



Nexus of Entrepreneurship Education and Entrepreneurial Mindset of Senior Secondary School Students in Lagos State, Nigeria

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ABSTRACT

This paper reviewed papers in relation to the implication of entrepreneurship education and entrepreneurial mindsets. Thirty-five (35) Papers were drawn from several databases thematically. The papers were sorted based on the recency and related theme. However, nine (9) related papers that were not recent were debunked just like the four (4) unrelated papers. Hence, the remaining 22 recent papers that were related to the theme of this paper were critically reviewed and deficiencies of the papers reviewed were identified. Based on the vast amount of literature reviewed on entrepreneurship education and entrepreneurial mindset, it seems that most of the studies focused on entrepreneurial intention of post-secondary school students, especially, the entrepreneurial intension of university students. There seems to be a few recent studies that focus on the entrepreneurial mindsets of secondary school students in Nigeria, especially the senior secondary school students in Lagos State, Nigeria. Furthermore, most of the entrepreneurship education studies adopted quantitative research techniques, there seems to be dearth of recent studies on entrepreneurship education that adopted the mixed methods research techniques. Therefore, further studies need to consider the identified gaps in entrepreneurship studies. The study concluded that despite several empirical studies done on the nexus of entrepreneurship education and entrepreneurial mindsets, there seems to be dearth of empirical studies on the nexus of entrepreneurship education and entrepreneurial mindsets of secondary school students, especially senior secondary school students in Lagos state, Nigeria. Hence, the need to fill the gap identified. There should be research on the entrepreneurship education and entrepreneurial mindset of the senior secondary school students in Lagos state, Nigeria that will employ both quantitative and qualitative methods.

Keywords: entrepreneurship education, entrepreneurial mindsets, entrepreneurial intention

INTRODUCTION

In 2006, the Federal Government of Nigeria introduced entrepreneurship education courses to university curriculum (Okojie, 2009; Agbonlahor, 2016). The implementation of entrepreneurship education started in the 2007/2008 academic session (Agbonlahor, 2016). In pursuance of the full implementation of entrepreneurship education, Joseph Ayo Babalola University, Ikeji-Arakeji, in Osun State pioneered the establishment of entrepreneurship department, leading to their slogan “The First Entrepreneurial University in Nigeria”. While other universities established a coordinating center for entrepreneurship education to support students’ entrepreneurial training.

The Nigerian University Commission (NUC) was given presidential directives by the Ministry of Education to supervise and coordinate the programme of introducing entrepreneurship education in Nigerian institutions of high learning (Okojie 2009). To make the delivery of Entrepreneurship Education, effective, the NUC prescribed the following ten areas in the Benchmark Minimum Academic

Standard (BEMAS) guide for Entrepreneurship Education in Nigerian Universities: first, introduction to entrepreneurship; second, entrepreneurship in theory and practice; third, types of business, staffing and marketing; fourth, capital requirement and raising capital; fifth, financial planning and management; sixth, feasibility studies and reports; seventh, innovations; eighth, legal issues in business; ninth, insurance and environmental consideration, and tenth, possible business opportunities in Nigeria.

Recently, NUC proposed the introduction of Core Curriculum and Minimum Academic Standards for the Nigerian University System (CCMAS) (CCMAS, 2022). The CCMAS was introduced as a means of upgrading BEMAS to optimize the effectiveness and efficiency of entrepreneurship education. Hence, entrepreneurship education was designed to provide students in tertiary institutions with the knowledge, skills, and motivation to encourage entrepreneurial success in a variety of ventures (Aliu, 2008). Also, Entrepreneurship Education was designed to instill entrepreneurial mindset to students. The notion of mindset originates from the cognitive psychology field (Mathisen & Arnulf, 2014). Mindsets are not innate; they are influenced and learned by an individual's prior knowledge and the interaction with current environment (Mathisen & Arnulf, 2014). In this context however, entrepreneurial mindset (EM) is defined as 'the ability to rapidly sense, act, and mobilize, even under highly uncertain conditions (McGrath & MacMillan, 2000). Furthermore, Shepherd, Patzelt, and Haynie (2010) note that entrepreneurial mindset as an 'ability and willingness of individuals to rapidly sense, act, and mobilize in response to a judgement decision under uncertainty about a possible opportunity for gain'. McMullen and Kier (2016) stressed that entrepreneurial mindset is an 'ability to identify and exploit opportunities without regard to the resources currently under their control', which means that entrepreneurial activity has risks to some extent. There are other definitions of entrepreneurial mindset in literature, but the consensus point is that entrepreneurial mindset is a way of thinking or an ability to capture entrepreneurial opportunities in an uncertain situation. Although, entrepreneurial mindset could be improved through training and be considered as a mind habit that requires learning to shape (Schmidt & Ford, 2003).

Based on the combination understanding of those definitions of entrepreneurial mindset, however, four components of entrepreneurial mindset are recognized: alertness to opportunity, risk propensity, ambiguity tolerance, and dispositional optimism (Tang, Kacmar, & Busenitz, 2012; George, Parida, & Lahti, 2016; Wang, Xu, & Zhang, 2016; Bell's, 2015)

Unemployment is one of the significant trends that hamper the economic development of countries and the well-being of people (Kouakou, Li, Akolgo, & Tchamekwen, 2019). The level of unemployment in Nigeria is 4.1% as at August 24th 2023 (National Bureau of Statistics (NBS)). The high level of unemployment in Nigeria has been a major concern for all and sundry. This is because, the unemployment level in Nigeria seems increasing daily, despite the ceaseless efforts geared towards tackling it. Among the several efforts geared towards ameliorating high level of unemployment in Nigeria over the years is the introduction of entrepreneurship education courses which were introduced to the curriculum of higher institutions in Nigeria in 2006, with the aim of equipping graduates with requisite skills for entrepreneurial success after school in order to reduce youths' unemployment: especially among school leavers in Nigeria (Agbonlahor, 2016).

More so, there is need to instill entrepreneurial mindset to students at their youngest age, so as for them to develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges (Kouakou, Li, Akolgo & Tchamekwen, 2019). Despite the growing demand for entrepreneurial oriented graduates, the teaching of entrepreneurship remains relatively underdeveloped (Kirby, 2004). Hence, there is a need to know the effective teaching techniques for entrepreneurship education (Alberti, Sciascia & Poli, 2005).

Perhaps, entrepreneurial mindset is one of the most appropriate measures for evaluating the impact of entrepreneurship education on students. Although, several studies have been carried out on the effect of entrepreneurship education on entrepreneurial mindset of university students in developed countries, however, not much is known on the best way(s) to influencing entrepreneurial mindsets of students (Mathews & Wessel, 2017), especially in the senior secondary school students using innovativeness, alertness to opportunities, ambiguity tolerance, and dispositional optimism as

parameters for Entrepreneurial Mindset. However, using mixed methods learning techniques that is centered on ideation-evaluation of new venture concepts: experience sharing, showing documentaries of successful giants' entrepreneurs and class lectures among others seems to be a promising way of influencing entrepreneurial mindset of senior students, especially the senior secondary school students. Meanwhile, there seems to be dearth of recent studies that determine; the effect of entrepreneurship education on innovativeness of selected senior secondary school students in Lagos state, Nigeria; the influence of entrepreneurship education on innovativeness of selected senior secondary school students; the effect of entrepreneurship education on Ambiguity tolerance of selected senior secondary school students; and the relationship between entrepreneurship education and dispositional optimism of selected senior secondary school students in Lagos State, Nigeria. This is the need for this study.

Literature Review

A. Conceptual Review

(i) Entrepreneurship education

Entrepreneurship education plays an important role in the development of entrepreneurs and enhancement of entrepreneurial activities in every economy. Entrepreneurship education is the process of passing the necessary skills and concepts to individuals to identify new business opportunities and to reach a high level of self-confidence to benefit from such opportunities (McIntyre & Roche, 1999). In addition to that, entrepreneurship education should include skill-building and leadership programs, new product development, creative thinking, and technology innovation (McMullan, Chrisman, & Vesper, 2002). Furthermore, entrepreneurship education programs help in developing personal qualities (Maritz, Jones, & Shwitzer, 2015). In the same vein, entrepreneurship education is the most important component of entrepreneurship ecosystem to enhance business creation stability (Van-Geldereren, Kautonen, & Fink, 2015).

Entrepreneurship education is germane to creating entrepreneurial skills, attitudes and behaviours that form the basis for economic growth of a country. Entrepreneurship education at universities is perceived to positively influence students' attitude towards entrepreneurship as respectable career prospect for graduates (Galloway & Brown, 2002). More so, many universities claim that they offer entrepreneurship education at an advanced level whilst focusing on writing business plans, acquiring start-up capital, and developing managerial skills, particularly nascent entrepreneurs (Matlay, 2006).

(ii) Fundamentals of entrepreneurship education

Entrepreneurship scholars are concerned with entrepreneurship curriculum contents (Learning contents) and pedagogies (how it should be taught) (Lekoko, Rankhumise & Ras, 2012). Perhaps, they believe that entrepreneurship education prepares learners as: regards the creation of new venture, knowledge sharing, and skills acquisition.

(a) Learning objectives of entrepreneurship education

The main aim of entrepreneurship education is to prepare learners to be innovative in creating their own enterprise(s) as soon as they complete their studies (Lekoko, Rankhumise & Ras, 2012). Specifically, entrepreneurship education will: provide opportunity for learners to be equipped with entrepreneurial orientation; be more aware of entrepreneurship as a career path and increase the learners' self-efficacy (Lekoko, *et al.*, 2012).

(b) Curriculum of entrepreneurship education

The synopsis of entrepreneurship education should encompass business idea generation, business planning to the identification of the products or services, feasibility study and business plan (Lekoko, *et al.*, 2012). Also, the content skills that need to be incorporated in entrepreneurship education are: (i) technical skills which relates to oral communication, technical management as well as organizing skills. (ii) personal entrepreneurial skills which relates to risk taking and innovation. (iii) business management skills which includes decision-making, generic management functions, marketing, and financial accounting skills (Lekoko, *et al.*, 2012).

(c) Teaching methods of entrepreneurship

Studies identified several approaches to teaching methods in entrepreneurship education and training programmes such as: lectures, presentations and handouts to video and case study-based learning, group discussion and role plays (Henry, Hill, Leitch, 2005; Lekoko, *et al.* 2012). Furthermore, teaching methods in entrepreneurship could involve talks by entrepreneurs, immersion in real-life situations, learning by doing, case studies (Fayolle *et al.*, 2006). Also, teaching methods involve lectures and seminars, networking and coaching, resources (Kuttim *et al.*, 2014). More so, experiential learning seems to be indispensable in knowledge and skills acquisition. Hence, learners need to have certain abilities such as: (i) concrete experience abilities, (ii) reflective abilities, (iii) abstract conceptualisation abilities and (iv) active experimentation abilities to be effective in their learning (Lekoko, *et al.* 2012). Therefore, it is evident that entrepreneurial education has the potential to transfer and communicate to the students the skills, ability, and knowledge necessary to identify potential business opportunities (Chinonye & Akinlabi, 2014).

(iii) Entrepreneurial mindset

Entrepreneurial mindset as a concept is gradually emerging in the field of entrepreneurship and plays a significant role in the process of nurturing the entrepreneurial skills and capabilities of students. Thus, entrepreneurial mindset through entrepreneurship education is the means needed first to gain the attention of the students.

Commarmond (2017) identified eleven (11) key themes that characterize an entrepreneurial mindset. These are: lifelong learning and openness to change; engagement in a complex and uncertain world; creativity and innovation; belief in one's own capacity; desire to behave entrepreneurially; the taking of initiative and responsibility for one's actions; pursuit of goal attainment and mastery; recognition of opportunities; determination and perseverance in the face of challenges; taking of acceptable risks; and belief in one's ability to influence others. At the level of single concepts, these themes overlap to a substantial degree with the elements included in other lists of entrepreneurial characteristics. For instance, Cromie (2000) suggested seven core attributes: need for achievement; locus of control; calculated risk-taking; tolerance for ambiguity; creativity; need for autonomy; and self-confidence. Also, Krueger (2015) enlist entrepreneurial mindset characteristics such as: action orientation; innovativeness; resilience; persistence; self-efficacy; role identity; entrepreneurial intensity; tolerance for ambiguity; risk acceptance; future orientation; market orientation; value creation; entrepreneurial intentions; and entrepreneurial behaviour.

(iv) Entrepreneurship education and entrepreneurship mindset

Entrepreneurship education has been widely recognized as the most important entrepreneurial tool for economic sustainability and development, yet sparse attention has been relayed to its usefulness in the development of students' entrepreneurial mindset. The development of students' entrepreneurial skills and initiatives through entrepreneurial education should be tailored at reinvigorating students' mindset towards becoming self-employed and not job seekers, especially in this epoch of graduates' unemployment. The concept of entrepreneurship education is applied in reference to how entrepreneurial understanding is transmitted (Chinonye & Akinlabi, 2014). The range of these understandings includes the belief system, abilities, skills, and cognitive resonance (Okeke & Eme, 2014).

Entrepreneurship education is defined as an instructional curriculum that intends to impart entrepreneurial attitudes and skills on students (Souitaris, Zerbinati, & Al-Laham 2007; Alexander *et al.*, 2020). Engaging students in entrepreneurship education is not only aimed towards building their entrepreneurial attitude but to also build their mindsets and endurance level to business start-up and performance.

There have been several scholarly contentions on how entrepreneurship education should be offered in universities of higher learning (Kirkwood, 2009; Okeke & Eme, 2014). Evidence abound that the traditional university teaching pattern does not encourage the required skills and attributes needed to produce students with robust entrepreneurship mindset capable of creating employment venture

(Elert *et al.* 2015) especially in this present economy downturn. The university system plays an important role in the training and education of students' entrepreneurs by developing their entrepreneurship mindset (Fuller-Love, Midmore, Thomas, & Henley, 2006). Entrepreneurship studies have revealed that students with entrepreneurship education possess higher entrepreneurship intentions (Saeed *et al.* 2015; Byrne and Shepherd, 2015).

Entrepreneurship education avails students the opportunity to start-up a business venture with the instillation of the right spirit and creative thinking pattern. While this evidence is obvious in other climes, the case for the Nigeria's university education system exudes a contrary evidence. For instance, the curriculum of university education in Nigeria departs from the intention of building students' entrepreneurship mindset with obsolete teaching methods and contents not in tandem with the present economy realities (Okeke & Eme, 2014). This necessitates the introduction of CCMAS to the higher institutions in Nigeria.

Entrepreneurship education has shown its effectiveness towards the development of entrepreneurial efficacy of students through the constitution of appropriate support system, hands-on learning undertakings and small business start-up management (Elert *et al.* 2015). For improvement in students' entrepreneurial intention and mindset, appropriate entrepreneurship educational programs in the areas of training, financial management and market skills and support functions must be clearly set out in the entrepreneurship education curriculum of universities for best results (Kouakou *et al.* 2019). Research in entrepreneurship studies have, however, argued that entrepreneurship education should not only rely on the technical teachings of entrepreneurship, but make more attempt to strengthening students' self-confidence and appropriate exposure to different learning opportunities (Hussain and Norashidah, 2015; Wang, Hong, Li and Gao, 2020). Unarguably, this trend portends the possibilities of building entrepreneurs with robust mindset and attitude required for success in a competitive business environment.

B. Theoretical Review

(bi) Effectuation Theory

Sarasvathy (2001) introduces effectuation in a conceptual article in which effectuation contrasts with causation in relation to entrepreneurs' decision-making logic. With causation, the emphasis is on prediction, whereas effectuation is directed towards controlling and shaping the unpredictable future based on the resources at hand (Kitching & Rouse, 2020). Although, Sarasvathy (2001) provides new insights into how entrepreneurs think and make decisions in the entrepreneurial process, particularly in situations characterized by uncertainty (Gregoire & Cherchem, 2020). Furthermore, Dew, Read, Sarasvathy, and Wiltbank (2009) note that expert entrepreneurs tend to use effectual thinking, whereas novice entrepreneurs usually attempt to tackle problems using causal thinking and textbook knowledge. Effectuation theory—as a value creation theory—gives new insights into the way in which entrepreneurs tackle the entrepreneurial process to create value. Therefore, this theory offers guidelines regarding the educational design that should be covered by entrepreneurship education (EE) programs. Hence, the following four principles lie at the core of effectual thinking: (i) controlling an unpredictable future, (ii) affordable loss, (iii) strategic alliances, and (iv) exploitation of contingencies (Kitching & Rouse, 2020). Regarding the first principle, rather than attempting to predict an unpredictable future by formulating fixed goals and then attempting to realize those goals (causation), entrepreneurs typically strive to control and steer their future, using what they currently have to create new value (effectuation). Causation suggests a more linear process for reaching a goal, whereas effectuation suggests a more iterative, non-linear way of learning (Read & Sarasvathy, 2005). Thus, entrepreneurs tend to focus on the resources and actions that they can control, rather than focusing on what they should do to reach a particular pre-specified goal, as this is often out of their control (Read & Sarasvathy, 2005). This does not necessarily mean that causal thinking plays no role in entrepreneurial decision making. In wide entrepreneurship education (EE), these two approaches (Causation and effectuation) to decision-making can complement each other, depending on the context, goal, and/or target group (Brettel, Bendig, Keller, Friederichsen, & Rosenberg, 2014; Perry, Chandler & Markova, 2012). Similarly, prior knowledge and experience are important factors for explaining why some entrepreneurs discover

opportunities, but others do not. For instance, Shane (2000) found that individuals with a particular education and knowledge background are more likely to identify opportunities in response to technological changes that are related to their specific area of expertise. Although applied from a different (i.e., theoretical) angle, this research illustrates how having disciplinary, domain-specific knowledge and experience (“What do I know?”) may facilitate the entrepreneurial process.

In the second principle (affordable loss), entrepreneurs tend to take calculated risks and attempt to create value by experimenting as much as possible with the ideas and opportunities that have the highest likelihood of yielding a return and low, affordable loss. A study by Dew et al. (2009) illustrates this principle by showing that experienced entrepreneurs tend to minimize the disadvantages resulting from their actions, rather than focusing on the actions that may have the highest returns.

With the third principle, entrepreneurs tend to collaborate with strategic partners who would be perceived as competitors, at least from a more traditional, causation point of view. This principle illustrates the importance of collaborating with a variety of stakeholders during the entrepreneurial process, as well as the importance of being open to collaborating across the boundaries of your own discipline and/or perspective (Lans, Baggen, & Ploum, 2018; Naia, Baptista, Januario, & Trigo, 2014). Finally, with the fourth principle (exploitation of contingencies), new contingencies are used either as opportunities or as input in the entrepreneurial process. These contingencies may replace other goals, in which case the entrepreneurial process becomes more fluent and chaotic by both responding to and integrating changes that occur over time (Kitching & Rouse, 2020).

These four principles—considering both causal and effectual thinking and decision-making, allowing for the identification and exploitation of opportunities by experimenting and taking calculated risks, involving various collaborations and stakeholders, and incorporating the unexpected when confronted with challenges and complexity guide the design criteria for wide EE programs. Causal thinking facilitates the exploitation of knowledge, whereas effectual thinking facilitates the exploitation of contingencies. In addition, effectuation theory touches upon the importance of asking “Who am I?” Research has shown that entrepreneurs develop an entrepreneurial identity during their entrepreneurial learning journey (Lundqvist, Middleton & Nowell, 2015). This entrepreneurial identity is interwoven with the entrepreneur’s personal motives, values, and intentions (Bernal & Linan, 2018), which increasingly become focused on not only creating economic value, but also creating value for a more sustainable, better world (Schaltegger & Wagner, 2011). Whereas research on effectuation originally focused on understanding how experienced entrepreneurs create value by starting a business, Obrecht (2016) shows that the theory can also be applied to sustainable entrepreneurship and the development of entrepreneurial identity.

To support the development of an entrepreneurial identity in students, effectuation theory indicates that wide EE should pay attention to the students’ personal motives, values, and intentions (Lans et al., 2014; Ploum, Blok, Lans, & Omta, 2017). This is consistent with design principles of Lobler (2006) which focus on encouraging students to steer their own learning by building on their own interests and goals. An important point related to identity development is that students engaged in wide EE should be encouraged to create value for others that may be economic, social, cultural, and/or ecological in nature (Obrecht, 2016). In this respect, role models and storytelling may help students think about questions such as “Who am I?”, “What do I have?”, and “What kind of value do I want to create, and for whom?”, which can help them develop their entrepreneurial identity (Donnellon, Ollila, & Middleton, 2014). Identity development also links to one of the design principles discussed by Naia et al. (2014), namely involving experienced entrepreneurs who can function as role models in Entrepreneurship Education.

Consistent with the experiential learning theory, Kitching and Rouse (2020) argue that the effectuation theory should include a social context dimension, as effectual decision-making logic is not sufficient for understanding the entrepreneurial process. Indeed, Kitching and Rouse (2020) further argue that social structures (e.g., gender, ethnicity, and socio-economic class), cultural structures (i.e., social norms), and agency (i.e., the entrepreneur himself/herself) interact and jointly shape the process of value creation. Building on, using, and interacting with social and cultural networks, values, and norms are key for the entrepreneur. In the context of Entrepreneurship Education, choices can be made

with respect to the social and cultural context in which learning occurs, thereby affecting the amount of uncertainty, creating and/or restricting possibilities, and affecting the number and types of collaborations in educational programs. Educators may consider the complexity of the context in which they want their students to work, which can range from the local, familiar level to the national, international, or even systemic level, thereby allowing for dynamic changes in the social and cultural structures that the students must consider when creating value.

(bii) Theory of Planned Behaviour (TPB)

The TPB was postulated by Ajzen (1991) and adopted by Krueger and Carsrud (1993). According to TPB, entrepreneurial behaviour depends on entrepreneurial intentions. TPB is borne from the Theory of Reasoned Action (TRA), which means that intentions are antecedents to actual behaviour, and are informed by a set of beliefs based on perceived outcome of the behaviour being considered. People will have higher intentions to behave, if they develop a positive attitude toward the behaviour (Ajzen, 1991), and if they believe others around them, who view this behaviour as desirable activity, thus developing perceived suggestive social norms (Sheppard, Hartwick, & Warshaw, 1988). TPB (Ajzen, 1991), view that entrepreneurial intentions can be influenced by conviction that is related to personal variables (Davidson, 1995). The TPB is based on the idea that human beings are rather rational in their choices and their individual's intentions may or may not lead to certain behaviour. Furthermore, Ajzen (2002) found attitudes and norms, inform behavioural intentions, and intentions subsequently are antecedents of behaviors. Behavioral intentions represent one's readiness to behave, while the behaviour is a response based on one's perception.

Krueger and Carsrud (1993) demonstrated the relationship thus: Attitudes = Motivation (Behavioural control) = Intentions = Behaviour. Entrepreneurial intentions are aimed at either creating a new venture or creating new values in existing ventures (Vesalainen & Pihkala, 1999). The TPB suggests that a person's attitude towards becoming an entrepreneur (subjective norms; perception of others), and behavioural control are both the antecedents of intention (Thandi & Sharma, 2003). The implication is that attitude, subjective norms, and perceived behaviour control act (motivation). Thus, the more favourable the attitudes and subjective norms is and the greater the perceived behavioural control is, the stronger the intention to perform the behaviour. The TPB has been used successfully to predict intentions in various applications (Kruegar & Carsrub, 1993).

(biii) Entrepreneurial Mindset Theory (EMT)

The theory of entrepreneurial mindset was developed by Dweck (2006). The theoretical arguments proceed from the assumption of the mindset theoretical analysis to examine the formation of students' entrepreneurial mindset. On its origin, Dweck (2006) operationalized the mindset theory as a set of assumptions and notions held by an individual or group of persons in the description of social situations. The theoretical landscape of the mindset was conceptualized into two distinct assumptions: the fixed and growth mindsets (Dweck, 2006). Accordingly, individuals who represent the fixed mindset cohorts believe that basic qualities about life cannot be changed and are less interested to improving their lives through hard work and other learning process (Haynie *et al.* 2010). In contrast, for those with growth mindset, who embrace changes and believe that putting the right frame of energy into a task would engender positive outcomes (Fuller-Love *et al.* 2006). In other words, the ideology of individuals with growth mindsets captures the narrative that great changes and growth are possible through appropriate dedication and efforts to activities (He & Harris, 2020).

According to Fatoki and Garwe (2010), students with poor confidence and fixed mindset come out with low entrepreneurial mindset. Therefore, the students are expected to encounter challenges in their entrepreneurial venture with severe setbacks in building a value creation (Nicola *et al.* 2020). On the contrary, students with a growth mindset believe in entrepreneurial success through learning how to surmount business challenges (Janney & Dess, 2006). Students with a fixed mindset typically avoid constructive feedback towards the building up of their entrepreneurial venture and feel defenseless by the success of other students. For instance, if they fail in their entrepreneurial venture, they tend to appropriate blames to the quality of the entrepreneurship education they receive and other contingent

factors such as the impact of economic recession. Conversely, students with a growth mindset understand that intelligence is flexible and could be altered, and through their many entrepreneurial failures, they learned and grow again (Yaw, 2004). Believing in the prominence of entrepreneurial hard work and effort enables students with growth mindset to conceive failure as a drive to continue learning their way to entrepreneurial success. In addition, students with a growth mindset apply constructive feedback to improve and learn from the entrepreneurial success of others (Brouder, 2020).

Studies have shown that students with a growth mindset towards entrepreneurial venture did not blame the impact of the economic downturn and other associated factors for their failures, but rather looked for ways to improve on their entrepreneurial skills and dedication for a more robust entrepreneurial venture (Byrne & Shepherd, 2015; Audretsch *et al.* 2016). Therefore, Janney and Dess (2006) suggested that entrepreneurship education aids students with the growth mindset in comparison to their fixed mindset counterparts who often are products of entrepreneurship education. In other words, the need to acquire the right frame of mindset requires for a successful entrepreneurship venture amidst economic uncertainties have been argued as a product of the quality of entrepreneurship education received and other important entrepreneurial skills. Hence, entrepreneurial mindset theory in the context of this study, elucidates the need for students' positive mindset, attitude, and other behavioral disposition as fundamental to success in entrepreneurship and sustainable value creation. Hence, creating a positive and working mindset towards entrepreneurial creation is crucial to solving the problem of unemployment. However, this dissertation is anchored on the theory of planned behavior (TPB) and Entrepreneurial Mindset theory because of the characteristics of these two studies.

C. Empirical Review

Wuisang, Korompis, and Lempas (in press) determined the effect of entrepreneurship education on entrepreneurship attitudes of Students of Economic Education Department at the Faculty of Economics, Manado State University. With the independent variable namely Entrepreneurship Education and the dependent variable is the Attitude of Entrepreneurship. The study was conducted on some students at Manado State University. Questionnaires were administered on sixty (60) students from Manado State University in the Department of Economics Education. Findings showed that there was significant influence of entrepreneurship education on the attitude of student entrepreneurship. Hence, the study concludes that entrepreneurship education improves student entrepreneurship attitudes in the learning process which ultimately improves student outcomes. Nevertheless, the study is limited in the areas of sample size selected. The sample size of sixty (60) students was not scientific, hence, further studies may replicate the methods but scientifically select its sample size.

Colombelli, Loccisano, Panelli, Pennisi, and Serraino (2022) investigated the implications of Challenge-Based Learning programs on entrepreneurial skills, and on the mindset and intentions of university students, through a quantitative approach. The analyzed period for this study was between January 2019 to January 2021, a period that included 11 challenges which involved approximately 300 students. The sample was composed of 127 students who filled in a questionnaire administered before and after participation in the challenge-based program to identify any possible changes in the ex-ant and post-test events. The obtained results revealed that the program positively and significantly affected the entrepreneurial mindset and skills, such as creativity, financial literacy, and planning, of the students who took part. The empirical evidence also shows an increase in the students' entrepreneurial intention, although the effect is not statistically significant for this first set of data. This study is limited to quantitative research method, further studies may consider mixed methods.

Gubik and Bartha (2021) examined the student perception and the efficacy of universities in shaping the entrepreneurial mindset. The study used 2018 GUESSS (Global University Entrepreneurial Spirit Students' Survey) database, which includes 9,667 answers for Hungary, to develop a general linear model. The model suggests that students' entrepreneurial intentions, attitudes toward entrepreneurship, self-efficacy, social norms, as well as the university, and the field of study all have a small but statistically significant impact on how students perceive the entrepreneurial ecosystem within the university. The study concludes that more emphasis on shaping attitudes and arousing student interest could increase the efficiency of entrepreneurship education. Nevertheless, the study is limited

to quantitative research techniques, further studies may consider mixed methods research. Also, the study is limited to entrepreneurial mindsets of universities students, further studies may consider entrepreneurial mindsets of high school students.

Adewumi (2021) examined the students' entrepreneurial mindset in the era of Global Health Pandemic in Lagos state, Nigeria. Exploratory research design through qualitative research approach such as semi-structured interview type was adopted for this study. A total of 24 final year students were selected on purpose and snowball across two faculties with the Mind-set theoretical analysis reviewed as the theoretical leaning. From this study, two types of non-probability recruitment strategies were employed snowball and purposive strategies. First, all the final year students across the selected Departments were recruited through snowballing to ensure that only students in their finals of undergraduate's studies were recruited for this study. This sampling strategy was achieved through initial referrals from at least one student from each Department of study wherein further referrals were made in identifying other students who meet up with the sample definition. Hence, the final year students with entrepreneurship experience were interviewed through the telephone. The interview lasted between May and August 2020 culminating in a total of four months. The transcripts interviews were all transcribed into text and subjected to the NVivo (v. 12) qualitative software for the identification of themes that support the research problem. Findings from the study show that the development of students' entrepreneurship mindset to include attitude development, preparedness, being business savvy and a stimulating business environment. Others include effective mobilization of human and material resources and appropriate students' cognitive cognizance. The persistent economic downturn was argued as the link between the global health pandemic and the dwindling rate of graduate jobs, whereas appropriate entrepreneurship education, content and curriculum was advanced as important indicators for a sustaining students' entrepreneurial mindset. Meanwhile, this study is limited to qualitative research technique, further studies may consider mixed methods. In addition to that, the study did not tell us the actual population of this study, hence, the sample size used might not be scientific. Further studies may consider scientific sample size.

Handayati, Wulandari, Soetjipto, Wibowo, and Narmaditya (2020) explored how entrepreneurship education determines students' entrepreneurial intentions as well as examined the emerging role of the entrepreneurial mindset in supporting this relationship. A quantitative method was applied to gain a better understanding of the relationship between the variables. The participants of this study were recruited from several vocational students in East Java of Indonesia by using an online survey. The survey was conducted from January to March 2020, using online forms. A total of 470 questionnaires were received, and after the validating action, approximately 450 questionnaires were verified applicable. The data were calculated utilizing Partial Least Square (PLS) approach to Structural Equation Modelling (SEM). The calculation and judgment of a Partial Least Square (PLS) model in this study was provided in two stages: First, the assessment of validity and reliability of the construct to determine the goodness of measures. Second, the evaluation of structural model to evaluate the hypotheses under research. The findings from this study indicate that entrepreneurship education positively influences both students' entrepreneurial intentions and an entrepreneurial mindset. It also reveals a robust correlation between entrepreneurship mindset and students' entrepreneurship intentions. Lastly, this study's finding shows that the entrepreneurship mindset has successfully mediated the relationship between entrepreneurial education and students' entrepreneurial intention. Nevertheless, this study is limited to quantitative research technique, further studies may integrate both quantitative and qualitative research technique for robust report. In addition to that, further studies may be done in Nigeria by replicating the variables used the study.

Wardana, Narmaditya and Wibowo (2020) investigated the relationship between students' entrepreneurship education and entrepreneurial mindset as well as understanding the mediating role of attitude and self-efficacy. The study adopted a convenient random sampling method for data collection. Respondents were from several universities in Malang of East Java in Indonesia undergoing an online survey and were calculated using structural equation modeling (SEM). Three hundred and ninety (390) students participated in the study. It also involved students in the first year and second-year study by approximately 2.6 percent and 2.4 percent, respectively. The respondents came from

various subject studies, including economics, social sciences and humanities, sciences, and engineering. Findings from the study show that entrepreneurship education successfully influences entrepreneurial self-efficacy, entrepreneurial attitude, and the entrepreneurial mindset. On the other hand, entrepreneurial self-efficacy promotes entrepreneurial attitude instead of the entrepreneurial mindset. Furthermore, entrepreneurial attitude plays an essential role in mediating both entrepreneurship education and self-efficacy toward students' entrepreneurial mindset. The study recommends that first, the university needs to change the curriculum of entrepreneurship courses by bringing practitioners as instructors, conducting fieldwork with more compositions than theories in the classroom. Second, the university aids students in making new products by facilitating several supporting activities, including business capital, in financial matters. Furthermore, the need for attitudes towards entrepreneurship students in their business is expected to create a more profitable business financial condition by making efficiency in several production aspects while still producing the best quality products. Lastly, the university makes support to students in forming an entrepreneurial mindset. This study is limited to quantitative research techniques, further studies need to consider mixed method research for robust results.

Rodriguez and Lieber (2020) assessed the relationship between entrepreneurial mindset development and students in entrepreneurship education programs compared with other career-focused academies. The study was carried out at public high schools across 10th, 11th, and 12th grades in Miami, Florida, from 2018 to 2019. The study was approved by statutory bodies; National Institutional Review Board and the Miami-Dade County Public Schools research review board. The schools selected were to ensure comparability in admission policies and composition. The study used a quasi-experimental design. The study sample included 171 participants in 10th grade (38 who received treatment), 72 participants in 11th grade (27 who received treatment), and 26 participants in 12th grade (12 who received treatment). In sum, there were 269 student participants with 77 students in the treatment sample. Furthermore, entrepreneurial mindset was measured in two matched groups of students from underserved communities at the beginning and at the end of the school year. The Entrepreneurial Mindset Index (EMI); a self-assessment tool was developed in partnership with Educational Testing Service to measure students' entrepreneurial mindset. The EMI consists of 30 items rated on a 5-point Likert-type scale, six situational judgment tests rated using distance scoring, a battery of self-report career and college outlook questions, and a handful of optional demographic and informational questions. The study shows that prior research has established the EMI scale's reliability and validity (Gold & Rodriguez, 2018). The study also shows that a confirmatory factor analysis showed the six domains jointly to have a good overall model fit (Hu & Bentler, 1999). Likewise, the comparative fit index (CFI) and Tucker-Lewis Index (TFI) were above 0.90, and the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) were below 0.08. Also, the study used multiple linear regression analysis to assess the average treatment effect on the treated (ATT) of the entrepreneurship education intervention on survey outcomes. Findings from the study shows that students in entrepreneurship education showed an overall statistically significant increase in entrepreneurial mindset, specifically in communication and collaboration, opportunity recognition, and critical thinking and problem-solving. Moreover, there was a positive association between entrepreneurial mindset gains and perceptions of future career success. Despite the robust methodology deployed in this study, there are still limitations; the sample size is small and limited to teachers who are trained in the curriculum and pedagogy. Further studies may scientifically justify the sample size selected. The study is limited to quantitative research technique, further studies may consider mixed methods techniques.

Hultén and Tumunbayarova (2020) experimented on building students' entrepreneurial mindsets by means of intervention at Russian University. The intervention was delivered during two weeks in October/November 2018 to students in a compulsory entry-level management course at the Russian university. This management course did not touch upon the areas in focus of the intervention and the local instructors had scheduled a two-week window with eight 4-h sessions for the delivery of the intervention. The intervention is COPSS-model. The COPSS-model is a process-oriented intervention model, which has proved to have a positive impact on the participants' entrepreneurial mindset. The

model includes five components that target the participants' self-efficacy regarding creativity, opportunity identification, problem-solving, self-directed learning and support through supervision. Active testing and experimentation are central components in the design of the intervention, which allows the participants to practice their creativity and problem-solving skills. Findings from the study demonstrate that engaging students in creative cognitive processes enhance their opportunity identification and individual entrepreneurial orientation. A limitation of this study is that it only examines the short-term effects of one intervention. Clearly, studies on the build-up of students' entrepreneurial mindset need a longer time-period to capture how the development process unfolds. Therefore, an important avenue for future studies is to examine the effect of continuous interventions on students' entrepreneurial mindset during and after programs in a variety of disciplines.

Schuhmacher and Thieu (2020) worked on the role of students, educators and educational institutes in entrepreneurship education using a systematic literature review and showing the direction for future studies. The study was inspired by stakeholder theory. The study was based on 59 empirical articles published between 1995 and 2019. The articles were systematically reviewed based on the general logic to synthesize the literature in a transparent, unbiased, and reproducible manner. The study used MaxQDA 2018 to code, interpret and synthesize sampled articles. The study shows that educational institutes focus on three institute-related factors: incubation support, characteristics of educational institutes, and program models to deliver EE. Hence, incubation support can enable a positive EE impact on entrepreneurial intention. The study concludes that entrepreneurship education taught by entrepreneurially minded educators generates more impact on student entrepreneurial intention.

Wardana, Narmaditya, Wibowo, Mahendra, Wibowo, Harwida, and Rohman (2020) investigated the relationship between students' entrepreneurship education and entrepreneurial mindset as well as understanding the mediating role of attitude and self-efficacy. The approach adopted in this study is a convenient random sampling method, which is widely used in entrepreneurship research. Participants were recruited from several universities in Malang of East Java in Indonesia undergoing an online survey and were calculated using structural equation modeling (SEM). Findings from the study indicate that entrepreneurship education successfully influences entrepreneurial self-efficacy, entrepreneurial attitude, and the entrepreneurial mindset. On the other hand, entrepreneurial self-efficacy promotes entrepreneurial attitude instead of the entrepreneurial mindset. Furthermore, entrepreneurial attitude plays an essential role in mediating both entrepreneurship education and self-efficacy toward students' entrepreneurial mindset. This study is limited to quantitative research technique, further studies may look into mixed methods research technique.

Syaefudin, Purwani and Wibowo (2020) examined the influence of entrepreneurial culture, entrepreneurship education, and mindset on entrepreneurial intentions. The study used a quantitative research method using a survey model. The participants of this study were recruited from 253 respondents studying languages at public universities in Indonesia. The study concluded that first, entrepreneurial culture influences students' entrepreneurial education. Second, entrepreneurial culture influences students' entrepreneurial mindset. Third, entrepreneurial education influences students' entrepreneurial intentions. Fourth, the entrepreneurial mindset mediates the effect of entrepreneurial education on students' entrepreneurial intentions. This study did not explain how the sample size of the study was computed. Neither did it show the validity of the instruments used. Further studies may consider the shortcomings identified.

Methodology

The methodology adopted for literature review is thematic. Papers were drawn from several databases thematically. The papers were sorted based on the recency and related theme. However, related papers that were not recent were debunked like the unrelated papers. Hence, the remaining recent papers that are related to the theme of this paper were critically reviewed and deficiency or shortcomings of the papers reviewed were identified. Appropriate recommendations were made on the reviewed papers.

Conclusion

Based on the vast amount of literature reviewed on entrepreneurship education, it seems that most of the studies focused on entrepreneurial intention of post-secondary students, especially, the entrepreneurial intension of university students. There seems to be a few recent studies that focus on the entrepreneurial mindsets of secondary school students in Nigeria, especially the senior secondary school students in Lagos State, Nigeria. Furthermore, most of the entrepreneurship education studies adopted quantitative research techniques, there seems to be dearth of recent studies on entrepreneurship education that adopted mixed methods research techniques. Therefore, further studies need to consider the identified gaps in entrepreneurship studies.

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