

Managerial Entrepreneurial Competencies Required By Technical College Students: Pilot Test

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Abstract: *Technical college curriculum is lacking entrepreneurial competencies required by the technical college students to become entrepreneurs upon graduation. The purpose of the study was to ascertain entrepreneurial competencies need by technical college students in Nigeria. The study was guided by a research question. A descriptive survey research was used in the study. The study population consists of 15 technical teachers. The tool used for the study was a structured questionnaire validated by three experts. The Cronbach Alpha reliability method was adopted to ascertain the internal consistency of the instrument that produced a reliability coefficient of 0.70. The collected data were analysed by means of mean and standard deviation to answer the research question. The values found for the Cronbach's Alpha allow the research to conclude that the instrument applied is reliable regarding technical teachers perception on the entrepreneurial competencies required for integration into technical college program. The study revealed that technical college students required entrepreneurial managerial competencies for self-employment. Therefore, the instrument can be used in context of entrepreneurial competencies integration and reveal the specific elements of entrepreneurial competencies. The future aim of the study is to compare and contrast the instrument with another entrepreneurial competencies component.*

Index Terms: *descriptive survey, instrument reliability, managerial entrepreneurial competencies, technical college*

I. INTRODUCTION

Technical and vocational institutions are designed to train young people for employment and self-reliance. As contained in the UNESCO TVET strategy 2016-2021 report that "TVET's contributions to areas such as youths employment, sustainable development and e-Learning have already been recognized and will only become more relevant when entrepreneurship training is integrated in its contents" (UNESCO-UNEVOC, 2016, p. 4).

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The youths unemployment which stand for over 70 million globally is increasing rather than decreasing (UNESCO-UNEVOC, 2015) which is a great challenge to the world leaders. This challenge must be overcome by providing education, employment opportunities, and empowering young people. UNESCO believed that this can be achieved through empowering young stars to overcome their life obstacle by exploring different avenues. One of these avenues could be gaining access to labour market and grow professionally through entrepreneurship education (UNESCO-UNEVOC, 2016a). Entrepreneurship education according to Maigida, Saba & Namkere, (2013) it is an interdisciplinary training that focuses on the tools necessary to start-up a business or vocation. Entrepreneurship education believed to be paramount aspect in supporting learners to become entrepreneurial (Lilleväli & Täks, 2017) which pose the need for systematic approach in dealing with the situation. As a result of this student has to be familiar with the characteristic and skills of entrepreneurship to become a successful entrepreneur. According to Ismail, Zain & Zulihar, (2015) in order to be able to perform self-reflection about the potential entrepreneurial competencies a person needs to study entrepreneurial characteristics and skills because entrepreneurial competencies as a learning outcome in entrepreneurship education are very important component in teaching and learning of entrepreneurship training.

A. Problem of the Research

Technical colleges are designed to address the issue of job creation, youth employment, self-reliance, poverty eradication, skill development and increase productivity so as to compete with the current opportunities and challenges in the labour market (Federal Republic of Nigeria, 2013). However, most of the students lack the required entrepreneurial competencies as observed by (Musa & Medugu, 2016). This is as a result of the curriculum contents which lacked the required skills in small businesses and enterprises (Chekole, 2014) thus, is a major obstacle to the growth and development of small and medium enterprises (SMEs). In fact there are global challenges terms of unemployment and poverty among the youths. With regards to this, (Syed, 2013); (Enombo, Hassan & Iwu, 2015) suggested for new school curriculum that would adopt the teaching of entrepreneurial education, to serve as a solution to the current issues of unemployment and high poverty rate. Indeed Hadi, Retnawati, Munadi, Apino & Wulandari, (2018)

emphasized the adjustment of curriculum as important for tackling these global challenge. Therefore having a well-designed curriculum integrated with entrepreneurial competencies could lead to overcome the issues of unemployment and poverty among the teaming youths. According to Edokpolor & Somorin, (2017) recommended that equipping students with right entrepreneurial competencies will lead to self-reliant and enterprising. Therefore such craftsmen if they possess adequate competencies, it is hoped to start-up their own venture as SMEs whereby put into practice what they have learnt at the technical college for wealth creation. Moreover, Medugu & Dawha, (2015) believed that, Nigeria is confronted with issues of unemployment due to the very wide gap produced by the lack of entrepreneurial competencies on the part of technical college students. As a result, Federal Republic of Nigeria introduces entrepreneurship education in the National Policy on Education (NPE) (Onojetah & Amiaya, 2013). The knowledge and skills acquired by the technical school in the degree for the production of goods and services. Although entrepreneurship education is important for technical colleges the curriculum content is not adequate for entrepreneurial training (Ogbuanya & Nungse, 2017). As such, the current technical college program includes only technical skills, which are too insufficient to allow technicians to acquire an entrepreneurial spirit capable of creating job opportunities and creating an entrepreneurial activity at the end of their studies (Nuhu, 2014). Since the identification and acquisition of competencies is essential for any professional development skills, thus it will yield a better alignment in the teaching and learning process and utilize the synergy between the school and the labour market (Brožová, Horáková & Fiedler, 2018).

B. Research Focus

As a result of the afore mentioned, researchers started to develop questionnaires for ECs in a single trade subject, Nwokolo & Aboho, (2012) conducted a study on entrepreneurship education and curriculum issues in vocational and technical education in Nigeria. Survey research design was employed and questionnaire was administered. Consequently Ngerem & Ngozi, (2016) employed a descriptive survey design; recommended managerial entrepreneurial competencies needed by secondary school teachers in delivering entrepreneurial training. A recent work adopted survey research design with aim of assessing the impact of electrical installation & mechanical craft practice skills on entrepreneurship for wealth creation and sustainable national development in technical colleges in Rivers state in Nigeria (Amaechi Orlu, Obed & Thomas, 2017). Moreover, managerial competencies required was investigated using a survey design (Abdulkadir, Ma'aji, Salami & Okwori, 2017). Therefore, this study was intended to ascertain entrepreneurial competencies (ECs) in term of managerial competencies necessary for technical college students to enable them established their own venture.

C. Objective of the Study

The study was aimed to determine the managerial entrepreneurial competencies required by technical students to establish new venture for self-employment.

D. Research Question

What are the managerial entrepreneurial competencies required by technical college students for self-employment?

II. RESEARCH METHODOLOGY

A. General Background of the Research

Technical teachers participated in the pilot test were parts of this study conducted by the researcher using a survey research design. The questionnaire was formulated after the first stage of the in-depth interview was performed to explore the specific entrepreneurial competencies in term of managerial entrepreneurial competencies required by technical college students for self-employment. In this stage the questionnaire which was formulated to determine the important elements of ECs in terms of managerial entrepreneurial competencies required by technical college students for self-employment was validated and pilot tested.

B. Instrument and Procedures

The capacity of an instrument to quantify what is intended to measure (Kumar, 2011) is referred as validity of an instrument. Furthermore, validity ascertains whether the research really measures what it was proposed to measure or how accurate the search results are. The instrument was developed based on a five point Likert scale questionnaire - Not-Required (NR), Less Required (LR), Partially Required (PR), Moderately Required (MR), and Highly required (HR), were inscribed against each item with a matching given values of 0, 1, 2, 3, and 4 respectively. It was subjected to both face and content validity by three experts' judgment from department of science and technology education, Bayero University Kano and department of vocational and technology education, Abubakar Tafawa Balewa University, Bauchi. The suggestions of validates was accept and all the necessary corrections were made. When the obtained mean of each item is equal to or greater to 2.50 was considered required, whereas mean of any item below 2.50 was reflected as not required (Brown, Agbulu & Amonjenu, 2017).

C. Reliability of the Instrument

Reliability is the validation of an instrument when it is consistent with the result and is used frequently (Lewis-Beck, Bryman, & Liao, 2004). The instrument was established by pilot test. The questionnaire was piloted to verify internal consistency as well as clarity and ambiguity. According to (Creswell, 2014) The pilot test is a method that is used to examine small number of people with features similar to those of the target group. Pilot test normally takes little amount of time (Schreiber, 2008). Consequently, Cronbach's alpha coefficient was employed to test the internal consistency of the questionnaire to establish reliability for the study.

D. Cronbach's Alpha

In most cases Cronbach's alpha coefficient is employed to examine the internal consistency of the items in the questionnaire that are to be tested. For the present purpose, it is enough to notice that reliability coefficients range from 0, it means no reliability, to 1.00, which implies perfect reliability. Obviously tests that give scores with a reliability of .70 or higher are sufficiently reliable for most research purposes (Gall, Gall & Borg, 2007).

According to Hair et al. (2014), any measurement instrument should have a reliability value more than .60. Thus, value less than .60 show that the instrument has low internal consistency, indeed it can lead to incorrect conclusion about what it intended to measure (Hair et al. (2014).

Table 1 Classification of the Cronbach's Alpha values and reliability.

Reliability	Very low	low	Moderate
Cronbach's Alpha value	$\alpha < .30$	$.30 \leq \alpha < .60$	$.60 \leq \alpha < .75$
	High	High Very	
	$.75 \leq \alpha < .90$	$.90 \leq \alpha$	

Source: (Nogueira & Fernandez, 2016)

III. DATA ANALYSIS

The reliability of the instrument was determined by the test method and the analysis was done using Pearson Correlation coefficient. The 15 items questionnaire was administered on the cross section of fifteen technical teachers as respondents at the same time so that reliability would be established. This approach is the most reliable in term of reliability testing because the responded have various choice to select from the range of answers (Johnson & Christensen, 2012).

A. Research Results

The data gathered was analysed based on the research question of the study and the results of the data analysed were presented in the table below. Research Question: What are the managerial entrepreneurial competencies required by technical college students for self-employment?

Table 2: Total mean and standard deviation values responses of technical teachers on the managerial entrepreneurial competencies required by technical college students for self-employment

No	Items	Mean	Std. Deviation
1	The ability to achieve the mission, vision and strategic objectives of a new venture	3.13	.74
2	Self-control	3.13	.74
3	Quality control management in venturing.	3.20	.56
4	Successful planning of the enterprises.	3.13	.74
5	Ability to manage time	3.00	.75
6	Efficient, rational and ethical management of all the resources of the organization.	2.80	1.01
7	Comparing of standard with actual situation.	2.66	.97
8	Communication for social interaction that touches every sphere of human and organization activities	2.93	1.03
9	Determination of distribution channels that are essential for effective management of the business.	2.86	.51
10	Ability to prepare a feasibility study.	2.80	.94
11	Demonstration of self-organizational discipline.	3.13	.74
12	Making decisions for which they are responsible.	2.66	.72
13	Able to work independently	2.66	.89
14	Personal relationship	3.00	.65
15	Ability to develop business plan	2.86	.99

The result presented in Table 3 shows the resemblances and differences in teachers' perception on the entrepreneurial required by the technical college students for self-employment in Nigeria. Categorically, the result can be divide into two categories; the first category with the highest mean score between 3.00 and 3.20 while the second category has a mean vale between 2.66 and 2.90. Therefore, Table 3 indicates that the responses are more positive and the common view express was in term of in start-up venture the issue of quality control management as an very important aspect required by the students to start their own business. Consequently, for a good management performance also there is a positive response, items 1 (The ability to achieve the mission, vision and strategic objectives of a new venture) the students needed to be able to interpret the goals and objective of the venture they want to establish in order to enable them to achieve their good will dream. Item 2 (Self-control), this is one of the important element in managing new business. 4 (Successful planning of the enterprises), and 11 (Demonstration of self-organizational discipline). These elements are important requirement for students to become novice entrepreneurs upon graduation. Upon re-examining items in this category it has been shown that all the above mentioned items scores a total means ranging between 3.00 and 3.20. This implies that these elements have the highest score in this study as suggested by the respondents of the instruments. In relation to the standard deviation, items 1, 2, 4 and 11 have .74; item 5 with .75; item 13 has .89; item 10 has .94; item 7 with .97; item 15 .99, this indicates that most of the values are closer to the average. Therefore, these elements are required by technical college students as managerial entrepreneurial competencies. The second category of the elements are also important in this study the study adopted 2.50 as the decision rule. Therefore, reviewing items in this category it has shown that three items 8, 15 and 10 have the highest score above 2.79. These items are crucial elements in managerial competences required by technical college students to become novice entrepreneurs. For instance, feasibility study, is required before stating the business, this will lead to develop an excellent business plan. Yet another vital element is commutation it is a paramount aspect of moving a business forward. Therefore going by the result presented in the table all the items in this category have a total means between 2.66 and 2.93. This implies that this category is also accepted by the respondents as managerial entrepreneurial competencies that are required by the technical college students for self-employment. In relation to the standard deviation, the item 9 has the lowest value .51; item 3 has .56; item 14 with .65; item 12 has .72; this indicates that most of the values are closer to the average.

B. Discussion

Training of technical students to become novice entrepreneurs is a vital aspect of technical and vocational education that needs urgent help in Nigeria by the stake holder. The national policy of education categorically emphasis the need for entrepreneurial education in this type of education right from the technical college level. Therefore one of the important entrepreneurial competencies required by the technical college students is managerial entrepreneurial competencies.



This study focuses on the importance elements of managerial entrepreneurial competencies required by the technical college students. Technical college teachers were utilized to responds to the instrument and they have given a very good output that clear way for the inculcation of this competency into the technical college curriculum in Nigeria. The mean result of the study shows that all the 15 items exceed the mean cut off mark of 2.50. This indicated that all the respondents agreed that the overall items are required for inclusion in the technical college program for the entrepreneurial training of technical college students. Similarly the standard deviation result shows that most of values are closer to the average this closeness of the respondents offer more value to the reliability of the instrument. Item 6 has 1.01 and that with the highest value is item 8 with 1.03. The standard deviation values higher than 1 indicate that the respondents did not consistently answer the questions that constituted the categories. On the other hand, a value lower than 1 means that the respondents marked mainly items 1, 2, 4 and 11, revealing consistent respondents perceptions.

The findings of this study revealed that technical college students required entrepreneurial managerial competencies as shown by the findings of the study. This in line with the findings of Medugu & Dawha, (2015) shown that managerial competencies are needed by graduates of automobile technical colleges to establish a venture in automobile. Also the findings are in line with the study carried by (Binuomote & Okoli, 2015). Consequently, going by the mean scores, quality control management is highly important and this study the element has the highest score, this finding is in line with the study carried by (Robles & Zárraga-Rodríguez, 2015) they believed that quality control management in ECs for entrepreneur to successful achieved the mission, vision and objective of the venture he/she must put effort intensively and tenaciously for the continuous enhancement of the business. Strategic business development and growth is also highly required by technical college students to establish new venture this finding is line with (Brown & Hanlon, 2016) they observed that for early growth managerial competencies a novice entrepreneur requires the ability to achieve the mission, mission and objective of the new venture. another important element in this study is developing business plan this finding is correlated with the study done by (Morris, Webb, Fu, & Singhal, 2013) which pointed out that this element is unique in assisting to define ECs contents. Therefore the study identified the important managerial entrepreneurial competencies required by technical college students for start-up venture for self-employment it is hoped that the stake holders should look into it for further necessary action.

C. Conclusions

This study was aimed at developing and evaluating the validity and reliability of the instrument which measures the perspective of technical teachers in determining the extent to which these ECs elements are required for integration into technical college curriculum in Nigeria. This pilot study is set out to address those issues in the context of ECs as regards to technical colleges. Therefore it has vital significant to the technical college curriculum developers when reviewing the curriculum. The values found for the Cronbach's Alpha allow the research to conclude that the instrument applied is reliable regarding technical teachers perception on the ECs required

for integration into technical college program. Therefore, the instrument can be used in context of ECs integration and reveal the specific elements of managerial entrepreneurial competencies. The future aim of the study is to compare and contrast the instrument with another ECs component.

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