Advances in Social Sciences Research Journal – Vol. 9, No. 8
Publication Date: August 25, 2022
DOI:10.14738/assrj.98.12890.
Egharevba, E, M., Ukenna, S. I., Ogbari, M. E., Barnabas, S. M., Oke, U., & Gayus, K. A. (2022). Innovative Entrepreneurship Education: Positing an Integrative Model. Advances in Social Sciences Research Journal, 9(8). 282-296.

Innovative Entrepreneurship Education: Positing an Integrative Model

Egharevba, Etinosa Matthew
Department of Sociology, Covenant University, Ota, Nigeria

Stephen Ikechukwu Ukenna
Research and Development Department
Standpoint Consulting Ltd, Anambra State, Nigeria

Mercy Ejovwokwoghene Ogbari
Department of Business Management
Covenant University, Ota, Nigeria

Suleiman M. Barnabas
Department of Sociology, Baze University, Abuja

Ugbenu Oke
Directorate of Research, National Institute for
Policy and Strategic Studies Kuru, Jos, Nigeria

Kasa Adamu Gayus
Department of Sociology, Covenant University, Ota, Nigeria

ABSTRACT

This conceptual paper is triggered by the backdrop that graduates emerging from the developing countries, particularly in the sub-Saharan African region seem not to be strong enough in their personal capacity, resolve and drive to becoming independent entrepreneurs, perhaps as a result of fear, inertia, and unwillingness to take-risk. These drawbacks somewhat suggest that prevailing innovative entrepreneurship educative models may be pedagogically inadequate. The study reviews existing models underpinning innovative entrepreneurship. Secondary sources of data was employed to provide broad insights on the domain of innovative entrepreneurship and related areas. This paper advocates for a departure from the current theoretical approach to the adoption of the Integrative Model of Innovative Entrepreneurship Education (IMIEE), which is a pragmatic mechanism for the study of entrepreneurship education and curriculum development in developing countries. The integrative model of innovative entrepreneurship education is imperative for understanding and guidance in pedagogy and practice such that drives innovative entrepreneurship practice and institutional sustainability.

Keywords: innovative entrepreneurship, entrepreneurship education, institutional sustainability, integrative model, models, curriculum development.

INTRODUCTION

World over, the innovative entrepreneurship culture is increasingly gaining wide-spread relevance as a critical success factor not just for entrepreneurship practice, but also for pedagogy in entrepreneurship education [1]. Agreeably, an individual's background (education, social demography and experiences) naturally opens up platforms that maximises potentials for developing sound and innovative entrepreneurial ideas which are not easily imitable by other competitors [2,3,4]. However, there is growing inertia among entrepreneurs about exploring innovation opportunities [5]. This situation seems to question innovative ideologies of an entrepreneur acquired especially during training. Hence, just very few entrepreneurs can truly be said to be innovative [6], which seems to draw attention on the appropriateness of prevailing models of innovative entrepreneurship.

Shane [7] agree that an individual's experience and knowledge determines how well and efficiently opportunities are identified and exploited, hence the need for properly educating potential entrepreneurs. Surprisingly, there are a plethora of thriving innovative entrepreneurs whose educational background involve them dropping out of school. For instance, founder of Microsoft, Bill Gates dropped out of Harvard and the founder of NIKE, Phil Knight received degrees from some top-ranked business schools, just to mention a few. This triggers the question about the relationship between higher educational attainment and innovative entrepreneurship. Can innovation be adequately practiced in college and universities? How can universities and colleges actively help students to imbibe innovative entrepreneurial skills? Such inquisitions have resulted in institutional stakeholders revisiting educational practices to examine its efficacy in motivating students' innovative desires for proffering solutions to ongoing societal issues that extend into future generations. It is important to note that policies pertaining to innovation are key in affecting innovative feats. However, they must be designed to cater for the specific needs and institutional structures of each peculiar nation [8]. This is otherwise known as the national innovation system.

RESEARCH PROBLEM

Especially in developing countries, graduates seem not to be strong enough in their personal capacity, resolve and drive to becoming independent entrepreneurs, perhaps as a result of fear, inertia, and unwillingness to take-risk [9, 10]. These (fear, inertia, no risk-taking) are evidenced in the increasing number of young graduates seeking jobs and the high failure rate of newly established small businesses [11]. These drawbacks somewhat suggest that prevailing innovative entrepreneurship educative models may be pedagogically defective. Accordingly, it is imperative to posit an integrative model that eliminates the elements of fear, inertia, and weak risk-taking attitude at the tertiary educational levels that concomitantly translate into fostering institutional sustainability through innovative entrepreneurial practices. This paper seeks to address the research question: what integrative model of innovative entrepreneurship education can guide pedagogy, curriculum development, and practice in innovative entrepreneurship? Without doubt, the development of such model has the potential of providing future researchers in the area of innovative entrepreneurship research with an array of ideas to guide their investigation. In addition, the model can provide an insight for innovative entrepreneurship practice and training. The rest of the paper discusses the following themes: literature review, methodology, finding and discussion and implications of proposed model, and Conclusion.

LITERATURE REVIEW

Conceptual review

Innovative Entrepreneurship

The concept of entrepreneurship has three major approaches: entrepreneurial function; enterprise performance; and owner-operated enterprise [12, 13]. Innovative entrepreneurship is a derivative of the first strand of the broad concept of entrepreneurship. The entrepreneurial function pertains to dynamic actors including managers and intrapreneurs who undertake crucial choices on production, research and development (R&D), location, innovation and investment. The field of Innovative entrepreneurship is an amalgam of two concepts – innovation and entrepreneurship. There is plethora of definition of innovation. Innovation is turning an idea into a solution that adds value from a customer's perspective. It is something newly introduced, such as a new method or device. Modern thinking in innovation synthesizes technologies and continues to challenge conventional techniques. Agreeably, innovation requires technological changes in form of new era of equipment, machineries and better educated workers. So, technological advances sometimes emerge from on-the-job training, capabilities, R&D, formal and informal investment forums [14]. Usually, innovation is measured by the magnitude of patents or venture capital received. Despite the various perceptions of innovation, including defining it as procedures of inventing new products for modification to satisfy clientele preferences before production and sales, one thing remains common across all definitions, innovation encompasses value creation[15]. Inserting the concept of innovation to entrepreneurship leads to producing new items or services or developing uniquely new techniques to manufacture or deliver commodities at lower cost [16]. This is very contrary to a replicative entrepreneur who imitates what already exists in the market and probably adopts an already existent business model that best suits their personal interests rather than that of the customer base. Cantillon [17], Say [18], Schumpeter [19] and Kirzner [20] are few authors who first distinguished between replicative and innovative entrepreneurship.

Baumol [21] explored bringing innovative entrepreneurship into micro-theory of value. In his book, it was conceded that right from time; entrepreneurs have been acknowledged for their contribution to the general welfare of economies, although it has gradually progressed from entrepreneurs being relegated to the background to eventually coming into the limelight and gaining more obvious global recognition. In reality, entrepreneurship goes beyond hard work and self-employment to utilising its full capacity of creativity, developing ideas [22]. Generation of such entrepreneurial ideas is characterised by rising educational levels which give the necessary forum to compare societal and economic values. Subsequently, it has been envisioned that such culture of innovative entrepreneurship is capable of incorporating social, artistic and economic activities to human embodiments of creativity. Hence, sound entrepreneurial idea is the foundation to successful innovative entrepreneurship.

Going back to definition of Schumpeter, entrepreneurial functionalities does not entail invention but is more concerned with awakening and re-defining knowledge into physical form in market places. Such invasion and disruption of prevalent market equilibrium with ground-breaking innovation, otherwise termed 'creative destruction' is made possible through better effective allocation of resources and a competitive environment [23, 24]. Hinterhuber [25] noted the importance of attaching missions or purpose to innovative entrepreneurial ideas such as Stephen Wozniak and Steven Jobs whose visions were to democratise computers such that the greater part of the populace can afford it. In this way, innovative entrepreneurship

differs from the traditional business motive/objective of primarily making profit. Additionally, Timmons [26] sees entrepreneurship as a human creative ability to build something from nothing. Curiosity and an optimistic attitude that there are much more opportunities to be discovered helps to foster innovative entrepreneurship.

Another traditional conceptualisation of an innovative entrepreneur is that such a person must be knowledgeable in basically every aspect: bargaining with clients and suppliers, coordinating employees, fostering team spirit, accounting, maintaining inventory and business equipment, handling tax collectors' demands and other legalities involved. However, such an individual that is generally qualified and perfect is not just difficult to locate but to train from the inception, not to mention that having all these qualifications is rather scary for ordinary people. This does not mean that an entrepreneur should not be vast. Contrarily, it implies that successful innovative entrepreneurship requires basic knowledge and comprehension of these different areas to allow for flexibility as it is literally impossible to be perfectly or fully skilled in each and every one of these subject matters [22].

Interconnectivity of Innovativeness and Entrepreneurship Education

Coupled with the increasing levels of education, customers are getting more sophisticated in their preferences and tend to desire uniquely outstanding products or services [11]. This partially arises from broader awareness about how businesses are generally conducted. Thus, asides top notch innovative ideas, having the right team of committed people and resources are additional ingredients that are intertwined in order to achieve innovative entrepreneurship. Embedded within these resources is the entrepreneur's education and experiences, which help to develop persistence and perseverance through the difficult points of possible failure [27]. However, for these factors to work, a thoroughly refined business model is necessary. Undeniably, the process involved in formulating innovative entrepreneurial ideas is a critical component of business models. Such models must include synergetic strategies that take into account societal values and problems that are common to all or most individuals within that society; else this might backfire due to its inability to attract the public [28].

Baumol [29] and more recently Ogbari, Olokundun, Ibidunni, and Obi [27] observed that educating innovative entrepreneurs at the university level is a deliberate process to prevent excessive dependence on imitating traditionally confining thoughts which hamper creative behaviours and attitudes that are important for innovation-oriented activities. Researchers have argued over time on the realistic possibility of teaching entrepreneurship that is innovative, rather than replicative and whether such personality skills including risk-taking are natural (in-born) or nurtured (learnt at an early age) or a synergy of both. Ukenna [9] had advocated how the risk inertia can be overcomed and skills developed to eliminate fear towards risk-taking. Some persons believe that one either possesses this entrepreneurship skill or doesn't, others such as Baumol, Litan& Schramm [30] are of the opinion that training and education are vital contributors to innovativeness of entrepreneurs.

Modern conditions of professional educational institutions are featured by rising competitiveness; thus, modern teachers should practice innovative and entrepreneurial dexterity in addition to applied professional competence [31]. Unfortunately, majority of teachers are not focusing on the innovative aspect of business and remain unready for its active

implementation [32]. This is probably because most modern educators have not developed their innovative entrepreneurial competence well enough.

Models of entrepreneurial activities span across consulting, inventory, commercial, investment, market-games, acquisition, intermediary and institutional models. So, productivity level of competent innovative and entrepreneurial formation is related to readiness to innovate, dynamism and the level of teachers' openness/receptiveness to new approaches of doing things. Active involvement in conferences, innovative ideas, grants, projects and systematic publications also help in boosting teacher's efficiency with regards to innovative entrepreneurship. Cooperating with relevant research institutes, technologies and developmental projects helps to ensure the integrity of innovative processes of entrepreneurial efficacy [33].

Concerning entrepreneurship education, it is apparent that the existent educational structure has not completely succeeded in encouraging a sufficient innovative entrepreneurship approach to tackling overall real-life challenges. As a matter of fact, most educational schemes that should combine education with real-life production activities do not actually reflect the intricacies of the market. Meanwhile, diverse experiences and lessons can be gotten from being involved in the real functionality of markets, starting from entrepreneurial ideas to pricing and quality which must be favourable to consumers' demands. Also, building dependable network and people-relationships as well as learning to effectively deal with both formal and informal power structures of society is a vital asset that goes beyond the theoretical teachings of schools [34]. In training students for undertaking entrepreneurial ventures that are innovative in nature, higher technical education which combines legal and economic knowledge with practical exposure is fundamental.

Hence, entrepreneurship education is much beneficial than Intrapreneurship where in the latter, job seekers usually present their educational certificates (most likely without practical experience and vocational training) and wait for employers to accept potential employee's offers of practicalizing their own ideologies for organisational gains. However, this stifles innovative entrepreneurship as the entrepreneur is restricted or saved from the burden of personally seeing to the establishment of his own business enterprise. The reality is that for youths to cultivate essential entrepreneurial skills, they must actively participate in developmental programs that have strong pedagogical accentuation on encouraging creativity, building leadership and problem-solving skills for taking the initiative, dealing with negotiations, decision making amongst other key life skills [35].

Baumol [29] recommended that universities adopt an integration of two methods in training innovative entrepreneurs: students should choose research projects that allow practical proficiency in prevalent analytical techniques coupled with a liberal imaginative process that is unorthodox. Nonetheless, balancing the provision of sufficient training technicalities with attempts to evade regularised and ordinary thinking approaches remains a crucial obstacle to designing quality schooling curricula for potential innovative entrepreneurs. So, it is much needed for such pedagogy to be imbibed within educational curriculum context that extends to even non-business students that demonstrate flair and interest in such. This is preferable to being restricted to business environment or special trainings in business administration. A vivid illustration is the rising pattern of involving science, arts and engineering students in the

entrepreneurship process [36]. In fact, the Kauffman Panel on Entrepreneurship Curriculum in Higher Education [37] is a strong proponent of teaching innovative entrepreneurship as this is not a case of one size fits all, thereby cutting across all disciplines. Therefore, for students to effectively learn how to implement innovative entrepreneurial operations, there must be proper interaction with their teachers.

Institutional Sustainability

The concept of innovation system encompasses the operations of public and private actors, interlinkages as well as the roles of institutions and policies [38]. This stems from R&D activities undertaken by research institutes, government agencies and universities. Lundvall, Johnson, Andersen and Dalum [39] observe innovation systems from two angles: its structure (in terms of what is produced and the most developed competencies) and institutional setup (that is, the process/manner in which learning, innovation and production occurs). Lundvall [40] pinpoints the narrow and broad perspectives of innovation system where the former directly focuses upon those kinds of institutions which are major innovation sources that intentionally aid the attainment and spread of implicit cognition. The broader innovation approach acknowledges that this narrow perspective of institutions is contained within a much larger socio-economic system. This innovation concept has even gained popularity globally including EU and OECD economies.

Empirical review

Interestingly, innovation goes beyond invention, which mainly pertains to R&D and encapsulates modern innovation theory that emphasises innovation as a mechanism of transferring new knowledge. Intriguingly, policy measures for stimulating innovative entrepreneurship are quite different from those that foster general entrepreneurship. Block, Fisch & Van Praag [41] explored the magnitude of innovative entrepreneurship by investigating 102 empirical works that were published in the primary economics and management journals. This enabled adequate synthesis of existent researches, thereby aiding knowledge, awareness and support of encouraging more innovative entrepreneurship.

Many empirical works have concentrated on replicative entrepreneurs and their associated educational experiences. Nonetheless, there are recent studies which investigated the interconnectivity of educational exposition and innovative entrepreneurship [42, 43, 44, 45]. A research survey on entrepreneurship education carried out between 1985 and 1994 confirmed that entrepreneurship is teachable given the positive influences of educational programs upon a person's entrepreneurial prowess [46]. Similarly, Kourilsky and Walstad [47] and Chilosi [48] provide evidence of instances where education has positively led to successful entrepreneurial undertakings, which expand from start-up initiatives to facilitating mass self-employment opportunities. This stems from increased confidence to assume risks that are implicit to such innovative businesses.

Additionally, degree attainment has been affirmed to be correlated with successful performance indicators like earnings, profits and growth. Van der Sluis, van Praag and Vijverberg [49] opines that higher educational levels of an entrepreneur aids greater performance of the concerned entrepreneurial ventures. This is strongly supported by Weaver et al. [50] who believes that highest entrepreneurship levels are connected with people that

possess a minimum of college education; regardless, education that exceeds bachelor's degree are not totally established to have positive linkages with entrepreneurship.

Kourilsky and Esfandiari [51] explored the New Youth Entrepreneur curriculum that had 12 educational units of coursework that were channelled to teach students major entrepreneurial nuggets. After teaching this syllabus for one period everyday throughout the semester, it was seen that it had substantial positive impact on African American high school students from lower social classes as they were equipped with basic entrepreneurial understanding and dexterity. Other authors have established that such curricular schemes enable the acquisition of creative thinking capacity, developing new products, insights into technological innovations, leadership and negotiation via related taught courses [52]. These subsequently boost awareness of entrepreneurial platforms [53], likely problems to be encountered [54], traits of an innovative entrepreneur's personality [55], building tolerance levels [56], methods such as patents for safeguarding ideas [57], funding sources for entrepreneurial ventures [58]. Rabbior [59] goes on to posit that entrepreneurship courses should also boost self-esteem and confidence by enlightening them on how it works in communities, of which communal integration and out-of-the-box thinking is very helpful. Gibb [35] recognises the place of addressing students' self-efficacy.

Mayhew et al. [34] sought to explore the link between innovative entrepreneurship educational experiences by executing series of assessment to 3,700 undergraduate seniors who graduated in 2007 spring. Their findings revealed that undertaking entrepreneurial courses as pedagogical approaches were substantially connected to innovation intentions after controlling for political, educational, demographic and personality covariates. This buttresses the research of Olarewaju and Olurinola [4] that recognised the importance of socio-demographic factors combined with the sound health of concerned individuals to impact the level of education attained via hands-on-training and practical experiences. Therefore, synthesising pedagogy-related information from diverse empirical and anecdotal sources makes it obvious that teaching based on real-life experiences yield the best outcomes. Whereas experience-based techniques incorporate developing business plans, field trips, consulting and holding interview sessions with on-the-field entrepreneurs, giving chances for students to actually start-up businesses [60, 61]; non-experiential approach includes behavioural simulations [62, 63].

Review of Previous Models on Innovative Entrepreneurship Education

Design Thinking Approach/Model

Originally traced and drawn from the professional designers and architects, the Design Thinking (DT) has been argued to be a critical success factor that should form the thinking pattern of modern entrepreneurs and managers. Rauth, Carlgren, and Elmquist [64] noted that DT is a management concept derived from a way of working with innovation mainly. They further argue that everyone can learn from the way that designers think and work to come up with better ideas and enable the development of more innovative offerings [65]. Today, DT is being implemented in various organizational settings often through executive education and consultancy projects as it so useful in fuzzy front end of innovation and product development. Consequently, it is developed into a management concept that is now taught at numerous business schools as it being applied in a variety of management contexts [64].

It is noted that embedding the DT approach into innovative entrepreneurship education requires primarily the integration of the ten design thinking tools. Ten design thinking tools as identified by [66] include: visualization; journey mapping; value chain analysis; mind mapping; brainstorming; concept development; assumption testing; rapid prototyping; customer co-creation; and learning launch. Randall and Liedtka [67] noted that all these tools can only work after answering four critical questions: What is? What if? What wows? And what works? This corresponds to the opinions of [66]. Moreover, these tools are somewhat re-emphasised by Dijksterhuis and Silvius [68] who reiterate the importance of focusing on the needs of the concerned users in addition to promoting visual aids. Thus, such thinking approach could be helpful when aiming to boost the competence of education for innovative entrepreneurship such that it translates into institutional sustainability. Therefore, a robust model, which this paper seeks to propose, is expected to integrate the DT tools and values.

D.I.S.R.U.P.T Model

The disruptive model emerged from the conceptualization of disruptive innovation. A disruptive innovation is an innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market-leading firms, products, and alliances [69].The term was defined and first analyzed by the American scholar Clayton M. Christensen and his collaborators beginning in 1995. According to Christensen [69], disruptive innovations tend to be produced by outsiders and entrepreneurs in startups, rather than existing market-leading companies. The business environment of market leaders does not allow them to pursue disruptive innovations when they first arise, because they are not profitable enough at first and because their development can take scarce resources away from sustaining innovations (which are needed to compete against current competition).

This model is also considered in striving to achieve innovative approach for teaching entrepreneurship. Disrupt is a new way of thinking which generates new ideas of how to meet clients' needs through the provision of either a product or a service, in this case being entrepreneurship education for innovative entrepreneurship and institutional sustainability. Disrupt is an acronym which stands for the following: D-Derive: bring something new out or slightly change from the original existing product or service to producing a new one; I-Include: making something new that add value and different from the original; S-Separate: removing connection between people or things and create a new product or service idea; R- Re-purpose**:** to change something in a product or service and to use the changed product or service for a different thing; U- Unite: This combines two products to create a new product; P- Personalize: designing or producing something to meet someone`s or individual requirements; T-Transplant: this is when an idea that works in one place is taken and introduced in another place, which can be a country or a different customer segment.

However, in terms of the focus of this paper, the thinking of the DISRUPT model can be built into the teaching of innovative entrepreneurship so as to attain sustainable institutions. The present teaching of innovative entrepreneurship has focused on sustaining innovation and not on disruptive innovation. Christensen [69] explained that the goal of sustaining innovation is to improve existing product performance. On the other hand, he defines a disruptive innovation as a product or service designed for a new set of customers, which is critical to innovative entrepreneurship and institutional sustainability.

Experiential Learning Theory/Model

The critical defect of most entrepreneurship curriculum and pedagogy is the absence of experience on the part of the students. This has given rise to the knowledge-practice gap, which has resulted to low risk-taking attitude and general fear when the students face the real world. This has triggered the need to pedagogically bridge gap by integrating experiential learning component in the innovative entrepreneurship education model. Thus insights are drawn from the Experiential Learning Theory (ELT) posited by Kolb [70]. According to McCarthy [71], generally, there are four approaches to learning which include (1) personality (2) information processing, (3) social interaction, and (4) instructional preferences.The second approach, information processing, examines how students absorb and use new information. David Kolb's experiential learning model and learning styles inventory (LSI) is the most prominent theory and instrument used [71]. Depicted in Figure 1 below, the experiential learning model is a four stage circular process where for effective learning to occur, the learner must experience the entire cycle. Most students favour one part of the cycle over other parts hence their learning style preference.

Experiential learning, or "learning by doing" has resulted in positive outcomes. Most experts agree that when students take an active role in the learning process the student's learning is optimized [71]. The ELT has important implications for innovative entrepreneurship education. Primarily by understanding experiential learning theory and linking to practice in the classroom, educators are better equipped to promote learning [71]. ELT is intended to be a holistic adaptive process on learning that merges experience, perception, cognition, and behavior. ELT defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" [70]. The experiential learning model is a cyclical process of learning experiences. For effective learning to transpire, the learner must go through the entire cycle. The four stage learning model depicts two polar opposite dimensions of grasping experience – concrete experience (CE) and abstract conceptualization (AC), and two polar opposite dimensions of transforming experience – reflective observation (RO) and active experimentation (AE). Experiential learning is a process of constructing knowledge that involves a creative tension among the four learning abilities. The learner must continually choose which set of learning abilities to use in a specific learning situation [70].

The Learning Style Inventory (LSI), the instrument used to assess the individual learning styles, identifies four types of learners based on their approach to obtain knowledge– Diverger, Assimilator, Converger, and Accommodator (see Figure I).

Figure I: The Experiential Learning Cycle and Basic Learning Styles (Kolb, 1984)

Divergers prefer to approach learning through Concrete Experience (CE) and to process it through Reflective Observation (RO). Divergers are best at viewing existing situations from many different points of view. Individuals perform better in situations requiring generating new ideas and brainstorming. Their strength lies in imaginative ability and awareness of meaning and values. Accommodators also prefer to take in knowledge through concrete experience, however they favor processing it through active experimentation ideas [70, 71]. Accommodators have the ability to learn from primarily "hands-on" experience. The converger also approaches knowledge through abstract conceptualization, however the converger favors

processing it through active experimentation. Convergers prefer to deal with technical tasks and problems rather than with social and interpersonal issues.

Obviously, the ELT provides critical insight in any conceptualization of an integrative model to guide understanding of innovative entrepreneurship education. Such an integrative model incorporates an experiential component that supports students to allay fear and triggers appropriate risk-taking behavior when engaging in real-world situation.

METHODOLOGY

This paper aimed at building a literature body from which a model could be derived to better conceptualize and explain innovative entrepreneurship education. Accordingly, a number of academic resources (conceptual and empirical) were used to produce an inclusive and all-encompassing review of literature. Guided by theoretical review of Ukenna and Nkamnebe [72], the search process this study involved a wide range of peer reviewed academic journal articles aimed at addressing the issues on innovative entrepreneurship education (IEE) as well as review of previous cognate models on innovative entrepreneurship. This process led to the conceptualization and formulation of the variables or elements that constitutes the proposed Integrative Model of Innovative Entrepreneurship Education (IMIEE)

The criteria used for the inclusion or exclusion of an element or variable within each construct (e.g. sparks of innovation drivers) were the necessity for the element to have an impact institutional sustainability. Elements have been derived from a number of previous models and concepts, such as Experiential Learning Model, D.I.S.R.U.P.T Model, and Design Thinking Approach. In addition, previous empirical studies have also informed the choice of elements that are insightful for positing the IMIEE. Literature was also drawn from the fields of education, psychology, sociology, and strategic management. The relevant literature has been organized and presented in the IMIEE according to coherent themes (or variables) that were derived during the review. These themes (i.e. innovation drivers, entrepreneurship culture) form the components presented in the proposed model.

DISCUSSION

The elements of fear, inertia, no risk-taking [9, 10] that seems to have partly triggered the increasing number of young graduates seeking jobs and the high failure rate of newly established small businesses owned by young entrepreneurs [11] seems to question the adequacy of prevailing models of innovative entrepreneurship education. Accordingly, we posit the Integrative Model of Innovative Entrepreneurship Education (IMIEE) depicted in figure 2 below. Therefore, the IMIEE we propose is expected to guide effectively teaching and other pedagogical activities in innovative entrepreneurship across schools, high schools and universities alike such that institutional sustainability will be the ultimate result. In addition to the above discussed three models (i.e. Design Thinking Approach, Disruptive Model, and Experiential Learning Theory) informed the conceptualization of the IMIEE, other cognate works that informed the IMIEE conceptualization are sparks of innovation by Hoffman [73] and entrepreneurship culture and climate by Gabr and Hoffman [74].

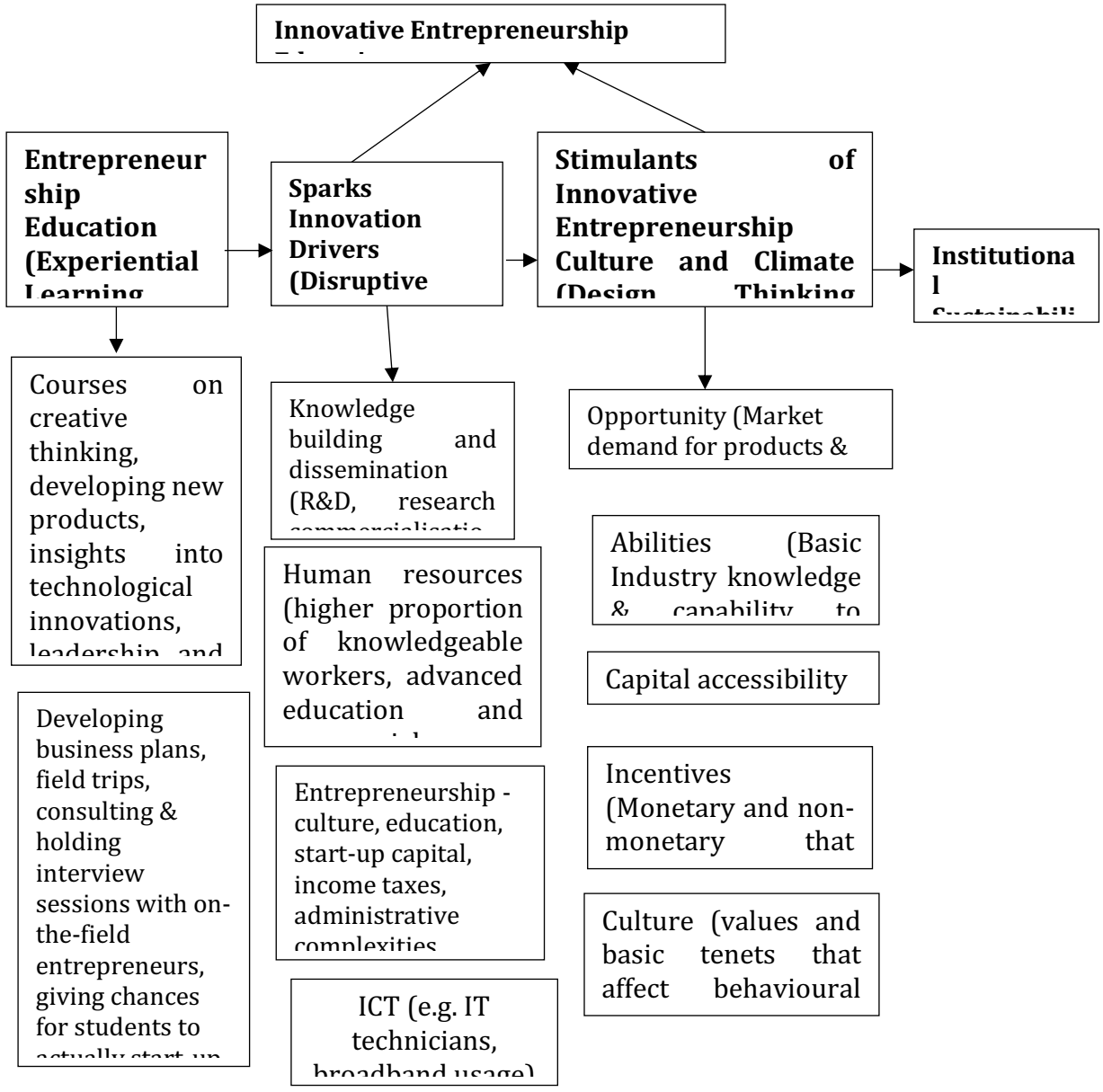

Figure II: The Integrative Model of Innovative Entrepreneurship Education
Source: Authors' own conceptualization, 2022

The IMIEE seeks to contribute to the understanding of innovative entrepreneurship in two ways. First, it gives insight to curriculum design and pedagogy in innovative education and second, it provides managerial tool for both potential and current entrepreneurs who seek deepened knowledge that strengthens their innovative drive. Accordingly, the IMIEE comprise of four critical components or constructs – entrepreneurship education (EE), sparks of innovation drivers (SID), stimulants of innovative entrepreneurship (SIE) culture and climate, and institutional sustainability. The first construct, entrepreneurship education (EE), in this context is conceptual from the experiential learning prism. The EE construct is strongly underpinned by the Experiential Learning Theory (ELT), as it is believed that the EE projected must be hands-on giving the students opportunities to acquire experience. Hence, it involves two distinct but interrelated parts: the creative development of their products or business idea;

and the actual execution of such ideas into micro start-ups within or outside campus. This is a departure from previous teaching in EE, which is theoretical loaded thereby making EE too abstract. The so much abstractness in EE seems to increase inertia, fear, and wider knowledge-practice gap due to none experiential lessons.

The second construct, SID, is underpinned by the Disruptive Model of innovation building. It is expected that during teaching, instructors are to provoke disruptive entrepreneurial mind-set. Christensen [69] maintained that the approach of sustaining innovation should be replaced with disruptive innovation approach if startups seek institutional sustainability and survival. The last construct, SIE, argues that innovative entrepreneurship education must be strengthened by wide-spread and firm-wide culture and climate of innovation through sound design thinking.

CONCLUSION

This study sought to explore innovation entrepreneurship from the perspective of entrepreneurship education. Therefore, the paper investigates diverse approaches to determine how best innovative entrepreneurship can be taught to aspiring entrepreneurs regardless of their disciplines. This entails an overall restructuring of school curriculum and pedagogy such that more practical and hands-on experiences can be gained. This has informed the need of proposed IMIEE, which we conclude will guide curriculum development and other pedagogical issues in innovative entrepreneurship education. It is concluded that an innovative entrepreneurship education that is pedagogically effective through insight from IMIEE can strongly translate into successful entrepreneurial practice, as it is expected to incubate future practitioners.

References

[1] Faltin, G, Creating a culture of innovative entrepreneurship (2001). *Journal of International Business and Economy*, 2001 2 (1), 123-140.

[2] Vesper, K. H. *New Venture Mechanics,* .New Jersey, 1993.

[3] Csikszentmihalyi, M, Das flow-Erlebnis. 7. Auflage. Stuttgart, 1999.

[4] Olarewaju, F. O. & Olurinola, I. O, (2019) Educational Attainment and Health Outcomes in Nigeria: A Survey from NDHS (2008 & 2013). *The International Journal of Humanities & Social Studies*, 7 (11).

[5] De Jong, J. P, J & Marsili, O, (2015) The Distribution of Schumpeterian and Kirznerian Opportunities, Small Business Economics, 44 (1): 19-35.

[6] Block, J. H., Fisch, C. O., & Van Praag, M. (2017) The Schumpeterian entrepreneur: A review of theempirical evidence on the antecedents, behaviour and consequences of innovative entrepreneurship, *Industry and Innovation*, 24(1): 61-95.

[7] Shane, A. S, (2003) *A general theory of entrepreneurship: the Individual-opportunity nexus*, Cheltenham, United Kingdom, E. Elgar.

[8] OECD (2005a) *Innovation policy and performance: Across-country comparison*. Paris, OECD.

[9] Ukenna, S. (2009) Entrepreneurship: Overcoming the risk inertia. *Madonna University Journal of Research in Business Administration and Management,* 1 (1): 61-68.

[10] Lawal, F. A., Iyiola, O. O., & Adegbuyi, O. A. (2018) Exploring alternative financing for entrepreneurship development in Nigeria: Surmounting challenges. *Journal of Entrepreneurship Education,* 21(2): 1-11.

[11] Adegbuyi, A. A., Adegbuyi, O. A., Ogunnaike, O. O., Ibidunni, A. S., & Fadeyi, O. I. (2018) Role of Learning Orientation on SMEs' Performance: Empirical Evidence from SMEs In Nigeria. *Journal of Entrepreneurship Education,* 21(4), 2018, 1-6.

[12] Goedhuys, M., & Sleuwaegen, L. (2010) High-growth entrepreneurial firms in Africa: a quantile regression approach. *Small Business Economics*, 34 (1), 2010, 31-51.

[13] Szirmai, A., Naudé, W., & Goedhuys, M. (Eds.) (2011) E*ntrepreneurship, innovation, and economic development,* Oxford University Press, 2011.

[14] Helpman, E. (2004) *The Mystery of Economic Growth*, Harvard University Press.

[15] Tidd, J., Bassat, J., & Pavitt, K. (2007a) *Managing innovation*, Chichester, United Kingdom, John Wiley & Sons.

[16] Baumol, W. J., Litan, R. E., & Schramm, C. J. (2007a) *Good capitalism, bad capitalism, and the economics of growth and prosperity*, New Haven, CT, Yale University Press, 2007a.

[17] Cantillon, R. (1755) *Essaisur la Nature de Commerce en General*, Paris, Chez Fletcher Gyles.

[18] Say, J. B. (1827) *A Treatise on Political Economy, 1803* (C. R. Prinsep & C. C. Biddle, Trans, 3rd, American edn.), Philadelphia, John Grigg.

[19] Schumpeter, J. A. (1936) *The theory of economic development*, 191 1 (R. Opie, Trans.), Cambridge, Harvard University Press.

[20] Kirzner, I. M. (1973) *Competition and entrepreneurship,* .Chicago, University of Chicago Press.

[21] Baumol, W. J. (2010) *The microtheory of innovative entrepreneurship*, Princeton University Press.

[22] Faltin, G. (2001) Creating a culture of innovative entrepreneurship, *Journal of International Business and Economy*, 2(1): 123-140.

[23] Schumpeter, J. (1993) Theorie der wirtschaftlichenEntwicklung, 8th Edition (unchanged version of the fourth edition, which was published in 1934) Berlin.

[24] Chima, G. U. K. (2016) New *Leadership Approach: Paradigm Shift* (1st Ed.). Lagos, Nigeria: Lumen Impact Communication.

[25] Hinterhuber, H. H. (1992) Strategische Unternehmensführung, Berlin/New York.

[26] Timmons, J. (1994) *New Venture Creation Entrepreneurship in the 1990s.*4th Edition. Boston.

[27] Ogbari, M. E., Olokundun, A. M., Ibidunni, A. S., & Obi, J. (2019) Imperatives of Entrepreneurship Development Studies on University Reputation in Nigeria, *Journal of Entrepreneurship Education*, 22(2): 1-10.

[28] Morgan, G. (1991) Emerging Waves and Challenges: *The Need for new Competencies and Mindset,* In: Creative Management. (ed.) by J. Henry, London, Newbury Park, New Delhi, 1991.

[29] Baumöl, W. J. (2004) *Education for innovation: Entrepreneurial breakthroughs vs. corporate incremental improvements,* Working Paper 10578, National Bureau of Economic Research.

[30] Baumol, W. J., Litan, R. E. & Schramm, C. J. (2007b) Sustaining entrepreneurial capitalism, *Capitalism and Society,* 2 (2), Article 1. http://www.bepress.com/cas/vol2/iss2/art1

[31] Ivanov, V. G., Shaidullina, A. R., Drovnikov, A. S., Yakovlev, S. A., & Masalimova, A. R. (2011) Regional Experience of Students' Innovative and Entrepreneurial Competence Forming Rev, *Eur Stud*, 7: 35.

[32] Osipov V. S. (2013) The Wheel of Competition as A New Instrument of Strategic Management, *World Applied Sciences Journal*, 27, (8):1083-1086.

[33] Ivanov, V. G., Shaidullina, A. R., Drovnikov, A. S., Yakovlev, S. A., & Masalimova, A. R. (2015) Regional Experience of Students' Innovative and Entrepreneurial Competence Forming, *Rev. Eur. Stud*, 7: 35.

[34] Mayhew, M. J., Simonoff, J. S., Baumol, W. J., Wiesenfeld, B. M., & Klein, M. W. (2012) Exploring innovative entrepreneurship and its ties to higher educational experiences, *Research in Higher Education,* 53(8): 831-859.

[35] Gibb, A. (1996) *The Role of Education and Training in Small and Medium Enterprise (SME) Development* (manuscript).

[36] Kuratko, D. F. (2005) The emergence of entrepreneurship education: Development, trends, and challenges, *Entrepreneurship Theory and Practice,* 29 (5):577 -597.

[37] *Kauffman Panel on Entrepreneurship Curriculum in Higher Education, Entrepreneurship in American higher education,* Kansas City, MO: Kauffman Foundation, 2008.

[38] Carlsson, B., Jacobsson, S., Holmén, M., & Rickne, A. (2002) Innovation systems: Analytical and methodological issues, *Research Policy,* 31: 233-245.

[39] Lundvall, B., Johnson, B., Andersen, E., S & Dalum, B (2002). National systems of production, innovation and competence building, *Research Policy,* 31: 213-231.

[40] Lundvall, B. A. (1992) *National systems of innovation: Towards a theory of innovation and interactive learning,* London, Pinter Publishers.

[41] Block, J. H., Fisch, C. O., & Van Praag, M. (2017) The Schumpeterian entrepreneur: A revolution of the empirical evidence on the antecedents, behaviour and consequences of innovative entrepreneurship, *Industry and Innovation*, 24 (1): 61-95.

[42] Ndofirepi, T. M. (2016) *The impact of technological creativity and entrepreneurship education on the entrepreneurship intentions of students at particular tertiary institutions in Zimbabwe and South Africa* (Doctoral dissertation, Bloemfontein: Central University of Technology, Free State).

[43] Mars, M. M., & Lounsbury, M. (2009) Raging against or with the private marketplace? Logic hybridity and eco-entrepreneurship, *Journal of Management Inquiry,* 18 (1): 4-13.

[44] Mars, M. M., Slaughter, S., & Rhoades, G. (2008) The state-sponsored student entrepreneur, *The Journal of Higher Education,* 79 (6): 638-670.

[45] Colyvas, J. A., & Powell, W. W. (2007) From vulnerable to vulnerated: The institutionalization of academic entrepreneurship in the life sciences, *Research in the Sociology of Organizations*, 25: 219- 259.

[46] Gorman, G., Hanlon, D., & King. (1997) Some research perspectives on entrepreneurship education, enterprise education and education for small business management: A ten-year literature review, *International Small Business Journal*, 15 (3): 56-78.

[47] Kourilsky, M. L., & Walstad, W. B. (2000) *The E generation: Prepared for the entrepreneurial economy?* Dubuque, IA: Kendall/Hunt Publishing Company.

[48] Chilosi, A. (2001) Entrepreneurship and transition. *MOCT-MOST: Economic Policy in Transitional Economies*, 11: 327-357.

[49] Van der Sluis, J., van Praag, M., & Vijverberg, W. (2005) Entrepreneurship selection and performance: Ameta-analysis of the impact of education in developing economies. *The World Bank Economic Review,* 9 (2):25-26.

[50] Weaver, M., Dickson, P. & Solomon, G. (2006) Entrepreneurship and education: What is known and not known about the links between education and entrepreneurial activity. *In The small business economy for data year 2005: A report to the president, Washington*, D.C.: U.S. Small Business Administration, 113-156.

[51] Kourilsky, M. L., & Walstad, W. B. (2000) *The E generation: Prepared for the entrepreneurial economy?* Dubuque, IA: Kendall/Hunt Publishing Company.

[52] Chima, G. U. K. (2016) *New Leadership Approach: Paradigm Shift* (1st Ed). Lagos, Nigeria: Lumen Impact Communication.

[53] Donckels, R. (1991) Education and entrepreneurship experiences from secondary and university education in Belgium, *Journal of Small Business and Entrepreneurship*, 9(1): 35-42.

[54] Plaschka, G. R., & Welsch, H. P. (1990) Emerging structures in entrepreneurship education: Curricula designs and strategies, *Entrepreneurship Theory and Practice,* 14 (3): 55-71

[55] Scott, M. G., & Twomey, D. F. (1987) The long-term supply of entrepreneurs: Student's career aspirations in relation to entrepreneurship. Journal of Small Business Management, 26 (4): 5-13.

[56] Ronstadt, R. (1987) The educated entrepreneurs: A new era of entrepreneurial education is beginning, *American Journal of Small Business,* 7 (4), 1987, 37.

[57] Vesper, K. H., & McMullan, W. E. (1998) Entrepreneurship: Today courses, tomorrow degrees? *Entrepreneurship: Theory & Practice,* 13, 1998, 7-13.

[58] Zeithami, C. P., & Rice, G. H. (1998) Entrepreneurship/small business education in American universities, *Journal of Small Business Management,* 25(1): 44-50.

[59] Rabbior, G. (1990) *Elements of a successful entrepreneurship/economics/education program,* in C. A. Kent (Ed.), Entrepreneurship education: Current developments, future directions, New York: Greenwood Publishing Group: 53-65.

[60] Solomon, G. T., Weaver, K. M., & Fernald, L. W. (1994) Pedagogical methods of teaching entrepreneurship: A historical perspective. *Simulation and Gaming*, 25 (3): 338-353

[61] Hills, G. E. (1998) Variations in university entrepreneurship education: An empirical study of an evofield. *Journal of Business Venturing,* 3:109-122.

[62] Stumpf, S. S., Dunbar, L., & Mullen, T. P. (1991) Simulations in entrepreneurship education: Oxymoron or untapped opportunity? *Frontiers of Entrepreneurship Research*, 11: 681-694.

[63] Brawer, F. B. (1997) Simulation as a vehicle in entrepreneurship education Digest, Center for Entrepreneurial Leadership Clearing house on Entrepreneurship Education, *Kauffman Center for Entrepreneurial Leadership*.

[64] Rauth, I., Carlgren, L., & Elmquist, M. (2015) Making It Happen: Legitimizing Design Thinking in Large Organizations, *Design Management Journal,* 8 (3): 47-60.

[65] Brown, T. (2009) *Change by design.* New York: Harper Collins.

[66] Liedtka, J., King, A., & Bennett, K. (2013) *Solving problems with design thinking: Ten stories of what works,* Columbia University Press.

[67] Randall, R., &Liedtka, J. (2014). Innovative ways companies are using design thinking, *Strategy & Leadership*.

[68] Dijksterhuis, E., & Silvius, G. (2017) The Design Thinking approach to projects, *The Journal of Modern Project Managemen*t, 4 (3).

[69] Christensen, C. M. (2006) The Ongoing Process of Building a Theory of Disruption, J*ournal of Product Innovation Management,* 23: 39-55.

[70] Kolb, D. A. (1984) *Experiential Learning: Experience as the Source of Learning and Development,* Englewood Cliffs, NJ, Prentice-Hall, Inc.

[71] McCarthy, M. (2016) Experiential Learning Theory: From Theory to Practice, *Journal of Business & Economics Research,* 14 (3): 91-99.

[72] Ukenna, S. I., & Nkamnebe, A. D, Sustainable consumption behavior in Sub-Saharan Africa: a conceptual framework. *Thunderbird International Business Review*, 59 (1), 2015, 33–50.

[73} Hoffman, A. (2005) *Innovation monitor 2005: Denmark's innovation capacity – from benchmarking to policy priorities*, Copenhagen: FORA, Division for Research and Analysis, Ministry of Business and Economic Affairs.

[74] Gabr, H., & Hoffman, A. (2006) *A general policy framework for entrepreneurship*, FORA, Division for Research and Analysis, Copenhagen: Ministry of Business and Economic Affairs.