



Managerial Entrepreneurial Competencies Framework for Technical College Programs: Concept and Relevance

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Abstract: One of the challenges of technical education in Sub-Saharan Africa, including Nigeria, is the lack of an appropriate entrepreneurial framework for the content of the technical college curriculum. The purpose of this study was to explore the managerial entrepreneurial competencies for technical college programs in Nigeria. This study was guided by a qualitative approach through document analysis and semi-structured interviews with 15 participants selected purposively and 11 Journal Articles were analysed. The empirical findings from semi-structured interviews confirm the theoretical findings in document analysis. This study found several managerial entrepreneurial competencies in document analysis and interviews, eventually analysed thematically. Themes include Business planning, Decision-making, Technical know-how, Interpersonal relationships and Communication. The study analysed only 11 documents and conducted 15 interviews, so the conclusions drawn from these sources depend on the authenticity of the information provided by the participants. The findings of the study indicate that managerial entrepreneurial competencies are worthy of inclusion in the technical college curriculum in Nigeria. Therefore, it is recommended that the curriculum needs to be reviewed to ensure that it meets the educational changes such as global trends and 21st-century education policies which now become a worldwide phenomenon.

Keywords: Entrepreneurial competencies, technical education, TVET

1. Introduction

Technical and vocational education is a key factor in the worldwide industrial development plan; it is a tool for empowering the public, especially the youth for sustainable living and social economic development (Yusuff & Soyemi, 2012). United Nations Education and Scientific Organization (UNESCO, 1998) defined technical and vocational education and training (TVET) as all forms and stages of educational processes involving, in addition to general knowledge, relevant technology and science studies and the acquisition of practical skills, knowledge, attitudes and work-related knowledge in various economic and social sectors of life (UNESCO, 1998). It is clear that technical

and vocational education is the most reliable tool to reduce poverty, and unemployment, and eradicate disease, among other examples in developing countries (Nwachukwu & Yaba, 2014). Thus, for example in Nigeria, the purpose of establishing technical colleges is to address the issues of job creation, youth employment, self-reliance, poverty eradication, and skills development to compete with current opportunities and challenges in the labour market (Idris, Rajuddin, & Rufai, 2014). Technical colleges are considered the leading vocational institutions in Nigeria to conduct programs like building construction, electrical / electronics, metalwork, motor mechanics, and woodworking, among other examples.

However, most technical college students graduate without the required entrepreneurial skills (Musa & Medugu, 2016). Similarly, Amaechi, Orlu, Obed, and Thomas (2017) emphasize that technical college graduates roam the streets due to the insufficient entrepreneurial competencies required to work individually as skilled staff. On the other hand, the gap between college-taught curriculum and the skills required in small businesses and enterprises is a main hindrance to SMEs' growth and development (Getaneh, 2014). With respect to this, (Hassan, Enombo, & Iwu, 2015; Zamberi Ahmad, 2013) suggested a need for a new school curriculum that will adopt the teaching of entrepreneurship education, which will be the solution to the current problem of unemployment and high poverty rates. As a result, this is clear evidence that technical college programs in Nigeria are experiencing weaknesses in entrepreneurial competencies in the curriculum. Therefore, integrating entrepreneurial competencies into technical education requires careful evaluation of the principles and concepts of entrepreneurial ability.

Building on the above, the contribution of this study is based on an extensive and critical review of the current and previous literature on entrepreneurship in which a research gap was highlighted thereby creating the need for developing the conceptual model for the study. In this study, a new research perspective was proposed, and important elements of managerial entrepreneurial competencies were established.

1.1 Entrepreneurship Education in the Context of Technical Education

Entrepreneurship education is an educational training that prepares an individual to become a responsible and enterprising person by developing entrepreneurial competencies (European Commission, 2017). This education helps individuals to develop skills, knowledge, and attitudes necessary for the achievement of their set goals. Research has shown that people with entrepreneurial education are more employable (European Commission, 2017). Hence, the significance of entrepreneurship education for sustainable industrialization and poverty reduction cannot be overemphasised. This phenomenon is imperative for creating adequate technical and entrepreneurial qualified personnel, who can stimulate investment opportunities, create jobs and increase productivity (A. I. Muhammad, 2015). Therefore, entrepreneurship can be described as the entrepreneur's performance that can be termed as someone who assumes innovation, finance, and business knowledge to convert skills and innovation into economic assets.

To sum up, it has been argued that the role of entrepreneurship education in developing entrepreneurs and improving entrepreneurial activities in every economy could not be over-emphasised. Because of this, it can be understood that there is a need for integrating entrepreneurial training in Nigerian technical colleges. Getaneh (2014) observed lack of integration between the curriculum taught in colleges and the required skills in the workplace at small businesses and enterprises is a major hindrance to the growth and development of SMEs. Regarding this (Hassan et al., 2015; Zamberi Ahmad, 2013) suggested the need for a new school curriculum that would adopt the teaching of entrepreneurial education, this will serve as a solution to the current issues of unemployment and high poverty rate. The purpose of instilling an entrepreneurial mindset into students as well as producing new educated entrepreneurs and new businesses is to produce well-educated entrepreneurs who can create jobs (Ghina, Simatupang, & Gustomo, 2015).

1.2 Basic of Managerial Entrepreneurial Competencies

Managerial entrepreneurial competencies (MEC) are specific individual competencies which assist an individual in becoming an excellent manager, example of such are specific knowledge, abilities, skills, traits, motives, attitudes and values necessary to improve management performance (Fejfarová & Urbancová, 2015). These performance-based competencies are assessed through observed behaviours (Chong, 2013). The literature identifies various dimensions of managerial competencies which contribute significantly to career success (Boyatzis, 1991; Spencer & Spencer, 1993). Additionally, Ibrahim and Soufani (2002) maintain that managerial competencies are the second set of factors related to successful entrepreneurs. Consequently, Brown and Hanlon (2016) identify early growth managerial competencies:

- Demonstrates the financial skills needed to effectively run the business.
- Regularly keeps track of the business's financial position.
- Maintains low levels of overhead.
- Do not spend excessive amounts on luxury or personal items.
- Maintains a debt level that the business can manage.
- Treats employees fairly.
- Communicates regularly with employees.

Since, in today's competitive technological driven world a high degree of managerial competencies is required from the new breed of graduating students, to emerge as successful entrepreneurs (AV & Aithal, 2018). Therefore, it is

evident that managerial entrepreneurial competencies have a paramount importance to be included in the ECs model of technical college programs which can lead to a better venturing start-up.

Consequently, managerial entrepreneurial competencies can benefit the students in the technical college because it will guide them on how to become successful managers when they graduate and set up their own businesses. Therefore, it is vital to incorporate managerial entrepreneurial competencies in the technical college curriculum by the policy makers because this will serve as a solution to the current issues of unemployment and high poverty rate. Additionally, the wisdom behind imparting an entrepreneurial mindset in students as well as producing new educated entrepreneurs and new businesses is to produce well-educated entrepreneurs who can create jobs for themselves and even employ others.

2. Theoretical Framework

The theoretical framework of the study is based on McClelland's Human Motivation Theory, Thomas Cochran's Sociological Theories of Entrepreneurship and Human Capital Theory to establish a relationship between the training of young people towards the acquisition of the appropriate entrepreneurial skills, knowledge and attitude (Jaziri and Touhami, 2018) toward the realization of self-employment for the economic growth and national development in Nigeria.

McClelland's theory maintained that every individual has three main driving motivators, the need for achievement, affiliation, or power. Therefore, the need for achievement is the highest for entrepreneurs because it emphasises achieving success by one's own efforts.

The sociological theories of entrepreneurship by Cochran (1958) who was one of the main proponents of sociological theory, started from the assumption that the fundamental problems of economic development are not economic (Udu, 2014). The sociological theory of entrepreneurship describes how sociological factors hasten the development of entrepreneurs. Similarly, the sociological theory of entrepreneurship maintains social cultures as a driving force of entrepreneurship. The theory also relates the impact of the environment on entrepreneurship (Hurley, 1999); (Pawar, 2013). Therefore, the theory emphasizes the role of the environment in which the individual is brought up, so it determines his desire for entrepreneurship (Cochran, 1964). This entrepreneurial theory sees the entrepreneur as a representation of the personality model of his society. Basically, sociological theories rely on social factors. In this context, technical colleges are the environment where the students are brought up to determine their desire for entrepreneurship.

Human capital theory believes that investment in people through knowledge that intensifies their cognitive abilities to improve their productivity in their work is termed human capital (Schultz, 1959; Becker, 1964; Mincer, 1974). Schuitz (1963) observed that to enhance economic and social achievements there must be a significant investment in education. For a nation to prosper and achieve developmental goals investment in education is a key factor. According to Becker (1975), the general human capital obtained during education can be useful in other contexts. Martin et al. (2013). Hence, the theory that clearly explains the impact of entrepreneurship education and training is human capital theory (Becker, 1964). Human capital theory hypothesises that for students who have greater levels of competencies, their outcome performance will be greater than those who possess lower levels (Ployhart and Moliterno, 2011). Therefore, these theories have relevance with Technical and Vocational Education and Training (TVET) likewise entrepreneurship since both believe that investment in people through knowledge that intensifies their cognitive abilities to improve their productivity in their work is termed as human capital.

2.1 Basic Concept of Entrepreneurship

The concept of entrepreneurship has a wide range of meanings. The origin of the word entrepreneur is the French word "entreprendre" which means to 'undertake' in a business context it means to start a business. According to Gohain, Chakraborty, and Saha (2017) entrepreneur is a person able to focus at the environment, identify the opportunities enhance the resources at hand and maximize the opportunities. G. Kaur (2015) ascertained that entrepreneurship is the propensity of a person to organize the business of his/her own and to run profitability, employing all the qualities of leadership, decision making managerial calibre etc. UNESCO-UNEVOC (2016) adopted the definition of Schoof (2006) "Entrepreneurship is the recognition of an opportunity to create value, and the process of acting on this opportunity, whether it involves the formation of a new entity. While concepts such as 'innovation' and 'risk taking' specifically are usually associated with entrepreneurship, they are not necessary to define the term." In view of the importance of entrepreneurship to human development, there have been many attempts by scholars to explain the factors behind the presence of entrepreneurial ability in some people and its absence in others.

2.2 Entrepreneurial Competencies

The term competency in education was initially used to define trainee teacher behaviours (Mitchelmore & Rowley, 2010). However, management competency was promoted by Boyatzia, (1982) who had conducted a survey of more than 2000 managers, thus identifying and considering more than a hundred possible competencies. Competency is an

underlying characteristic of an individual that he/she takes in a job situation, that may lead to a higher and effective performance in such a job (Kochadai, 2012). The notion of competencies in recent years has attracted attention from various disciplines in academia, education, medicine, psychology, and public policy to mention but a few (Morris, Webb, Fu, & Singhal, 2013).

They further reiterated that their work in various disciplines has demonstrated various proficiency, specifically, competency is associated with a high level of performance or productivity. Therefore, according to H. Kaur and Bains (2013) individual characteristic is termed entrepreneurial competency while a person who accepts risk to gain profits in venturing is an entrepreneur. In fact, an entrepreneur needs skill, knowledge and ability to perform a successful business. Consequently, Kyndt and Baert (2015) maintained that competencies are the collective and unified components of knowledge, skills, and attitudes. Also, Ploum, Blok, Lans, and Omta (2018) attributed knowledge, skills, and attitudes as important elements of competencies for various career ways. Therefore, entrepreneurial competencies are the integrated and combined elements of knowledge, skills and attitudes required by an entrepreneur to execute a successful venture.

2.3 Basic Concept of Managerial Entrepreneurial Competencies

Managerial Entrepreneurial Competencies (MEC) are specific individual competencies that assist an individual in becoming an excellent manager, example of such are specific knowledge, abilities, skills, traits, motives, attitudes and values necessary to improve management performance (Fejfarová & Urbancová, 2015). This is supported by Chong (2013) who affirmed that management performance-based competencies are assessed through observed behaviours. Accordingly, MEC are identified as an important aspect needed for early growth business (Brown & Hanlon, 2016).

3. Objective of the Study

The main objective of this study was to qualitatively explore the Managerial Entrepreneurial competencies required by technical college students for self-employment in Nigeria.

4. Research Methodology

The study utilized a qualitative research method for the data collection through two phases. The first phase involves document analysis, and the second phase involves interviews with research participants. Researchers have successfully conducted the study at technical institutions and SMEs of the northwest zone in Nigeria with a total population of 891 experts. The cluster sampling (Creswell & Creswell, 2017; Kumar, 2018) was adopted by the researchers to select three states out of seven in the study area. The three states have the highest technical colleges and SMEs, similarly, the nine technical colleges are in the more secure area in the zone. However, the interpreted results are for all technical college programs in Nigeria, because all the technical colleges in Nigeria are operating the same curriculum. Quota sampling procedure (Kumar, 2018) was used in selecting the 15 participants, which comprises 10 trade teachers from nine technical institutions (from each sampled institution); and 5 entrepreneurs from the SMEs (at least one from each sampled state). These participants have great relevance in this study because they are conceded experts due to their educational background, knowledge and experience in their respective fields of specialization. The reason why only 15 participants were chosen was due to saturation, Malterud, Siersma and Guassora (2016) maintained that saturation takes place when the researcher has no longer obtained more information that augments the theory that it has been developed. Typically, qualitative analyses entail fewer sample sizes but must be adequate to provide feedback for most or all of the views required in the study. In qualitative research, there are no detailed rules to determine the appropriate sample size. Consequently, Creswell and Poth (2018) suggested 10 to 15 participants.

4.1 Method of Data Analysis

Document analysis and semi-structured interviews for the data collection to explore the research questions by the researchers were used (Bowen, 2009). For the document analysis, journal articles that discussed ECs were selected in the Scopus database and Google Scholar search uses the following keywords: entrepreneurial competencies, managerial competencies, and administrative skills. The author finds several documents that discuss the concept of managerial competencies. However, we only select articles that reflect managerial entrepreneurial competencies regarding the integration into the curriculum. That is the selection was based on the content of articles which conform with the content of this study. According to Bowen, (2009) content analysis is the process of organising information into categories related to the central questions of the research. Eventually, eleven journal articles were selected for inclusion in the study. Because documents can be analysed to verify findings or corroborate evidence from other sources (Bowen, 2009) and these articles conformed to these criteria. Consequently, the study used thematic analysis; Braun and Clarke (2006) argued that thematic analysis is a poorly demarcated and rarely acknowledged, yet widely used qualitative analytic method within and beyond psychology. In this study, the documents were analysed using thematic analysis with the aid of a design form drawn to guide the analysis process. Fereday and Muir-Cochrane (2006) stated that thematic analysis is a form of pattern recognition within the data, with emerging themes becoming the categories for

analysis. The process involves a careful, more focused re-reading and review of the data. The reviewer takes a closer look at the selected data and performs coding and category construction, based on the data’s characteristics, to uncover themes pertinent to a phenomenon. The documents were reviewed for the identification of managerial entrepreneurial competencies appropriate for integration into the technical colleges’ curriculum, as shown in Table 1. The qualitative data analysis process based on the recommendations of Bowen, (2009), begins with the "recognition" of the data by listening to the tape used to record the interviews, transcribing the interviews in the papers and proofreading the transcripts. In addition, the analysis of the semi-structured interview started initially with a visit to the institutions and the SMEs scheduled for this study, to brief the selected participants about the purpose of the study and make schedules for the interview with them. Subsequently, the interviews were conducted with participants as scheduled. The interview protocol precisely requested participants to indicate their perceptions about entrepreneurial competencies in technical college and the components of the entrepreneurial competencies and their dimensions, suitable for integration into the technical college curriculum in Nigeria. For example, the first question reads “What are the most important items or components concerned with entrepreneurial competencies in technical college? Thematic data analysis was also utilized in analysing the generated data from the semi-structured interview by the researchers. The analysis was started by transcribing the audio-recorded form of the data immediately after the first interview. The process continued in the same way of conducting and transcribing the interview, before conducting the subsequent interview until it was believed that the data attained a saturation point. The analysis continued with an in-depth reading and re-reading of the transcribed data which was subsequently offered to the interview participants for their corrections and confirmations to improve the validity of the data.

5. Result

The operational framework of the study is formulated based on processes outlined by Amirmudin, (2011), The processes are in the following steps: Research problem and statement; identification of population and sample; data collection using qualitative method performing interviews to collect qualitative data; analysing the qualitative data furthering the development of appropriate managerial entrepreneurial competencies based on the results from the qualitative analysis and extended discussions, conclusions and recommendations from research participants; documenting the results in a written format. The data collected were theoretically determined to answer the research question through analysing the document and empirically by interviewing participants as outlined below:

A. Document Analysis

The documents analysed by the researchers were eleven journal articles focused on MEC as shown in Table 1.

Table 1 - Finding matrix from document analysis

Authors	Business plan	Decision making	Technical know-how	Interpersonal relationship	Communication	Administration
Brown and Hanlon (2016)		√			√	
Chang and Rieple (2013)	√					√
Ilayaraja (2015)		√	√			
Nath and Sahu (2017)	√	√			√	
Robles and Zárraga-Rodríguez (2015)		√			√	
Fatoki (2014)	√	√			√	
Rezaeizadeh, Hogan, O’Reilly, Cunningham, and Murphy (2017)		√		√	√	
Inoti (2017)	√	√	√			
Malekipour, Hakimzadeh, Dehghani, and Zali (2017)	√	√				
Sundah, Langi, and Maramis (2018)	√	√	√			
Chang and Rieple (2013)	√	√		√	√	

Table 1 indicates that eleven journal documents on MEC were analysed and found that among the dimensions of the MEC ‘decision making’ has the highest citation with ten journal articles indicating the important of this dimension in MEC. This was followed by ‘business plan’ and ‘communication’ dimensions as also another important dimension in MEC. Consequently, ‘technical know-how’ and ‘interpersonal relation’ are another important MEC dimensions found

in the documents analysis. Therefore, these dimensions due to their importance in management of entrepreneurial activities are found worth for inclusion in the ECs model for technical college programs in Nigeria.

B. Interview Findings: Managerial Entrepreneurial Competencies

Following the interview with the 15 Experts Respondents (ER) participated in the study. Example of some typical responses of the participant on the managerial competencies were given below:

ER1: "I believe managerial competencies are very important for technical college students since they are expected to establish their own business after graduation. So, they need all the leadership qualities."

ER2: ". I recommend managerial competency because I am anticipating these young people after graduation and establishing the business to be the leaders of that venture. So managerial competency is very important".

ER3: "Hmmm Manager, ah I mean, managerial skills are needed for these students to become novice entrepreneurs because of administrative work, yes, they need it.

ER4: ability ... ah yes, managerial competency is important for these youngsters in preparing them to be self-employed"

ER5: "Then, they need to know how to manage the business when it was established"

Table 2 shows the code and categorization of the Managerial entrepreneurial competencies construct. Building on the responses of the qualitative data, all the experts mentioned that managerial entrepreneurial competency is an important ECs required by technical college students for self-employment.

Findings on Dimensions of Managerial Entrepreneurial Competencies

Based on the qualitative data, all 15 experts stated that managerial entrepreneurial competencies play a vital role in running entrepreneurial activities as fundamental sources to get profit and influence administrative behaviour. Therefore, providing students with managerial competencies is one of the basic requirements of producing students with leadership abilities that will lead them to become prospective entrepreneurs. Therefore, they stressed that managerial competencies should be given specific attention in an attempt to achieve long-term prosperity.

Consequently, the experts on **business plan** advocated that "*business plan and decision making as very important managerial competencies should be involved when considering ECs level*". In his part expert ER10, emphasises the need for a business plan in entrepreneurship "proper planning, without planning your business on how to start where to start and so on you will end missing the road." This finding is in line with Ghina (2018) who confirmed that business plan is one of the most important MEC found worthy for inclusion in their entrepreneurial program. While on the issue of decision-making, they reiterated that "*selection between alternatives, sensitized, undertake analysis, evaluate and select the logical choice are very crucial for a good manager.*" The finding coincides with Ghina (2018) who stressed that the ability to make a decision has a vital role as an entrepreneurial skill in solving managerial problems in a business setting. It has been understood that decision-making is a fundamental part of modern management. Therefore, it is one of the specific components of managerial entrepreneurial competencies for the integration into the ECs model for technical colleges in Nigeria.

Experts ER1, ER2, ER3, ER4, ER5, ER6, ER7, ER8, ER9, ER10, ER11, ER12, ER13 and ER14 had a common comprehension about the importance of **technical know-how** skills in entrepreneurship, and directly stated that "*you see, one cannot just wake up to start a business without the knowledge of that trade and it is the knowledge that you have either formally or informally that will make you to start the business.*", further they stressed that "it elucidate new venture creation in order to bring out total personality trait, skills and knowledge ability in performing successful job role. It also involves the will to build up and make unilateral decisions that will accumulate effect in various aspects of the development process of the country." This outcome concurred with the work of Kravchenko et al. (2015) found that technical know-how is the main basis of intellectual capital for entrepreneurs.

Thirteen out of the fifteen experts referenced **interpersonal relationship** skills and stressed that "*Start-up ventures having a combination of the above variable will attract and maintain customers in the business of any entrepreneur because managerial competencies will result in creating awareness over a wide horizon, and customer relation competencies will attract people because of excellent human relation.*" This outcome is in confirmation with Rezaeizadeh et al. (2017) who recommended interpersonal skills as one of the key driver competencies in the management of a venture and could be best developed through the use of new educational approaches.

For **communication skills**, it is worth mentioning that the experts agreed on the specific importance of this dimension of managerial competency, "*effective communication because one must communicate with the people you are dealing with, as customers. In fact, having good communication skills is probably the most important skill of all, for managers.*" This is in line with the findings of Fatoki (2014) indicates that communication is one of the important skills and characteristics necessary to successfully conduct a venture start-up by students upon graduation.

To sum up, the experts presented common perspectives and understandings of the importance of managerial entrepreneurial competencies for technical colleges. Table 2 presents the outcome of the analysed data by the researchers. It indicated that there was congruence between experts' views and opinions about selecting the important managerial entrepreneurial competencies. The themes of the study were formulated according to Braun & Clarke (2006).

6. Discussion

Managerial entrepreneurial competencies are the set of knowledge, skills and attitudes required by technical college students to become an outstanding leader in running an established business for the enhancement of management performance. Managerial entrepreneurial competencies are found to be positive and significant components of ECs required by the students to establish new businesses since the students are expected to become business leaders in the future. In fact, MEC are specific individual competencies which aid an individual in becoming an excellent manager, Examples of such are specific knowledge, abilities, skills, traits, motives, attitudes and values necessary to improve management performance (Fejfarová & Urbancová, 2015). This is supported by Chong (2013) who affirmed that management performance-based competencies are assessed through observed behaviours. It is imperative to include MEC among the ECs required by technical college students because they contribute significantly to career success and entrepreneurship activities. Consequently, Brown and Hanlon (2016) identify MEC as an important aspect needed for early growth business.

The interview participants strongly advocate for MEC by stressing that: “managerial entrepreneurial competencies play a vital role in running entrepreneurial activities as fundamental sources to get profit and influence administration behaviour (ER1, ER2, ER15). Likewise, (ER2, ER3, and ER14) stress that Managerial competencies should be given specific attention to achieve long-term prosperity. This is in agreement with (Rezaeizadeh et al., 2017) who affirmed that providing students with managerial competencies is one of the basic requirements of producing students with leadership ability that will lead them to become prospective entrepreneurs. Therefore, management ability is significant for the development of students’ leadership skills as the students are expected to establish their own venture upon graduation; hence this recommendation should be put into consideration. Consequently, the experts highlighted the most important dimensions of the MEC required by technical college students for self-employment that should be included in the ECs model in this study. These are business plans, decision-making, technical know-how, interpersonal relationships, and communication.

The experts advocated that “business plan is a very important managerial competency that should be involved when considering ECs level.” In his part expert ER10, emphasises the need for a business plan in entrepreneurship “proper planning, without planning your business on how to start where to start and so on you will end missing the road.” This finding is in agreement with Njoroge and Gathungu (2013) who emphasize the necessity of business plan ability as an important aspect for every entrepreneur. It has been understood that planning is one of the fundamental aspects of modern business, without good and timely planning, a business can easily break. Therefore, it is vital in this study to include the business plan in the ECs model required by technical college students in Nigeria for self-employment. Similarly, Ghina (2018) affirmed that a business plan is one of the most important MEC found worthy of inclusion in their entrepreneurial program.

Table 2 - A summary of key managerial and entrepreneurial competencies

Dimensions	Respondents: ER1 – ER15															%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Business plan	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	100
Decision making	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	100
Technical know how	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	93
Interpersonal relationship	√	√	√	√	√		√	√		√	√	√	√	√	√	87
Communication		√	√	√		√	√		√	√	√	√	√	√	√	80

While on the issue of decision making the experts reiterated that “selection between alternatives, sensitization, undertake analysis, evaluate and select the logical choice are very crucial for a good manager.” From the view of the experts, decision-making in a business setting is important for a business to prosper. This finding is in agreement with Ghina (2018) who asserted that ability to make decisions was found to have a vital role as an entrepreneurial skill in solving managerial problems in a business setting. Therefore, since we are committed to having an ECs model that would cater for technical college students who become novice entrepreneurs as well as in turn metamorphose into managers of their ventures; so, decision-making is vital for inclusion in this work; ECs model for technical college programs. The findings also concurred with that of Rezaeizadeh et al. (2017) who confirmed that decision-making is a vital skill required by technical college students to become entrepreneurial managers. Consequently, Nath and Sahu (2017) found that decision making is one of the fundamental skills required by an entrepreneur as a manager. Therefore, it has been understood that decision making is a fundamental part of modern management. Hence, it is one of the dimensions of managerial entrepreneurial competencies for integration in the ECs model for technical college programs in Nigeria.

The experts had a common comprehension of the importance of technical know-how in entrepreneurship and directly stated “you see; one cannot just wake up to start a business without technical know-how. The knowledge of that trade is the knowledge that you have either formally or informally that will make you start a business.” (ER1, ER3, ER5). Further they stressed that “it elucidates new venture creation in order to bring out total personality trait in performing successful job role.” This finding is in line with the assertion of (Ilayaraja, 2015) who found that technical know-how is one of the most important barriers to entrepreneurship entry that limits the number of emerging entrepreneurs. Consequently, Kravchenko et al. (2015) conducted a comparative study between Russian and US entrepreneurs; and found that technical know-how is the main basis of intellectual capital for entrepreneurs. Based on the conclusion it is worthy to include technical know-how as a skill required by technical college students in setting up their own business upon graduation to become prospective entrepreneurs for self-employment.

Interpersonal relationship is another vital entrepreneurial skill required by technical college students to start up their own venturing. This has been stressed by experts such as (ER1, ER3, ER5, ER7 and ER14) start-up ventures having a combination of the MEC dimensions will attract and maintain customers in the business of any entrepreneur because managerial competencies will result in creating awareness over a wide horizon, and customer relation competencies will attract people because of excellent human relation. This is in confirmation with Rezaeizadeh et al. (2017) who recommended interpersonal skills as one of the key driver competencies and could be best developed through the use of new educational approaches. Consequently, Rahman, Ahmad, and Taghizadeh (2016) affirmed that interpersonal skills influence the financial and non-financial performance of a business.

For communication, it is worth mentioning that the experts agree on the importance of this dimension in managerial competency, for instance, ER2, ER7 and ER15 stated that “effective communication, because one has to communicate, with people he is dealing with as customers, in fact, having good communication skills is probably the most important skill of all, for managers.” This is in line with the findings of (Fatoki, 2014; Robles & Zárraga-Rodríguez, 2015) indicating that communication is one of the most important skills and characteristics necessary to successfully conduct venture start-up by the student upon graduation. Likewise, Rezaeizadeh et al. (2017) affirmed that communication skills improved ECs structure. Therefore, communication ability is one of the important skills needed by an entrepreneur in modern leadership. It is worth concluding that communication skills should be among the required dimensions of ECs model by technical college students for self-employment.

To sum up, the experts presented common perspectives and understandings of the importance of MEC required by technical college students for self-employment. Likewise, the findings concurred with the above-mentioned literature. Finally, these results indicated congruence between experts’ views and opinions about selecting the important managerial entrepreneurial competencies. Therefore, to achieve long-term prosperity and sustainable entrepreneurship managerial competencies should be given specific attention, so that they should be included in the ECs model for technical college programs in Nigeria. Consequently, the contribution of this study is based on an extensive and critical review of the current and previous literature on entrepreneurship in which a research gap was highlighted thereby creating the need for developing the conceptual model for the study. In this study, a new research perspective was proposed, and important elements of managerial entrepreneurial competencies were confirmed. Similarly, to the best knowledge of the researchers based on literature, no empirical evidence emerged on ECs in the Nigeria technical colleges; hence, this study bridged this research gap.

7. Conclusion

Despite the importance of entrepreneurial training to technical college students, ECs have not been reflected in the curriculum of the colleges. Therefore, there is no entrepreneurial course at the technical college level because it is not in the syllabus. The present technical college curriculum consists only the technical skills and thus is too scanty to produce technicians with an entrepreneurial attitude who can create job opportunities and self-employment upon graduation. Therefore, technical college students lack appropriate training in entrepreneurship that will enable them to acquire desirable and relevant competencies needed for job creation and self-employment. Therefore, it is imperative to identify managerial entrepreneurial competencies for self-employment that would enable the development of a conceptual model for effective integration at the technical colleges to allow the students to obtain both technical and entrepreneurial skills. The study recognized the need for integrating ECs into technical college programs curricula for self-employment and thereby analysed documents on MEC to identify key competencies required for integration into the curriculum. Subsequently, the researchers conducted semi-structured interviews with experts from both the technical teacher and the SME entrepreneurs to verify the findings theoretically discovered in the document analysis. The findings revealed the important competencies required for integration into the curriculum of the technical colleges as business plan, decision making, technical know-how, interpersonal relationships, and communication. It is recommended that federal and state governments should plan, organize, and implement the model in the curriculum of technical college programs in Nigeria. In essence, this research has practical implications for the Federal and State Governments of Nigeria, policymakers, curriculum developers, administrators, lecturers, students, and the entire Nigerian community. The study was limited to nine technical colleges in the three states from the northwest geographical zone of Nigeria. This is due to the large geographical area and highly dense population of Nigeria. Another vital wisdom behind the selection of the north-west zone is that it has the highest technical colleges (NBTE, 2017) and

SMEs in Nigeria. This study should serve as a reference material for researchers so that further research can be carried out to explore additional elements of entrepreneurial competencies for inclusion in technical colleges.

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