entrepreneurs. As a relatively costly pedagogy, experiential education consistently requires adequate funding and enough contact hours for effective delivery and learning to take place.

It is, therefore, recommended that university management and the SRC should financially support the clinic by allocating part of their annual budgets to complement funding from the major or flagship sponsors while efforts are made to lobby government to establish an entrepreneurship education plan and fund, for HEIs in Ghana, within the proposed premier national entrepreneurship and innovation plan. Furthermore, it may be advisable for the management committee to focus on the few students who show interest in the clinic and ensure that they succeed in achieving their goals of joining the clinic.

Meeting the expectations of participants is, especially, important for students who participate in the clinic with the aim of starting their own businesses after the clinic, or by gaining entry into the KBI. For such participants, tracer studies can be conducted to track their performance during and after the clinic. The reports of the studies should be properly documented and widely circulated among the target group, as a means of communicating the effectiveness of the clinic in meeting their aspirations. It is also recommended that future studies on the clinic should concentrate on assessment of the satisfaction level of participants and the impact of the clinic on the entrepreneurial self-efficacy, intentions and start-up rate of participants.

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