The making of innovative entrepreneurs in Business Schools: Lessons from a Resource Constrained Environment

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Abstract

Nurturing innovation has become a central rather than peripheral focus of entrepreneurship education in most Business Schools in North America and elsewhere. Yet the link between pedagogy and innovative entrepreneurship is under explored. Using a case study approach this study explores experiential pedagogy - teaching practices consistent with experiential learning theory- in a Business School in a developing country. The finding shows that experiential pedagogy inspires aspirations for innovative entrepreneurship and affinity for an entrepreneurial career. The contributions to entrepreneurship education theory and implications for practice are discussed.

1 Introduction

Innovative entrepreneurs commercialize inventions, *create* new products, processes and services (Morris and Kuratko, 2014; Cliff et al., 2006; Baumol, 2010; Drucker, 1985). Also, innovation capabilities are in high demand. 95% of employers give hiring preference to graduates with innovative entrepreneurial capacities that enable them to contribute to innovation in the workplace (Associates, 2013). For these reasons business schools are attempting to reposition capability to innovate as a "central rather

than peripheral focus" of entrepreneurship education (Mayhew et al., 2016). Scholars are interested in understanding how entrepreneurship education, specifically and business school in general inspire innovative entrepreneurs (Mayhew et al., 2012; Mars et al., 2008; Muñoz et al., 2019; McClure, 2016; Morris and Kuratko, 2014).[1] Although various theoretical lenses have been used to explore the peculiarities of entrepreneurship education and how these peculiarities influence various outcomes such as entrepreneurial intention (Rauch and Hulsink, 2015; Muñoz et al., 2019) and behavior (Gielnik et al., 2015; Rauch and Frese, 2007), surprisingly, there is a paucity of conceptual and empirical work targeted at understanding whether experiential pedagogy inspires aspirations for innovative entrepreneurship (Mayhew et al., 2012, 2016; Chell and Athayde, 2009; Block et al., 2017). In particular, little is known about whether certain pedagogical methods in a resource constrained environment may inspire innovative entrepreneurship given the evidence that experiential pedagogical methods may lead to higher learning outcomes than traditional lecture-based pedagogy (Arranz et al., 2017). This paper attempts to address this gap by posing the question: How does pedagogy relate to innovative entrepreneurship in a resource constrained environment.

Resent works relevant to this question focus upon two aspects which are considered to be important. The first aspect is the role of curricular and experiential pedagogy in developing competences that may shape cognitive ability to identify opportunities for innovation (Arranz et al., 2017; Neck et al., 2014; Barbera et al., 2015; Gielnik et al., 2015; Mayhew et al., 2012; Lutterman-Aguilar and Gingerich, 2002; Olokundun et al., 2017; Sitra and Sasidhar, 2005; Mitchell and Chesteen, 1995). Grounded on experiential learning theory, I define *experiential pedagogy*[2] as teaching practices that engage students within and outside the classroom to learn by experimentation and reflection in order to draw conclusions on alternative ways to act differently. The other aspect is the role of stakeholders such as administrators (McClure, 2016)

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[1] For this study, Innovation is an economic or social rather than a technical term. This means that the term innovative entrepreneurship is not limited to creation of new products processes or services, but also creating new markets for products, processes and services; changing the yield of resources; or as changing the value and satisfaction obtained from resources by the consumer (adapted from Drucker, 1985, p. 33). Innovative entrepreneurs purposefully search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation (Drucker, 1985, p. 35).

[2] Other authors describe this method of teaching and learning as active learning, collaborative learning, engaged learning. However, the author argues that the term experiential pedagogy is most appropriate since all other terminologies implicitly acknowledge that such learning methods are grounded in experiential learning theory

and students (Mars et al., 2008; Morris and Kuratko, 2014; Cheung, 2014; Gordon et al., 2012; Hindle, 2007; NSSE, 2014) in nurturing aspirations for innovative entrepreneurship. Although compelling, the experiential pedagogy thesis has received limited empirical testing to conclude that it is linked to innovative entrepreneurship. In particular it is not known which specific pedagogical methods enable intentions for innovative entrepreneurship. Nor it is fully known how stakeholders in developing countries contextualize entrepreneurship education to compensate institutional voids and yet inspire innovative entrepreneurship.

I report the findings of an in-depth case study of experiential pedagogy applied in entrepreneurship education application at one Nigerian Private University with a dedicated Entrepreneurship Development Center and business school. (Provide a brief definition of experiential Pedagogy).

My purpose in this study is not to provide a syllabus for teaching but rather to explore the experiential pedagogy in an environment with institutional voids and to capture the key lessons from the pedagogical practices to increase the chances for other Business Schools in developing countries to inspire potential innovative entrepreneurs. I hope that this study contributes to a deeper understanding of how business schools can nurture innovative entrepreneurship and the role of experiential pedagogy in the process.

The following section provides an overview of the literature on innovative entrepreneurship, experiential pedagogy and the theoretical model underlying my study of experiential pedagogy in a university. After a detailed description of the research method and case, I present the findings in four categories: stakeholder and program design, Curriculum and pedagogy, Experiential pedagogy and institutional void and Outcomes. I conclude with a summary of my findings and a discussion of their implications for entrepreneurship education and business schools.

2 Literature Review

2.1 Conceptualizing innovative entrepreneurship

> Innovation is the specific tool of entrepreneurs, the means by which they exploit
> change as an opportunity for a different business or a different service. It is ...
> capable of being learned, capable of being practiced.
>
> *(Drucker, 1985, p. 19)*

Rather than imitate prevailing practices and existing routines [3], innovative entrepreneurs question "the rules of the game," founding firms that exhibit novelty and act differently from others. Innovative entrepreneurs *create* new products, processes and services, commercialize inventions or transmute value (Cliff et al., 2006; Drucker, 1985) either through new startups or within existing firms. Put differently, innovative entrepreneurship takes various forms including product to market innovations, technological processes innovations and novel organizational designs. Innovation is essential for differentiation in a competitive businesses world and the innovative entrepreneur is the central figure in the innovation process (Embassy-Israel, 2016).

Since the field of innovative entrepreneurship is budding, advocates for linking entrepreneurship education to innovation make the argument that "education and training [...] play a key role in the innovation arms race that is essential to sustain economic growth in any economy" (Baumol et al., 2007, p., 268). Business firms cannot succeed "unless their managers and workers have the skills necessary to generate innovations or, at the very least, to recognize and purchase the rights to innovations developed by others" (Baumol et al., 2007, p., 268-269). These possible consequences of innovation are why it is important to study the origins of innovative entrepreneurs in business schools. Within entrepreneurship education research,

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[3] Described as replicative entrepreneurship see - Cliff et al. (2006); Baumol et al. (2007)

innovative entrepreneurship "is associated with a *desire to continually advance ideas*, whether on one's own or in collaboration with others" (Mayhew et al., 2016, p. 423). From Drucker's standpoint, innovative entrepreneurship begins with recognition of innovative opportunities[4] and a conscious plan to exploit them. I refer to the later as innovative entrepreneurial intention. Innovative entrepreneurship, as with any planned behavior, is hard to observe and involves "unpredictable time lags" (Souitaris et al., 2007, p. 568). Accordingly, the focus of this study is to explore whether experiential pedagogy inspires innovative entrepreneurial intention. Thus, for this study it is only necessary that individuals develop innovative entrepreneurial intentions. This conceptualization consistent with Mayhew et al. (2016, 2012).

2.2 Higher Education and Innovative Entrepreneurship

There is a lack of consensus on the effects of higher institution on innovative entrepreneurship. On the one hand some studies suggest that higher education can positively influence the cultivation of innovative entrepreneurial intentions (Mayhew et al., 2016; Morris and Kuratko, 2014; Mayhew et al., 2012). On the other hand, some show that university students do not perceive higher education as having a direct influence on innovativeness (İlhan Ertuna and Gurel, 2011), and business creation (Arranz et al., 2017; Fayolle and Gailly, 2015). Two aspects of this debate over the effect of higher education are considered important. First, the specific role of curriculum and pedagogy still under explored. The debate over the role of curriculum and pedagogy point to the core of the question: how to train innovative entrepreneurs Block et al. (2017); Baumol et al. (2009). Scholars suggest that experiential pedagogy - those teaching practices consistent with experiential learning theory, is an acontextual approach to learning that can support innovative outcomes and help to train innovative entrepreneurs (Neck

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[4]*Recognising innovative opportunities is not the focus of this study. Peter Drucker identified seven sources for innovative opportunities: The first four sources are visible primarily to people within an industry or service sector. These four source areas are: • The unexpected—the unexpected success, the unexpected failure, the unexpected outside event; • The incongruity—between reality as it actually is and reality as it is assumed to be or as it "ought to be"; • Innovation based on process need; • Changes in industry structure or market structure that catch everyone unawares. The second set of sources for innovative opportunity, a set of three, involves changes outside the enterprise or industry: • Demographics (population changes); • Changes in perception, mood, and meaning; • New knowledge, both scientific and nonscientific. (Drucker, 1985, p. 35)*

and Greene, 2011; Neck et al., 2014; Baumol, 2004). In particular, Mayhew et al. (2016) find that participation in out-of-class cocurricular experiences that connect subject-matter learning to real-world applications are related to innovative entrepreneurial intentions (Mayhew et al., 2016). In contrast, Arranz et al. (2017) find that curricular and out-of-class activities decrease capacity and intention to start a business. As, Mayhew et al. (2016) observed from studying U.S. and German students, innovative intentions are complex, nuanced and varies based on, not only curriculum and out-of-class experiences, but also personal experiences of students (such as entrepreneurial kin) and educational settings such as experiences with faculty and facilities used in teaching. The second aspect of the debate over the effect of higher education relates to the role of stakeholders in creating an environment that inspires innovation.

2.3   National Educational Environment

Besides the two aspects of research discussed earlier, another element of this study stems on the need to explore the peculiarities of experiential pedagogy in a developing context characterized by institutional void. Scholars call for more studies in the emerging economies (the economically underdeveloped countries of Africa, India, China, Brazil, Mexico amongst others), particularly in the African context to investigate management theories and practices such as experiential pedagogy (George, 2015; George et al., 2016) for potential new insight on entrepreneurship education theory (Nowiński et al., 2017; Nabi et al., 2017; Nkomo, 2015; George et al., 2016). In response, this study focuses on Nigeria Higher Education and Institutions an empirical context. This context is characterized by the following a) the multiple socio-cultural and political issues such as insecurity in the North-Eastern part of the country due to Boko Haram terrorist group, the security challenges in the South-Eastern part of the country caused by the recent agitation for the secession of the Biafra region from Nigeria; b) economic issues including recession and high graduate unemployment (33.1% of youths aged 15 to 24, and 20.2% for those aged 25 to 34 are unemployed NBS 2017) exacerbates by the recent sharp decline in crude oil prices - the most significant source of revenue; c) funding constraints which leads to a shortage of qualified academic staff; d) and the policy of compulsory entrepreneurship courses (required courses that a student has to take to complete the requirements for a

particular university program) for all university students (Dakung et al., 2017).

Moreover, Nigeria, as with other emerging context, presents many opportunities and particular challenges to starting a business. The world bank ranks the country 146 out of 190 on the ease of doing business. Some of the challenges are institutional such as bureaucratic administrative structures that delay registering a business, securing relevant permits, registering a property and enforcing contracts; customs controls that increases the time and cost of trading across borders; and difficulty to secure credit and the high interest rates that come with it). Other challenges are infrastructural such as the unavailability of reliable electricity and good transport networks. In short, the business environment is "distorted and restrictive" (Saint et al., 2003). A survey of international businesses working in Sub-Saharan Africa found that Nigeria is one of the most challenging countries in the world for private business (Schwab et al., 2000).

Based on Johns (2006) argument on the role of context in management research, it is plausible to expect the contextual factors listed above to affect behavior of higher institutions in Nigeria when designing entrepreneurship courses, as well as the students attitudes, aspirations and behavior associated with innovation. Therefore Nigeria educational environment is ideal for exploring the nature of experiential pedagogy and its link to innovative outcomes.

2.4   Research Framework

As shown in Figure 1 the theoretical framework includes 3 parts: stakeholders, pedagogy and outcome.

2.4.1   Stakeholders

Faculty and students facilitate learning within the classroom through meaningful interactions. For example, faculty may encourage collaboration among students, and provide frequent and substantive feedback (NSSE, 2014). To some extent, faculty may also facilitate learning through out-of-class experiences. Moreover, faculty may include practitioners who share their experiences with *do[ing] entrepreneurship.*

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2.4.2 Facilitating Environmental Factors

In addition to efforts of course designers and faculty, the availability of certain facilities (e.g., incubation centers) and support within and beyond the University (regarding financial and regulatory) may influence experiential pedagogy.

2.4.3 Experiential pedagogy and Curriculum

Experiential pedagogy requires considerable time and effort to facilitate learning within and beyond the classroom. It involves "repetition and experimentation that increases [an] entrepreneur's confidence in certain actions and improves the content of his stock of knowledge" (Minniti and Bygrave, 2001, p., 7). Arguably, course designers are mostly responsible for creating an environment for students to *engage* in learning by taking *actions* and *reflecting* on the outcomes. Course designers are responsible for creating a dynamic and effective curriculum for training entrepreneurs.

Extant research suggests that curriculum matters when training entrepreneurs. Mayhew et al. (2012) posit that dynamic and effective curriculum can help students develop essential entrepreneurial skills such as self-confidence and self-esteem, through the use of techniques that support "nonlinear thinking," community integration and entrepreneurial ventures and initiatives. Kourilsky and Esfandiari (1997) developed and tested the effects of New Youth Entrepreneur curriculum, a series of 12 educational modules geared toward high school students that contain instructional materials, learning activities, and exercises designed to teach key elements of entrepreneurship, on lower socioeconomic black high-school students' knowledge of basic and advanced concepts in entrepreneurship. Their study confirms that appropriate curricular innovation can significantly influence the acquisition of entrepreneurship concepts and skills.

Scholars suggest curricular component should include the following: creativity, innovation, negotiation, leadership and new product development, (McMullan and Long, 1987; Vesper and Gartner, 1997); sources of capital (Vesper and Gartner, 1997; Zeithaml and Rice Jr, 1987); challenges of various stages of venture development (McMullan and Long, 1987; Plaschka and
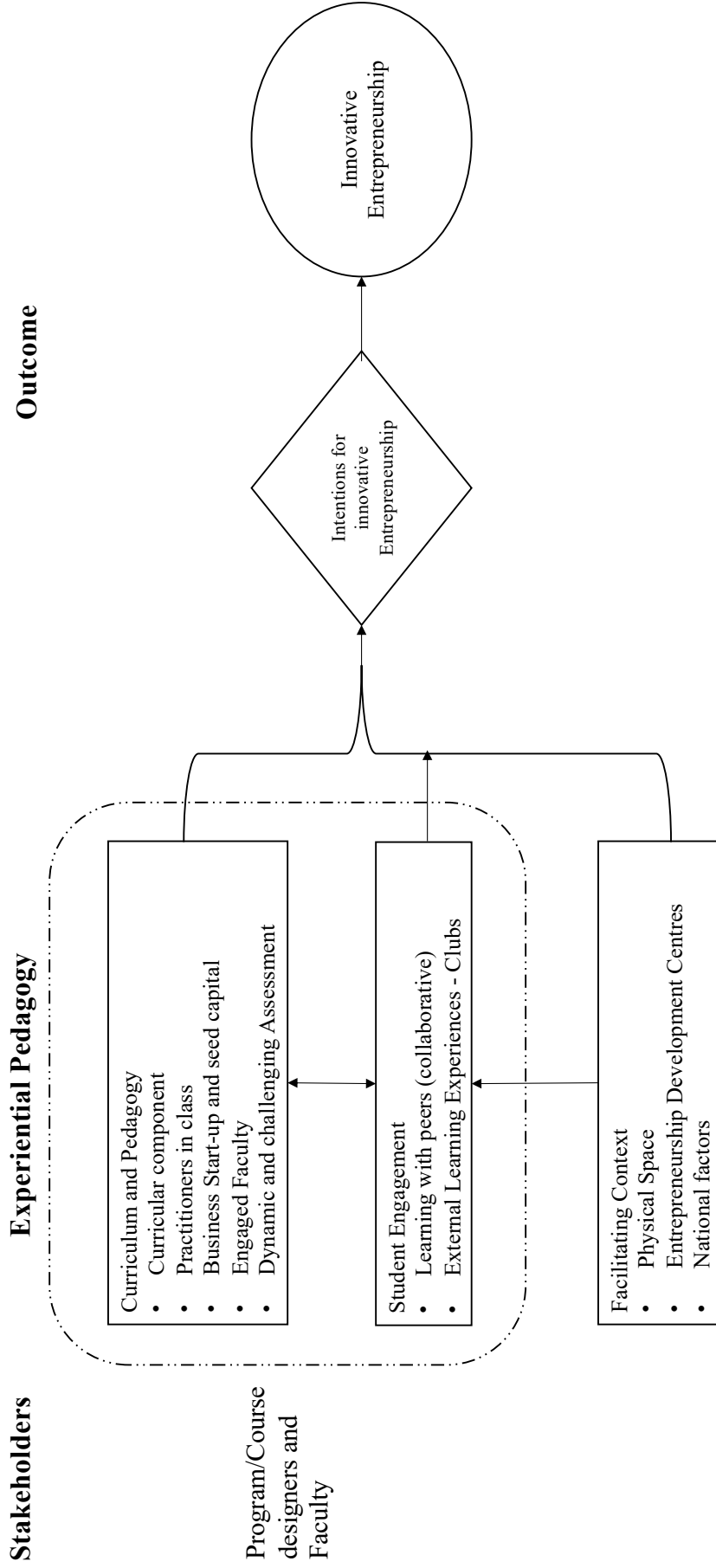
Outcome

Innovative Entrepreneurship

Intentions for innovative Entrepreneurship

Stakeholders

Experiential Pedagogy

Program/Course designers and Faculty

Curriculum and Pedagogy
- Curricular component
- Practitioners in class
- Business Start-up and seed capital
- Engaged Faculty
- Dynamic and challenging Assessment

Student Engagement
- Learning with peers (collaborative)
- External Learning Experiences - Clubs

Facilitating Context
- Physical Space
- Entrepreneurship Development Centres
- National factors

Figure 1: Conceptual Framework

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Welsch, 1990); intellectual property rights; ambiguity tolerance; the characteristics of an entrepreneur. Other essential curricular components are assessment and out of class experiences (co-curricular opportunities) to increase awareness of entrepreneurial career options (Mayhew et al., 2012). Mayhew et al. find that assessments that encouraged students to develop arguments or encourage experiential approaches to problem-solving have a positive association with intent to innovate. This finding resonates with Banta et al. (1996) position that "Effective assessment programs reflect the imaginative, creative, and energizing aspects of learning" (p.11). Similarly challenging learning environment -where faculty challenge students ideas and encourage students to challenge their ideas or think outside the box to solve problems, have also been linked to intent to innovate (Mayhew et al., 2012). Furthermore, co-curricular practices that involve out of classroom experience have been found to inspire students intent to innovate

2.4.4 Outcome

Finally, scholars suggest, experientially based pedagogical methods can support high learning outcomes (Mayhew et al., 2012). Hence this study whether experiential pedagogy illicit innovative outcomes according to the theoretical framework shown in figure 1.

The next section discusses the method used to gather data to test this framework.

3 Methodology

This study adopts a single case-study approach. Single case-studies are generally accepted as sufficient basis for providing the observation and analysis of a phenomenon in a single setting (Yin, 2013).

Figure 2: Case Study Methodology
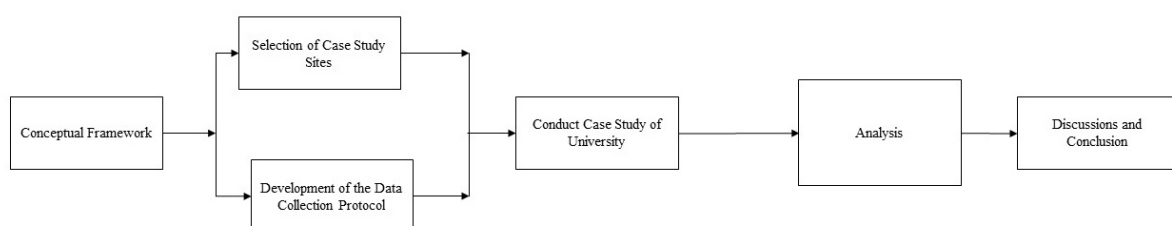
Note. Adapted from Alavi and Gallupe (2003) and Yin (2013).

Figure 2 is a graphical expression of the approach to this study. A similar approach was used by Alavi and Gallupe (2003). The figure indicates that the initial step in the study is the development of a conceptual framework for experiential pedagogy in entrepreneurship education. Underpinned by the conceptual model, the next step involves the selection of the specific case (the data collection site) and the design of data collection protocols. Following the selection of the case and definition of data collection protocols steps, a case study of the University was developed. Next, I analyzed the data in line with the research question to determine how experiential pedagogy inspires innovative entrepreneurship according to the theoretical model which shows that stakeholders (students, faculty, and course designers), curriculum and pedagogy and environmental factors a necessary components for inspiring innovative entrepreneurship. I was also interested in how students reacted to the compulsory element of the course.

The case study was based on Pan Atlantic University - a private university in the southwestern part of Nigeria. This university was not selected because they offer entrepreneurship education since all universities in Nigeria are mandated to do so; nor was it selected based on how long it has existed. Instead, the primary criterion for selection of this university was its experience from implementing practices that are analogous to that of other universities in developed economies that are described as experiential pedagogical practices in literature (Barbera et al., 2015; Neck et al., 2014; Gielnik et al., 2015; Mayhew et al., 2016). Thus, I was interested, not in the number of times the university has implemented these practices, but in how they implement them in the local context to unpick any acontextuality issues.

The Next section describes the selection process of the case study sites.

3.1 Selection Process

From a list of all the universities in Nigeria, the researcher identified a list of 3 potential case study universities by reviewing secondary research based on literature and worldwide Web searches of their websites, contacting prominent researchers, and program administrators. Next, a sample of students from all three universities was invited to respond to a questionnaire at the beginning of the compulsory entrepreneurship course (T1). Before using it, the question-

naire was piloted at one of the universities with non-participating students and the feedback from the pilot test was used to clarify and to refine the wording of the questions.

The objective of the questionnaire at T1 was to gauge the scope of experiential pedagogy used at the universities. I drafted the questionnaire following the review of the entrepreneurship education literature. In line with the conceptual framework in Figure 1, the questionnaire comprises examples of experiential pedagogy (See Table 1), examples of campus facilities (Mayhew et al., 2012), and behavioral expectation associated with intentions (Davidsson, 1995; Krueger et al., 2000; Van Gelderen et al., 2008; Rauch and Hulsink, 2015). The respondents also were asked to rate how experiential they perceived the pedagogy to be on a scale of 1-10 where 1 is not experiential and 10 extremely experiential.

A total of 379 participants completed the screening questionnaire at T1. The results show that of the three universities, Pan-Atlantic University uses experiential pedagogy the most with an average of 60% of the experiential pedagogy listed in Table 1. On this basis, Pan-Atlantic University was selected.

Table 1: Examples of Experiential Pedagogy

Pedagogy	Reference
Student business start-ups	Truell et al. 1998; Hills 1988
Traineeships and field learning	Dilts and Fowler 1999
Behavioral simulations	Stumpf et al. 1991
Computer simulations	Brawer 1997
Consultation with practicing entrepreneurs	Klatt 1988; Solomon et al. 1994
Interviews with entrepreneurs,	Solomon et al. 2002
Live cases Guest Speakers and Mentors	Gartner and Vesper 1994; Souitaris et al. 2007
Environmental scans	Solomon et al. 2002
Business plans	Gartner and Vesper 1994; Gorman et al. 1997; Hills 1988; Ronstadt et al. 1988
Field trips	Klatt 1988
Use of video and films	Klatt 1988
Cases	Gartner and Vesper 1994
Class Discussion	Katz 1995

3.2   Data Collection and analysis

To begin the process of data collection, I visited the university between August and October of 2016. Each visit lasted a full day, during which I conducted in-depth interview with 2 representatives of the top management (director of entrepreneurship center and course leader) and a faculty member associated with the entrepreneurship course. The interview was 45 minutes long. The objective of the interview was to develop an in-depth understanding of the processes and practices associated with the initiation, development, and delivery of the entrepreneurship courses run by the university.

Following the interview with the top management, I conducted (semi-structured) telephone interviews with five focus groups. Each focus group consisted of 3-9 students. As shown in Table 2 all the groups have members with at least one entrepreneurial kin. Focus group

Table 2: Characteristics of Focus Groups

Group	Students	Period	Gender	Age	Entrepreneurial Kin
1	3	Current	All males	17-19	All had at least one entrepreneurial kins
2	3	Current	2 females and one male	18-25	2 have at least one entrepreneurial kin
3	4	Current	2 males, 2 Females	18-22	2 have at least one entrepreneurial kin
4	9	Past	5 males, 4 females	18-22	3 have at least one entrepreneurial kin

4 comprise of students who have completed the course the previous academic year and the other three comprise of students who are currently undertaking the course. The groups were interviewed between week 6 to week 9 of the course. Each interview session lasted 1 hour and 20 minutes. These students provided answers to interview questions concerning teaching and learning practices (practical activities, use of practitioners and case studies, interactions with faculty, group discussions and assessments), facilities (both on and off campus) that may affect how they perceive entrepreneurship, and their aspirations after their program.

One month after the end of the course, the same questionnaire that was administered at the beginning of the course was repeated to assess whether there were changes in the behavioral exceptions associated with intentions.

The behavioral exceptions were assessed using a single item suggested by Davidsson (1995), and adopted in Rauch and Hulsink (2015): "How likely do you consider it to be that you will be running your own firm within five years from now?" The respondents indicated the likelihood between 0 and 100.

To assess the innovativeness of potential behavior, students were asked to list the kind of businesses they aspire to create in the future. I made a list of all of them and asked the students' colleagues to rate their innovativeness of these businesses on a scale of 1-10: where 1 is *"not innovative"* and 10 means *"very innovative."* This approach was used because in a study on predicting the success of novel ideas, Justin Berg find that peers were most accurate in evaluating the potentials of novel ideas than any other group of reviewers. Peers were twice as accurate as experts in predicting the potential success of novel ideas (Berg, 2016). In other words, peer evaluation is more accurate than *expert* rating (Grant, 2017; Marty et al., 2010).

At the completion of the data collection, the audiotapes of the interviews were transcribed[5]. Next, a detailed profile of the compulsory entrepreneurship course at Pan-Atlantic University was developed. To enhance validity and reliability, data for the case-study university was collected from several sources from September to December 2016 (Yin, 2013). These sources included site and telephone interviews, surveys, entrepreneurship course curriculum, websites, records and media reports such as university magazines, bulletins, annual reports collected during the site visits, or published by the university and archival materials. Other sources included media reports published by official organizations linked to higher education and entrepreneurship development within Nigeria. Furthermore, the reliability requirement was covered using a standard protocol, with a common set of open-ended questions concerning the proposed conceptual framework.

Once a detailed case study of PAU was developed the data was examined to extract and to articulate the dominant themes, pedagogical practices and their impact on students. An overview of the case study for Pan-Atlantic University is presented next.

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[5]The interview generated a total of 36 pages with 19,597 words.

Entrepreneurship I

Timeline	Topic	Curriculum	Pedagogy
Week 1	Entrepreneurial Journey; Effective teams	Provide theoretical foundations to entrepreneurship and team work	Structured Lectures, and group discussion
Week 2	Opportunity Recognition; Idea Generation	Explain the concepts of identifying or creating new opportunities; tools and strategies for creating or identifying new Ideas	Structured Lectures, and group discussion and case study
Week 3	Setting up your business; Live Case	Focuses on choices and analysis of opportunity; solving critical and practical problems that pertain to start-up phase of business creation	Structured lecture and Guest speaker who is a practicing entrepreneur
Week 9	Market Research	Defines the process of identifying your target market, preparing to enter the marketplace and how to communicate value to your customers. Understanding the market and how to create solutions that are relevant to market; Customer needs and strategies for penetrating the market as well as challenges of marketing a product or service; Developing a marketing plan	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 4	Design Thinking; Group Meeting	Focusing on creativity and problem solving and how to apply them in real life cases	Structured lecture. Collaborative learning, Student collaborate to design a tower with marshmallow, spaghetti sticks and threads
Week 6	Concept to Market; Group Meeting	Focusing on the challenges of bringing a new concept to the market and how to negotiate around such challenges. The role of branding and how to differentiate oneself	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 7	Raising Start Up Capital; Presentation	Understanding the various sources of capital and Bootstrapping lessons for starting a business with little capital; Benefits and drawbacks of bootstrapping. Exploiting the networks or an entrepreneur to generate start up capital	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 8-9	Pitching Skills	Presenting ideas to investors, lenders, and customers in a clear, concise and convincing way	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 10	Disruptive Innovation	Understanding various theories of Innovation. The potentials of innovation and dangers of not innovating.	Structured lecture. Collaborative learning, With case study discussion and analysis
Week 11	Business Model Canvas; Group Meetings	How to organize your business, protect your ideas, and communicate them to others. a) IP Management; b) Business Model Canvas. Various Revenue generation mechanisms.	Structured lecture, Case study method and group discussion
Week 12	Entrepreneur Live Case	Seminar: The guest speaker chooses a topic and engages with the students	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 13	Sales & Marketing	Market Communication; Idea to Market; Sales; Negotiation; Various sales strategy; How small business can leverage cheap and available means to sell and market their goods	Structured lecture. Collaborative learning, With case study discussion and analysis
Week 14	Entrepreneur Live Case	Seminar: The guest speaker chooses a topic and engages with the students	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 15	Pitching	Assessment	

Table 3: Course Timeline, Content and Teaching Methods (I)

		Entrepreneurship II (Business Start-Up with $250 seed capital)	
Timeline	**Topic**	**Curriculum**	**Pedagogy**
Week 16	Financial Management	How to organize your finances. a) Budgeting/Financial Planning. Other Basic accounting concepts, such Cashflows and balance sheets	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 17	Managing Operations	Outlines a company's organizational structure, how to recruit and manage talent,	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 18	Ethics; Group Meetings	Focus on ethical concerns of entrepreneurship	Structured Lectures, and group discussion and case study
Week 19	Social Enterprise; Group Meetings	Theories of Social entrepreneurship and how to identify social problems	Structured Lectures, and group discussion and case study
Week 20	Meet the Lenders	As the title suggests, students have a chance to interact with investors representatives from banks who share what they look for in a business idea and plan and how they know which ones will thrive or succeed	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 21	Legal; Taxation	Focuses on the legal environment and regulations that affect the running of a business	Structured Lectures, and group discussion and case study
Week22	Live Case; Group Meetings	Seminar: The guest speaker chooses a topic and engages with the students	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 23	Business Plan	Lesson on how to write a business plan	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 24	Business Clinic	Mentoring sessions for students groups	Collaborative learning, students work in groups. Faculties guide students
Week 27	Live Case for each group	Seminar: The guest speaker chooses a topic and engages with the students	Guest Speaker/Practicing entrepreneur. Interactive session with participant-centred learning
Week 28	EXPO Preparation	Final preparations for showcasing their business ideas, products or services.	Collaborative learning, students work in groups, on their business start-up Faculties guide students
Week 29	**EXPO**	A day for student groups to exhibit their business, products and services to members of the public. They are expected to make sales on that day.	Student Showcase their Business Start-up.
Week 30		**Exam Preparation**	

Table 4: Course Timeline, Content and Teaching Methods (II)

4   Findings

4.1   Pan-Atlantic University

Pan-Atlantic University (PAU) started with seminars in temporary premises in Victoria Island, Lagos in 1991 and commenced a Chief Executive Program in 1992. In 2014, PAU launched its undergraduate programs. The first programs were 4-year B.Sc. programs in accounting, business administration and media & communication. Two more programs, B.SC. in Economics and B.Sc. in Information, Science and Media Studies (Digital Media) were added in 2016[6]. Pan-Atlantic University has a student population of 757 and a student to staff ratio of 11:1 (PAU, 2017).

PAU aims to empower students with real skills and attuned to a global marketplace. Part of their strategy to achieve this aim is the use of guest speakers and practitioners in the classrooms, in what they refer to as Real Learning. The curriculum for their entrepreneurship courses is designed to reflect this aim. As shown in Table 3 and 4, from week 1 to 14 the course covers provide theoretical knowledge about entrepreneurship through topics including idea recognition/creation, innovation, creativity, market research, capital, business start-up, sales e.t.c.

The course utilizes practice-oriented pedagogy with active, collaborative and participative learning philosophies such as the use of case studies and collaborative group work. These practices are grounded in experiential learning theory. Accordingly, guest speakers, some of whom are practicing entrepreneurs and directors and CEOs of multinational companies are often used in the classroom. For instance, the Managing Director of Coca-Cola Nigeria Limited, visited PAU in 2016, to give a seminar on business leadership to the students of the School of Business Administration during one of their entrepreneurship classes.

In their second year of study, all students are required to complete a compulsory entrepreneurship course. There were 80 students on the course who are split into two class. Thus, the average size of the class is 40. This entrepreneurship course takes place through the first and second semester of the second year. The format of the course is such that basic principles of

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[6]Students were not enrolled on this course at the time of this research

entrepreneurship - model, markets, management, and finance, are taught in the first semester. From week 16 Table 4, students form groups of six to ten members. Each group is given a seed capital of approximately $250. They are expected to register their business, open a bank account, mobilize additional funds and run the business throughout the semester. All business participates in a one-day exhibition which is opened to the general public. At the end of the semester, the business will be officially liquidated, the seed capital returned to Entrepreneurship Development Center (a center within the university dedicated to the development of graduate entrepreneurship) and the profit donated to a charity of their choice or used to improve the community around the University. Groups are expected to break even, at least, and to return the seed capital. As part of the course, a report is submitted by each group focusing on how they have been able to use entrepreneurial principles learned in the first semester. More importantly, the report expects them to reflect upon their action and describe what they have learned during their entrepreneurial journey.

Outside the classroom, students can join groups such as The Entrepreneurship Club. The club started in the summer of 2016 and is an environment for students to discuss matters on graduate entrepreneurship and to impart knowledge on others who are yet to undertake the entrepreneurship course. Also, students have access to the Entrepreneurship Development Center - a center whose mission is to provide holistic business development and support services to small and medium enterprises (SMEs) in Nigeria.

5 Discussion

The main objective of this study is to explore the links between experiential pedagogy and innovative entrepreneurship by examining the effectiveness of experiential pedagogy applied in entrepreneurship education in a developing country. The study in this article is a response to calls by critics for more entrepreneurship education research in African contexts. This objective is in line with the research question: How does experiential pedagogy relate to innovative entrepreneurship? The study focuses on Nigerian context where there is compulsory entrepreneurship education. Based on case study analysis, the findings are discussed along the

three dimensions of the theoretical model: stakeholder, curriculum and pedagogy, and outcome (innovative entrepreneurship).

5.1   Stakeholders

In PAU, director of the Entrepreneurship Development Center, course leaders and staff members involved in entrepreneurship education are considered the stakeholders for this study. School director and course leader ensure that their curriculum and pedagogy are designed to complement each other and prepare students for the opportunities and challenges that are specific to the Nigerian context. As the director —who is also the principal developer of the entrepreneurship course stated in an interview:

> "We did not copy our course design from any university. We had to create our own. You have to remember that in developed countries, there are multiple support systems for student entrepreneurs that don't exist here in Nigeria. Banks are hostile and skeptical of giving students money for business, without a fully functional business. No one will want to invest in [students]. There is little or no support from the government. There are weak institutions and infrastructures to support business growth, and there is a recession. With all these in mind, we had to design a course that will prepare students for the real world in Nigeria."

By this comment, the director suggests that the curriculum and pedagogy used in the entrepreneurship course is contextualized according to the environmental and economic realities in Nigeria. As discussed previously, doing business in Nigeria is challenging (Schwab et al., 2000; Bank, 2018) due to institutional and infrastructural voids. Thus contextualizing entrepreneurship curriculum and pedagogy, I submit, implies identifying situational constraints and opportunities that affect the occurrence of innovative entrepreneurship and adapting the entrepreneurship course to compensate or exploit those constraints or opportunities respectively (Johns, 2006). To some extent, the comment of the director highlights the significant role of the stakeholders in inspiring innovative entrepreneurship. However, there is more at work here.

The comments echo Johns (2006) argument that context affects organizational behavior and management researchers should highlight such effects in their studies.

5.2 Experiential Pedagogy

Based on the conceptual model, experiential pedagogy has two components: curriculum and teaching practices deployed to engage students. This section presents the findings in support of these components. In demonstrating understanding of the concept, a student defined experiential pedagogy as teaching methods that "improve on the weaknesses of conventional teaching practices[7] in other to make learning better." Another student explains further: "so it is not enough for the lecturer to come and just state 'this is how you do it' or right on the board, but getting the students *engaged* in what they are learning." Students gave the examples of teaching practices that are consistent with experiential pedagogy listed in Figure **??** as shown in Table 5. Experiential Pedagogy, unlike traditional lecture centered pedagogy encourages problem-solving, creativity and a mix of enterprising skills and behaviors needed for entrepreneurship (Dhliwayo, 2008; Jones and English, 2004).

In describing their orientation towards the course, a student stated "for me, if we did not do [this] entrepreneurship course, [...] I would have been sad." This statement, in line with John et al. (2014) finding, show that students are likely to embrace compulsory entrepreneurship course if experiential pedagogical practices such as business startup, and healthy collaboration with relevant industry and practitioners were used. The findings indicate that students understand and, to some extent, expect the use of experiential pedagogy in entrepreneurship education. Further details of the findings on this subject follows.

5.2.1 Curriculum and Pedagogy

Scholars suggest that dynamic curricular components should include: innovation, negotia-

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[7] By conventional teaching methods they imply a lecturer-centered approach to learning in the classroom.

Students quotes	Corresponding pedagogy
"use real–life cases or real–life situations." "based on real–life situations, things that have happened. [...] a way of bringing real life to the classroom."	Case studies
"real people who started real businesses"	Practitioners are lecturers and guest speakers
"adopting new age technologies. It's [...] a more interactive kind of method"	Videos & films, blogs & social media, and online web-based assignments
"practical ways of how [theories are] actually applied in real life"	Business start-ups, internships, and field trips

Table 5: Students Examples of Experiential Pedagogy

tion and leadership (McMullan and Long, 1987; Vesper and Gartner, 1997); sources of capital (Vesper and Gartner, 1997; Zeithaml and Rice Jr, 1987); challenges of various stages of venture development (McMullan and Long, 1987; Plaschka and Welsch, 1990); assessment and out of class activities (co-curricular opportunities) (Mayhew et al., 2012). As shown in Tables **??** and **??** and Tables **??** and **??**, most of the curricular components and pedagogical methods of entrepreneurship education at PAU are contextualized and consistent with experiential learning theory. For instance, student report that through the design thinking class, they learned how to "think outside the box and to design with little resources."

Perhaps one of the most important curricular component, especially relevant in developing countries, is *bootstrapping* — raising capital — because access to capital is one of the major challenges of start-ups in developing countries such as Nigeria (Bank, 2018, 2012). Students stated that following the *bootstrapping* topic they learned "how to pitch well to generate funds" through various means including crowdfunding and pitching to investors.

Besides bootstrapping, another activity that students reported to be valuable related to student business startup. At PAU, student teams are offered seed capital of about $250 to start a business as part of the entrepreneurship course. At the end of the course, they showcase their businesses during a one-day exhibition for members of the public to see and interact. At the time of writing, one of the groups who showcased their business at the exhibition in 2016 still trades. When asked about their thoughts on business start-up exercise, one of the students explains the impact this way:

"... in the course of doing [business start-up] we found out some things, learned new things, and we [...] found out that there can be much profit in [the] business if we played the cards right. It [...] helped us to *experience* what we were [...] taught in class: the importance of market research for example [...] we saw that the market research that we did not do properly could affect business performance."

90% of the students in all five focus groups used the term *experience* when describing the impact business start-up activity had on them. One past student of the entrepreneurship course explains the impact of business start-up activity as follows:

"...we had to put ourselves in the shoes of entrepreneurs, understand the pains of being an entrepreneur, *experience* the challenges, try to overcome them, try to make sure that we make a profit and meet target and deadline. So [...] that was the most *experiential*."

By experiential, the students imply opportunities for experimentation. Experimentation is a cardinal of experiential learning theory. Experimentation relates to putting knowledge into practice. Experiential pedagogical methods that are consistent with experimentation include the following: business plan exercise case study analysis, group discussion, use of practitioners as guest speakers in class and out of classroom experiences such as student business start-up Neck et al. 2014; Mayhew et al. 2012; Solomon and Matlay 2008; Solomon et al. 1994; Neck and Greene 2011. However, student business start-up is considered as a more experiential pedagogical method than other listed because it provides the opportunity for more extensive practical experiences, reflection, and skills acquisition (Bae et al., 2014; Solomon et al., 1994). Consistent with this submission, all the participants interviewed for this study described the start-up activity as the most exciting part of the course. Perhaps the expression of satisfaction might help to explain why all participants of this study find the course interesting despite being compulsory. One of the current students who were yet to participate in start up activity stated:

"Business start-up is going to be a huge avenue for us because we are going to *experience* [entrepreneurship] in real life. We are going to see how we can manage, our grant of $250 and how we are going to create value, [...] how we can acquire a competitive edge. So I think *practicalizing* it is going to be the icing on the cake. I really feel that starting up will really just put all of the entrepreneurship course in one. [...] they have taught us about pitching your ideas, working in groups, legal aspect everything we have learned so far, all those come together in the business start-up. So I feel it is the most experiential."

This finding is consistent with Neck and Greene (2011) who state that student start-up is arguably the highest form of apprenticeship that can be included in an entrepreneurship course. Start-up activities give students the opportunity to experiment their business ideas and reflect on the outcomes and ways to improve on them However, more may be at work here. Start up activities provide opportunities to *learn by doing* which may leads to the emergence of practical (tacit) knowledge which integrates experiential knowledge, formal knowledge, and personal beliefs (Van Driel et al., 2001). Drawing on the seminal work of Van Driel et al. (2001), practical knowledge is invaluable for two reasons. First, it is affected by an individual's concerns about their context and environment. Thus, practical knowledge is *person- and context-bound* as it is adapted to a local context which includes opportunities and challenges that may vary considerably across countries. Second, it is, mainly, implicit or tacit knowledge. One may not be used to articulating their practical knowledge: they are more in a "doing" environment than in a "knowing" environment.

In addition to practical knowledge, the practical experiences gained from start up activities help students to develop high self-efficacy (Peterman and Kennedy, 2003; Ajzen, 1985; Shapero and Sokol, 1982). Self-efficacy (which influences perceived behavioral control) is an essential antecedent of intention for entrepreneurship (Autio et al., 2001; Peterman and Kennedy, 2003). One can conclude, therefore, that business start-up activities influence students' aspirations for entrepreneurship.

Besides start-up activities, the use of practitioners in class is considered important peda-

gogy that may help inspire students aspirations for innovative entrepreneurship (Souitaris et al., 2007). At PAU, practitioners deliver 50% of the curriculum for the entrepreneurship course. Students found lectures delivered by practicing entrepreneurs to be "more valuable because [they shared examples from] what they experience in their daily operations." Some students used terms such as *motivated* and *inspired* (e.g., "[we were] inspired in a way to want to start our own businesses") to describe the feelings triggered by practicing entrepreneurs. In other words, practicing entrepreneurs inspire students. One student describes the impact of a lecture delivered by the chief executive officer of an animation company in Lagos, Nigeria:

"Before the class, we did not think there was an animation company in Nigeria, because most of the cartoons we watch were [Western characters]. They are not Nigerian content. [...] we were *surprised*, *happy* and *inspired*. Her company had this particular project [...] with Adidas. I felt like, a Nigeria company doing, collaborating with [...] one of the top [...] brands in the world? [It] was amazing and really impressive. [It] gave us greater idea of what we could do [and] a different perspective of what we think about innovation."

In this statement the student describes a spark of inspiration following a workshop delivered by a practitioner. As Souitaris et al. (2007) note, inspiration (a construct with an emotional element) is an influential benefit of entrepreneurship education. The findings suggest that inspiration raises attitudes and intentions which increases the likelihood that students will attempt innovative entrepreneurship at some point in their lives. All the participants interviewed for this study expressed a positive attitude towards entrepreneurship course and were very satisfied despite the compulsory element. To emphasize this point one student states: "for me, if we did not do [this] entrepreneurship course, [...] I would have been sad. Doing a course like this opens your mind to other ideas that also relates to your career path in some way; it exposed me to a lot of possibilities."

In the whole, the findings discussed indicate that on average, experiential pedagogy (business start-up and practitioner guest speakers) stimulates entrepreneurial aspirations and in-

creases the chances that a student will start their own business. The findings are similar to the result of National Survey of Student Engagement that experiential pedagogy has a high impact on students learning and retention (Kuh, 2008). However, it contradicts Arranz et al. (2017) which find that out-of-class activities decrease capacity to start a business. One explanation for the positive response to entrepreneurship education is that the students may have *apriori* interest in entrepreneurship because of their entrepreneurial kin(s).

Based on the proceeding discussion, I propose

> *Proposition 1: Contextualized experiential pedagogy will raise the aspiration of students for entrepreneurship*

5.2.2   Student Engagement

At PAU students often work together and learn in groups. For instance, they discuss and analyze case studies, work on class exercises (e.g., presentations) in groups.

Psychologists have widely researched and advocate for collaborative learning, the grouping and pairing of students for achieving an academic goal. The term *collaborative learning* refers to an instruction method in which students at various performance levels work together in small groups toward a common goal. The students are responsible for one another's learning as well as their own. Thus, the success of one student helps other students to be successful (Gokhale, 1995). According to Vygotsky (1980), students perform at higher intellectual levels when asked to work in collaborative situations than when asked to work individually. Gokhale (1995) report that students who participate in collaborative learning perform significantly better on the critical- thinking test than students who study individually.

It should be noted that the claims of the merits of collaborative learning are simplistic because they do not address the ethical dilemmas in *collaborative learning*. Students experience different levels of a perceived threat when working in groups which can impact their overall learning experience. So, the more students see the learning activity as profoundly threatening to a sense of self, the more likely they will disengage (Dean and Jolly, 2012). Also, in most

cases, students do not contribute equally to a group task which may reduce the group's average performance. One student described the challenges of group work as follows:

> "It was quite difficult. There were times it was frustrating. A lot of people are very hard to work with. During meetings, for example, some will come 20-30 minutes late or some will not even come at all, or even inform [anyone] of their absence. [...] you just have to realize that [...] some people in your group may not put in as much effort as you."

Moreover, there are the challenges of embedding *collaborative learning* practices in lecture-based classes which are quite predominant in Nigeria. This latter point does not apply to PAU due to the small class size. Nonetheless, it is relevant.

In addition to collaborative learning, interactions with faculty and use of challenging assessments that require problem-solving have been linked to innovative outcomes (Mayhew et al., 2012). At PAU students have several opportunities to interact with faculty, and assessments require students to apply theories to practical problems.

5.3 Facilitating Environment

PAU has buildings with spaces for students to network and brainstorm with high-speed internet access. The university also has an Entrepreneurship Development Center which supports students with entrepreneurial ideas. Entrepreneurship Development Center "provide(s) technologically based skill training that ensures students understand how their expertise fits into improving the society" (Federal Republic of Nigeria, 2013) may also drive innovative entrepreneurship among students and graduates. Physical space where like-minded students can meet can inspire creativity and innovation in a way that may lead to innovative entrepreneurship. Thus, besides the curriculum and teaching technique used in an entrepreneurship course, *facilitating university-environment* is another ingredient for inspiring innovation.

Beyond university-environment, research suggests that public policies play an important role in shaping a national innovative capacity by determining human capital investments and creating incentives for innovation (Saint et al., 2003). Students noted that economic recession and the perceived lack of access to capital affect their decision on how soon they plan to start an entrepreneurial career.

5.4 Outcome

In line with the research question, the conceptual model posits aspirations for innovative entrepreneurship as an outcome of experiential pedagogy and facilitating environment. Student comment suggest evolution in their understanding of innovation through the entrepreneurship course. For example, during an interview, a student described the effect of the entrepreneurship course on innovation mindset as follows:

> "I thought that innovation was [about] bringing new products into the market. But, now I know it is more than just that. It is also about the way you bring the product to the market; even it is an ordinary product. The way you start - bootstrapping, crowdfunding, the process of starting [...] so innovation includes how you bring your product to the market. That is what I also learned so far in the entrepreneurship course."

Implicit in this statement is a perception that innovation in entrepreneurship is not only about commercializing new products but also in transmuting the value of existing products which is consistent with Drucker (1985) argument.

Among current students (Focus Group 1-3), there is also evidence of aspirations for innovative entrepreneurship. This is confirmed with the following quotes: "I have a couple of ideas for innovative ways of advertising that I haven't seen anywhere." "I still have the same goals and targets and objectives, but the course has taught me how to achieve them in better ways." "...and I will like to own a technology company, a Nigerian technology company where I will make laptops, tablets, phones, watches and other things." "I thought about [...] a video game

company in Nigeria. When I thought about it I realized that Nigeria doesn't have the technology required to actually achieve something like that [...] because nobody has tried it before so I feel that if everything goes my way I may be actually able to start such [a company]."

The expressions above, I argue, indicate intention for innovative entrepreneurship for the following reasons. First, the behavioral expectation to start a business within 5 years of graduation increased from 55% (at the start of the course) to 59% at the end of the course which implies stronger conviction for entrepreneurial career. Second, the innovativeness of their aspirations, was peer-reviewed on a scale of 1-10 (where 1 is *"not innovative"* and 10 means *"very innovative"*) in accordance with the steps described in the method section. The average score was 6.8. This score means that their aspirations are 68% innovative. As peer evaluation is considered highly accurate (Grant, 2017; Marty et al., 2010) the score can be considered significant. Moreover, the ideas expressed by the students are consisted with a definition of innovative entrepreneurship that includes bringing new products and services to the market or transmuting value. Put together, the results indicate that students are 59% likely to start their own business that will be 68% innovative within five years of graduation after completing entrepreneurship course with experiential pedagogy.

One example of this transmutation of value involves focus group 4 which comprise past students of entrepreneurship course who created a business named Scrap Metal. As one of the members of this group stated, "the idea was to take scrap materials, things that people general dispose of and use it to create artworks, such as clothing and accessories. And also promote other artists who [...] take scrap material to create artworks for decoration. For our own side we took scrap fabric from tailor workshop and used it to create designs on t-shirts. ... apart from what we created ourselves our intention is to help promote artist who made art from disposed materials."

The student here, expresses transmutation of value by transforming scrap materials — "things that people generally dispose of" to more valuable products "such as clothing and accessories" that customers are willing to pay for. The activities of this group are consistent with Drucker (1985) definition of innovation and, I submit, an example of innovative entrepreneurship. Notably, student colleagues described the products of Scrap Metal as creative and inno-

vative. At the time of writing, the business is still in operation.

Drawing on the evidence discussed above which shows that experiential pedagogy is linked to innovative entrepreneurship, I propose that

Proposition 2: The more experiential the pedagogy, the stronger the impact on innovative aspirations

6 Conclusions

The primary motivation of this article is to investigate whether experiential pedagogy applied in compulsory entrepreneurship education setting has links to innovative entrepreneurship. The results show that contextualized experiential pedagogy that includes business start-up can inspire innovative entrepreneurship. Experiential pedagogy provides the opportunity for experimentation which enhances not only understanding of entrepreneurship process from ideation to venture creation, but also inspires attitude, perceived feasibility, innovation mindset, and affinity for an entrepreneurial career. The findings have several theoretical and practical implications.

several key issues. First, this study presents evidence that experiential pedagogical methods are useful for stimulating innovative aspirations in students. Second, it provides evidence that experientially based learning practices can lead to innovative entrepreneurship. By this, the study contributes to a debate on what types of pedagogy may help to train innovative entrepreneurs. Third, the study contributes to the literature on experiential pedagogy and how it manifests in an emerging economy context. Lastly, it raises three propositions for future investigation.

First, this article contributes to innovative entrepreneurship theory by providing evidence that experiential pedagogy is linked to innovative entrepreneurship. The findings are consistent with Mayhew et al. (2016) by showing that out-of-classroom activities such as business student start up can inspire innovative intentions because it an avenue to juxtapose the theoretical with the practical, the hypothetical with the pragmatic, the problem with the solution.

My study extends Mayhew et al. (2016) by providing evidence of innovative entrepreneurial activities that can be traced to experiential pedagogical practices applied in entrepreneurship education. In other words, this study provides evidence that innovative entrepreneurs can be nurtured in business schools when experiential pedagogy is applied in entrepreneurship education. The evidence is encouraging for scholars who are interested to gain knowledge about how higher education can influence innovative entrepreneurship (Mayhew et al., 2012; Baumol et al., 2009). However, the findings here contradict Arranz et al. (2017) which find that out-of-class activities decrease capacity to start a business. One explanation for this difference may be due to the application of business start up which is considered a highly experiential pedagogy (Neck et al., 2014).

Second, the study contributes to Kolb's (1984) experiential learning theory by providing evidence of the effects of pedagogical practices undermined by experiential learning theory from a developing country context. The ethos of experiential learning is that *learning by doing* is the best way to learn (Kolb, 1984; Kolb et al., 2001; Dewey and Small, 1897). Scholars have emphasized that learning should be active, practical as well as theoretical not just passive and theoretical (Gielnik et al., 2015; Rauch and Hulsink, 2015; Neck et al., 2014; Neck and Greene, 2011; Rasmussen and Sørheim, 2006). Based on experiential learning theory, active and practical learning methods such as out of class experiences provide opportunities to transform experiences into knowledge. From Kolb (1984) standpoint, such learning occurs by applying theories (action) and reflecting on the experiences from various perspectives (reflection). In this way, Arranz et al. (2017) suggest that experiential pedagogy may promote innovative outcomes. Such practices inspire students' intent to innovate (Mayhew et al., 2012). This study confirms that experiential pedagogical methods promote higher learning outcomes related to innovation (Neck and Greene, 2011; Neck et al., 2014; Rasmussen and Sørheim, 2006; Rauch and Hulsink, 2015; Gielnik et al., 2015). Furthermore this study highlights the importance of synergy between curriculum and teaching practices to achieve experiential pedagogy. For example, provision for the use of practitioners in class, student start-up exercises, and collaborative learning practices should be made in the curriculum and the time of design.

Furthermore, in line with Souitaris et al. (2007) the results of this study confirm that using

practitioners as educators is useful because it inspires students to change their attitude and confidence for entrepreneurship. This study echoes the remarks of Arranz et al. (2017) that entrepreneurship educators should be, to some extent, entrepreneurs. Such educators draw from real life experiences when teaching. Students perceive this teaching method highly inspiring because it breaks down the boundaries between the university and the outside world.

To some extent this study progresses an understanding of how context affects organizational behavior (Johns, 2006). Johns (2006) argues that management researchers should highlight the effects of context in their studies. This study find that Business Schools contextualize entrepreneurship curriculum and pedagogy to compensate constraints created by institutional voids within their context (Johns, 2006). This finding is important as it shows that entrepreneurship education is not acontextual. Rather, the potential is maximized when the curriculum and pedagogy are contextualized.

Moreover, the evidence in this study may be encouraging for policymakers in Nigeria and other developing countries who advocate for compulsory entrepreneurship course as part of a broader strategy to meet economic challenges such as unemployment and sustain economic growth. For example, in Nigeria, 49.5% of youths are either unemployed or underemployed (NBS, 2016). Since innovative aspirations which the most appropriate antecedent of innovative entrepreneurship can be nurtured, more investment should be made in experiential pedagogy. Innovative entrepreneurs *create* new things (or bring new things to the market). At its extreme form, innovative entrepreneurs commercialize inventions (Baumol et al., 2009). Innovative entrepreneurship is the disruptive force that sustains economic growth.

For educators, this study confirms that innovation is mainly a result of pedagogical practices oriented towards action and based on student engagement. In this sense, Decramer et al. (2012) point out that activities for developing real business ideas, as well as creating mixed of students to work together in small groups toward a common goal are key elements for the emergence of innovative aspirations.

To sum up, as Arranz et al. (2017) note, curriculum and pedagogy need to incorporate teamwork to improve critical- thinking, workshops delivered by practicing entrepreneurs to inspire positive attitude and confidence, and business start activities to allow students to maximize the

development of innovative ideas. In particular, use of practicing entrepreneurs and business start up in entrepreneurship education favors the transformation of students into innovative entrepreneurs.

6.1 Limitations and Recommendations

There are three main limitations to this study. First, the background of students in private and public universities may vary significantly, and therefore the outcomes of entrepreneurship education may vary across both university-types. PAU is a private university which attracts students from upper middle class and upper class. The experiences of students from such background may be different from the population of students in public universities across the country regarding aspirations and class sizes. For instance, it is possible that because of their background, some private university students have been exposed to technologies and innovation that enables them to connect the dots (Shane and Venkataraman, 2000) and develop innovative intentions.

Second, relates to the issues of class size. The class size of PAU (80) is significantly small compared to that of a public university in Nigeria with average class size of 500 students. This difference in the class size reasonably amplifies the challenges of embedding experiential pedagogy in large lectures. Investigating how experiential pedagogy manifests in such larger class size might unpick more nuances in embedding experiential pedagogy in large lectures (Dean and Wright, 2016).

Third, the replicability of PAU's pedagogy. PAU was selected for this study in part because they are the only university known at the time of this writing, that provides seed capital of $250 for student start-up activity as part of the entrepreneurship course. Owing to financial constraints, the replicability of their pedagogy across public universities is open to debate.

Based on these three issues, therefore, care should be taken when interpreting the results of this study. To improve generalizability, future studies should adopt quantitative research approach to investigate a) how experiential pedagogy manifests in public universities; b) whether experiential pedagogy proposed in the model elicit the same results in students across public and private university; c) whether the compulsory element of the entrepreneurship courses

affect students across public and private university differently.

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