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## Embedding components of entrepreneurship and creativity skills into construction technology education curriculum in Nigeria

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### ABSTRACT

Construction Technology Education (CTE) students in tertiary institutions in Nigeria have been criticized for their inability to demonstrate entrepreneurship and creativity skills after graduation. CTE graduates could not be workers in construction industries (wood and building) in Nigeria. Therefore, the curriculum of CTE programs in Nigerian tertiary institutions could be determined as well for the study aims to refocus on the appropriate entrepreneurship and creativity skills components should be embedded as well. This study was a qualitative research method involving an intrinsic case study design employed as the technical analysis. This study comprises 16 CTE experts as the population sample purposively selected from the tertiary institutions in the northwestern states of Nigeria. The study utilized semi-structured interviews with all of the participants since it was the protocol of the instrument for qualitative data collection. Some of the 3 CTE experts from Nigerian tertiary institutions validated the protocol. The interview results were then transcribed, coded, and interpreted manually as the data collection. Findings from the responses of the participants revealed that some skills programs including marketing, ICT, and management skills as part of the entrepreneurship skills should be appropriate to be embedded into the curriculum of the CTE. However, other skills such as critical thinking, innovation, and self-evaluation skills formed part of the creative skills components and also constructed the curriculum. The study concludes that restructuring the CTE curriculum at the undergraduate level is needed as a recommendation to the agencies responsible for running tertiary institutions in Nigeria. Lastly, the prior goals are to incorporate entrepreneurship and creativity skills components for the employment sustainability of CTE students after graduation.

**Keywords:** Construction Technology Education, Creativity Skills, Curriculum, Entrepreneurship Skills, Tertiary Institutions.

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#### Article history

*Received:*  
04 April 2023

*Revised:*  
09 May 2023

*Accepted:*  
31 May 2023

*Published:*  
31 May 2023

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**Citation (APA Style):** Isa, M. U., Lawal, U., Salihu, Y. I., Shuaibu, H., Cledumas, A. M. (2023) Embedding components of entrepreneurship and creativity skills into construction technology education curriculum in Nigeria. *Jurnal Pendidikan Teknologi dan Kejuruan*, 29(1), 109-124. <https://doi.org/10.21831/jptk.v29i1.59867>

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### INTRODUCTION

Training people for work and reflecting the modern trends in the development of occupations and skill requirements is a crucial part of Technical and Vocational Education (TVE) in Nigeria was

designed (Okoye & Arimonu, 2016; Olatunji, 2018). Specifically, TVE programs offered in universities, polytechnics and Colleges of Education (COE) are skill-oriented and performance-based (Onweh & Akpan, 2014). Among the various courses offered in these TVE institutes are various forms of construction technology education (CTE) programs such as wood and building technology education (Olabiyi, 2014). The application of scientific knowledge and skill in the design, selection of materials, construction, assembling, and fastening of two or more pieces of wood together, as well as erecting building and wooden structures are the components that must be involved in CTE tertiary institutes (Mshelia, 2012). Accordingly, the Federal Republic of Nigeria (2016) also considered wood and building options as one of the TVE options obtainable at tertiary institutes, which offers students the essential competencies for effective participation in the job environment. CTE in essence, was designed to deal with the process of training students to acquire competencies in woodwork and building technology education to be equipped with the skills to be productive and gainfully employed. More so, CTE focused on imparting vital knowledge and skills relevant to wood and building designing and construction, and the application of modern equipment/machine in wood and building technology (Ojo, 2016). These skills are essential for successful employment in the wood and building construction industries. Additionally, to effectively cope with the modern trends in occupation requirements, entrepreneurship, and creative skills are essential in CTE programs.

Time and effort, assuming the accompanying financial, psychological, and social risk, and receiving the resulting rewards of monetary and personal satisfaction are the entrepreneurship skills that necessary needed to be devoted to creating something with a different value (Shuaibu & Kamin, 2019). Entrepreneurship is the skill to create value through recognition of business opportunities, and communicative and management skills to mobilize human, financial, and material resources necessary to bring a project function as stated by (Shuaibu, Kamin, Isa, and Cledumas, 2021). Otherwise, entrepreneurship requires skills to utilize effectively and give a chance to develop their upgrading new business capabilities. According to Fillis and Rentschler (2010). To solve a problem, creativity skill has been perceived as an initiative individuals manifest through their thought and imagination. Conversely, upgrading new business capabilities needs skills for them that utilize effectively in exploring entrepreneurship. An initiative individuals manifest through (Fillis & Rentschler, 2010) their thought and imagination in solving the problem is described as creativity skill 0).

Accordingly, Umar (2009) defined an individual skill that must have for the students by identifying the steps to follow through critical thinking and analyzing problems. Essentially

creativity skill entails the individual's ability to explore ideas and thoughts to find solutions for problems without necessarily following the usual sequence of thought. In this regard, creative skills serve vital roles in entrepreneurship since it guides entrepreneur on how to explore more in their business. The impact implies that an entrepreneur needs to be creative to be successful in business. Indeed, in the 21<sup>st</sup>-century work environment, CTE with creative skills are expected to be equipped with relevant entrepreneurship. However, the undergraduate level of CTE in Nigerian tertiary institutes has been strongly avoided because they are lacking the necessary entrepreneurship and creativity skills.

Therefore, Olabiyi (2014) remarked that wood and building construction graduates lacked entrepreneurship and creativity skills, which has led the construction industries in Nigeria to express discontentment with the level of skills exhibited by CTE graduates. Buttressing further, due to their inability to exhibit skills in creativity and entrepreneurship, the wood and building industries could not employ CTE graduates (Ojo, 2016). This is an indication that CTE graduates in Nigeria lacked the necessary entrepreneurship and creativity skills needed for employability. Furthermore, entrepreneurship and creativity skills components need to be refocused on the curriculum content of CTE programs at undergraduate levels in Nigerian tertiary institutions. This intended the appropriate entrepreneurial and creative skills must equip CTE students effectively for preparing the employment sustainability of CTE students after graduation.

### **Problem Statement**

In this 21<sup>st</sup>-century era, entrepreneurship and creativity skills have been discovered to be vital indices for successful employment. Additionally, entrepreneurship and creativity skills have impacted positively the success of both employer and employee in achieving the aims and objectives of setting up and managing a business enterprise. Essentially, entrepreneurship and creativity skills aimed to assist individuals in be successful business entrepreneurs. Equally, because of the significant role entrepreneurship and creativity skills plays an important role in their inclusion in the educational system of schools. This targeted that the appropriate entrepreneurship and creativity skills be imparted to CTE students at undergraduate levels in Nigerian tertiary institutions for employment sustainability.

However, studies have revealed that graduates of CTE (Building and Woodwork technology education) from Nigerian tertiary institutions lacked the necessary entrepreneurship and creativity skills for successful employment, and for this reason could not be employed by employers in the construction industries. Employers in the building and wood construction industries have complained about CTE students lacking skills in sales, marketing, ICT application, and managerial services, as well as critical thinking, innovation, and self-evaluation skills. Conversely, this lack of skills by CTE graduates in Nigeria's tertiary institutes has

contributed to the rising rate of unemployment which has led to social vices in the society like, kidnapping, thuggery, and arm banditry. This by implication, denotes that appropriate entrepreneurship and creativity skills have not been imparted to CTE graduates in Nigerian tertiary institutions. Meanwhile, the lack of entrepreneurship and creativity skills by CTE students could be connected to the curriculum of CTE at the undergraduate level which does not focus on inculcating appropriate entrepreneurship and creative skills.

However, the incorporation of entrepreneurship and creativity skills components in the teaching and learning process should need to refocus the curriculum of CTE programs in Nigerian tertiary institutions to enhance CTE students' skills and be employable after graduation. This is also how to eliminate CTE students lacking the necessary entrepreneurship and creative skills. The heart of this study was guided by the following research objective and question.

#### *Objective*

Determine the perception of stakeholders on entrepreneurship and creative skills components appropriate for embedding into the curriculum of CTE programs in Nigerian tertiary institutions.

#### *Question*

What is the perception of CTE stakeholders on the components of entrepreneurship and creativity skills appropriate for embedding into the curriculum of CTE programs in Nigerian tertiary institutions?

#### **Literature Review**

The literature was reviewed under the following sub-headings; Entrepreneurship and creative skills, CTE program in Nigerian tertiary institutions.

#### *Entrepreneurship and Creativity Skills*

Entrepreneurship is the skills that are included by the organization for starting, operating, and sustaining a business within the limit of a market as perceived as requiring skills to prospect for existing exploration (Shuaibu & Kamin, 2019). The federal republic of Nigeria (2013) stated that the relevant entrepreneurship skills required for job creation and wealth generation to equip the graduates are described as the philosophy of entrepreneurship education.

In addition, developing the student's entrepreneurship skills to pursue different entrepreneurial opportunities is the essence of the philosophy of entrepreneurship education (Ojo, 2016). At this juncture, it is vital to state components of entrepreneurship skills appropriate for educational programs, especially CTE. In this sense, Kelly (2020); Ojo (2016); Olabiyi (2014) stated that the components of entrepreneurship are including business plan skills, marketing skills, and financial management skills as components for an educational program like CTE. Equally, entrepreneurship skill components which are called ICT skills components are desirable for

educational programs which consist of self-motivational skills, and management skills (Bala, Kareem, Hassan, & Nwankwo, 2020; Fillis & Rentschler, 2010).

Creative skills are skills that aid of an individual's initiative to break away from the usual order of views as a manifest of their influence (Shi, Yuan, Bell, & Wang, 2020). Other definitions view of creative skills is that skill that made complement entrepreneurship for success in business operations (Saptono et al., 2019). Further, creative skills as mentioned by Fillis and Rentschler (2010); Saptono et al. (2019); H. Wang, Jiao, and Li (2022); Yunos et al. (2019) the components of creative skills are including self-evaluation, curiosity, critical thinking, idea exploration, working independently, self-confidence, and innovativeness. However, these creative skills aspects are a necessity for the success of any entrepreneurship venture. In this regard, Saptono et al. (2019) stated that in running a business, entrepreneurs need creative skills in recognizing opportunities, generating ideas, and innovativeness. Moreover, the two relations of creative and entrepreneurship skills have great connections in business operations.

#### *Construction Technology Education Program in Nigerian Tertiary Institutions*

Construction technology education (CTE) is a teacher education program offered at tertiary institutes in Nigeria designed to prepare technology teachers who will be sound in pedagogy and equipped with relevant technical skills to teach in secondary schools, technical colleges, Colleges of education, and Polytechnics. Additionally, there are several offers for students in CTE programs to work in the industry as well as in the private sector of the economy (FRN,2016). Further, the skills for employment in the construction industry have to be CTE focuses on equipping students (Fauzi, Ali, & Amirudin, 2019). In support of this assertion, Aliyu (2016) stated that wood and building courses as the core subjects that are designed for CTE programs in Nigerian tertiary institutes. In addition, inculcating the right skills and values in students for effective participation in the world of work needs other subsidiary courses.

Equally, the philosophy of the CTE program as stipulated in the revised curriculum for the Bachelor degree VTE program stated that CTE aims at the complete development of individual pre-service teachers to be committed and efficient breed of CT Educators for secondary schools, Technical Colleges, Scholl of education and Polytechnics, as well as the industrial and private sectors of the economy (FRN, 2016).

Furthermore, the FRN (2016) stated the object of the CTE program at the undergraduate level of tertiary institutions is to include provide a course of instruction in CTE for the pursuit and acquisition of learning and knowledge for service to humanity; Provide a sound foundation for interested graduates to pursue a higher degree in CTE; Equip service teachers with pedagogical and practical skills; Develop soft skills ( Positive values and attitudes)for the efficient discharge of their duties; And to develop in the preservice teacher the spirit of self-reliance and

entrepreneurship. These objectives are quite explicit especially as they emphasize more on developing individuals' ability and entrepreneurship. However, it is pertinent to state here that CTE programs at the undergraduate level are offered in the universities as TVE base courses usually within the duration of 4 to 5 sessions that is four or five years (Ismail & Mohammed, 2015). Additionally, other tertiary institutions in Nigeria like the polytechnics and colleges of education offer CTE programs at the undergraduate level in affiliation to the universities offering such programs with the same curriculum content.

## **METHOD**

### *Research Design*

This research employed a qualitative research method involving an intrinsic case study design using in-depth interviews of participants. Yazan (2015) emphasized that an intrinsic, holistic description and analysis of a phenomenon such as a program, an institution, a person or a process, or a social unit are involved with the scope of an intrinsic case in a qualitative study. Researchers mostly employed intrinsic case study design when studying a program curriculum (Hancock & Algozzine, 2016). Equally, Shuaibu and Kamin (2019) described an intrinsic case study design as typically exploratory requiring much preparation on who to collect data from, where to collect the data, and what phenomena of interest to investigate.

### *Area of the Study*

The study was carried out in the tertiary institutes offering CTE at the undergraduate level in the northwestern part of Nigeria. Accordingly, the tertiary institutions in the northwestern part of Nigeria including Bayero University Kano, Kano state university of Science and Technology, Federal College of Education (Technical) Bichi, and Kaduna state polytechnic were involved in this study.

### *Sample and Sampling Technique*

The population for this study comprised stakeholders in CTE (Lecturers and curriculum planners) used as a sample for the study. Additionally, purposive sampling was employed for the selection of participants for the study. Purposive sampling is a sampling technique employed in selecting individuals with rich experience in the content of investigation (Owen, 2014). In this regard, lecturers with 15 years of working experience and above with a minimum qualification of a master's degree were selected as samples for the study. In this regard, 12 CTE curriculum planners and 4 CTE lecturers were purposively selected from 4 tertiary institutions in northwestern Nigeria. Table 1 shows the sample participants interviewed in this study.

Table 1 Sample of Participants Interviewed

| S/n | Institution  | No Curriculum Planners sampled | No of the Lecturers sampled |
|-----|--|--------------------------------|-----------------------------|
| 1   | Bayero University Kano                               | 1                              | 4                           |
| 2   | Kano University of Science and Technology            | 1                              | 3                           |
| 3   | Federal College of Education (Technical) Bichi, Kano | 1                              | 3                           |
| 4   | Kaduna Polytechnic                                   | 1                              | 2                           |
|     | Total  | 4                              | 12                          |
|     | Grand Total= 16                                      |                                |                             |

### *Instrumentation*

A semi-structured interview approach was the tool employed in this study to gather qualitative data. The interview methodology for the qualitative instrument uses specific information regarding the purpose of a study and talk about a specific study to ask questions (Castillo-Montoya, 2016). Both contents, as well as facial validation from the 3 experts in the field of CTE, were subjected to the interview protocol stage. Three CTE specialists subjected the interview technique to content and face validation. The validates are 1 from Bayero University Kano, 1 from Kano state university of Science and Technology, and 1 from COE Gidan Way Kaduna. The final draft of the protocol was used as a guide for the interview session with the participants.

Moreover, interview sessions with participants were conducted to ascertain the trustworthiness of the data by member checks and peer debriefing. Trustworthiness requires the reliability of qualitative data (Connelly, 2016). Member checking was involved by giving the transcript from the interview to the participants to ascertain accurate reporting of their responses (Creswell & Creswell, 2017).

Accordingly, the 16 participants okayed the transcript after going through and verifying an accurate report of their presentation. Similarly, peer debriefing was done by giving the data collected from the interview to a qualitative expert to probe into the result of the data and made suggestions for the improvement of the qualitative data analysis to ensure appropriate reporting. The essence of peer debriefing in qualitative research is to ensure the reliability of the qualitative data under investigation (Venkatesh, Brown, & Bala, 2013). Furthermore, the results gathered from the interview were manually transcribed, coded, and interpreted accordingly using thematic content analysis. Results of the data were also presented on a pie chart to illustrate the percentage of responses by participants.

**RESULTS AND DISCUSSION**

The results of the interviews with the stakeholders in the CTE program in Nigerian tertiary institutions regarding the entrepreneurship and creativity skills elements that should be incorporated into the undergraduate CTE program's curriculum are shown in Table 1. Planners of CTE curricula and instructors are envisioned as stakeholders. The following codes were used for the representation of participants, entrepreneurship skills, and creative skills. **Codes for Participants:** Curriculum Planners (CP) 1-4; Construction Technology Lecturers (CTL) 1-12. **Codes for Embedded (E).** **Codes for not Embedded: NI.** **Codes for entrepreneurship skills:** Business planning skills (ES1); Financial management skills (ES2); Marketing skills (ES3); ICT Skills (ES4); Interpersonal Skills (ES5); Management Skills (ES6); Self-Motivational Skills (ES7). **Codes for Creative Skills:** Idea Exploration skills (CS1); Innovative Skills (CS2); Curiosity Skills (CS3); Self-confidence skills (CS4); Independent working skills (CS5); Critical thinking skills (CS6); Self-Evaluation skills (CS7).

Table 2: Extracts from Interviews with Construction Technology stakeholders

| Question  | Responses  | Themes   | Codes                                  | Participants   |
|---|--|--|--|--|
| Q1 Can you give further details on whether the CTE program's undergraduate curriculum at Nigerian tertiary institutions includes entrepreneurial and creative abilities components? | One could see from the curriculum that components of entrepreneurship and creativity skills are not in the curriculum, but entrepreneurship concepts and philosophy are embedded   | Embedded<br>Not Embedded   | I<br>NI                                | CP2, CTL5<br>CP1,3,4, CTL1,2, 3,4,6,7,8,9,10,11,12   |
| Q2 Can you provide a list of the entrepreneurship skills aspect that you think should be covered in the undergraduate CTE program curriculum in Nigerian tertiary institutions?     | Yes, can, some of these components will include skills in using the computer for sales and marketing, skills in planning business goals expected to be achieved in construction programs, skills in creating a conducive working environment, Skills in effective customer relations, Skills in self and individual motivational skills, Skills in product | ICT Skills<br>Business planning skill<br>Management skills<br>Interpersonal skills<br>Self-motivational skills<br>Marketing skills | ES4<br>ES1<br>ES6<br>ES5<br>ES7<br>ES3 | CP1,2,3,4, CTL1,2,4, 5,7,8,9,10,11,12<br>CP2,4, CTL2,3,5,8,10,11,12<br>CP1,2,3, CTL1,5,6,8,9,10,11<br>CP2,3,4, CTL1,2,7,9,11,12<br>CP1,4, CTL1,3,4,6,8,10,11,12<br>CP1,2,3,4, CTL1,2,4,5,7,8,9,11,12 |



| Question  | Responses  | Themes                      | Codes | Participants                 |
|---|--|-----------------------------|-------|------------------------------|
|   | advertisement, skills in sourcing funds for projects.  | Financial management skills | ES2   | CP1,3,4, CTL1,2,3,6,9,11,12  |
| Q3 Can you provide a list of the creative skills aspect that you think should be covered in the undergraduate CTE program curriculum in Nigerian tertiary institutions? | Skills in applying one's initiative in solving problems, Skills in building confidence during project execution, skills in applying deep reasoning to solve complex problems, Skills in evaluating one's achievement in project execution, Skills in investigating procedures to plan and execute projects, Skills on inquiry application, Skills in exploring ideas on projects, Skills in building confidence on an individual, Skills in working independently without depending on others, Skills in innovativeness. | Innovative skills           | CS2   | CP1,3, CTL2,5,6,7,9,10,11,   |
|   |  | Self-confidence skills      | CS4   | CP1,2,4, CTL3,5,6,8,10,11,12 |
|   |  | Critical thinking skills    | CS6   | CP2,3,4 CTL1,2,3,4,6,8,9,11  |
|   |  | Self-evaluation skills      | CS7   | CP1, CTL4,6,7,9,10,11,12     |
|   |  | Idea exploration skills     | CS1   | CP2,3, CTL2,4,5,7,8,11,12    |
|   |  | Curiosity skills,           | CS3   | CP4, CTL1,2,6,7,9,10,12      |
|   |  | Independent working skills  | CS5   | CP1,3,4 CTL1,2,5,6,8,9,11,12 |

Table 1 presents the responses of participants, while Figure 1 shows the percentage of responses of participants on each theme. As shown in Table 1, an explanation regarding if entrepreneurship and creativity skills elements are integrated into the construction program curriculum in Nigerian TI. themes generated from the interview revealed that 87.5% of the participants opined that in Nigerian TI the components of entrepreneurship and creativity skills are not integrated into the curriculum of construction programs, while 12.5% of the survey participants said that the CTE in TI curriculum had elements for entrepreneurship and creativity abilities. Further, themes generated on stakeholders' perceptions of entrepreneurship competence elements suited to integration with the CTE curriculum in Nigerian TI showed 87.5% of participants thought ICT skills were a part of entrepreneurship competencies suitable to integration with the curriculum., while 12.5% were unsure whether or not ICT skills should be included as a component for the curriculum of CTE. Similarly, **Business planning skill** was perceived by 56.3% as a component of entrepreneurship skills that should be embedded into the curriculum of CTE in TI, while 43.7% of participants were silent about business planning skills as a component of entrepreneurship skills to be embedded into the curriculum of CTE. Equally,

on **management skills**, 62.5% of the participants admitted management skills as a component of entrepreneurship skills that should be embedded into the curriculum of CTE in TI, while 37.5% were silent about management skills as a component to be embedded into the curriculum of CTE. Additionally, Interpersonal competence is seen by 56.3% of participants as an essential entrepreneurial ability that should be included in the CTE curriculum in Nigerian TI, while 43.7% were silent about interpersonal skills as an entrepreneurship skill component appropriate to be included in the curriculum of CTE in TI. Also, 62.5% of participants believed that **self-motivational skill** was an element of entrepreneurship that should be included in the CTE curriculum in TI, while 37.5% were uncertain about whether or not self-motivational talent should be included in the CTE curriculum. In terms of marketing skills, 81.3% of the participants believe that these are elements of entrepreneurship that should be incorporated into the Nigerian curriculum of the construction program at TI, while 18.3% were unsure whether these elements should be incorporated into the CTE curriculum at TI. In addition, on **financial management skills**, 62.5% of the participants considered financial management skills as an entrepreneurship skill that should be incorporated into the curriculum of the CTE program at TI, while 37.5% were uncertain about whether financial management competencies were abilities that deserve integration into the CTE curriculum in TI of Nigeria.

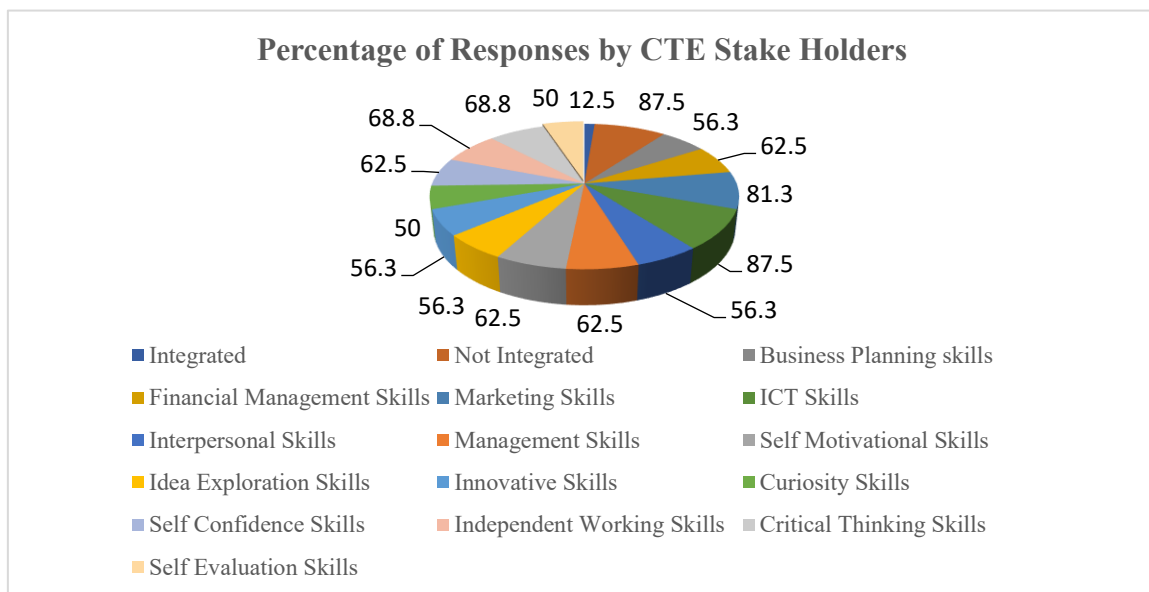


Figure 1: Percentage of Entrepreneurship and Creativity Skills Components Appropriate for Embedding into CTE Curriculum Responses by CTE Stakeholders

Based on the interview conducted with WTE stakeholders the result revealed that the curriculum that has not been embedded in CTE programs in Nigerian tertiary institutions consists of entrepreneurship and creative skills components. This finding is in conjunction with the view of Bala et al. (2020) who asserted that entrepreneurship and creative skills components are undoubtedly significant for the success of students in construction programs after graduation,

unfortunately, most students lacked these skills due to their absence in the curriculum content of CTE program in Nigerian higher institutions. Buttressing further on the absence of entrepreneurship and creativity skills components in the CTE curriculum in tertiary institutes of Nigeria. Ojo (2016) stated that CTE programs at the higher level of education in Nigeria appear deficient in entrepreneurship and creativity skills components for CTE students to flourish in an enterprise or paid employment after graduation. This undoubtedly hampers CTE students from gaining employment in construction industries in Nigeria. Further, based on the findings on entrepreneurship skill components appropriate for embedding into the curriculum of CTE in TI of Nigeria, findings revealed 87.5% of participants mentioned ICT skill as an entrepreneurship skill component appropriate for embedding into the curriculum of CTE in Nigerian TI. In support of this finding, Fillis and Rentschler (2010) value ICT skills as an indispensable element for successful entrepreneurship which should be the focus of the curriculum content of any educational program that aims to prepare students to be successful entrepreneurs. Similarly, Bala et al. (2020) reiterated the significance of ICT skills for CTE students for successful entrepreneurship, stating that acquiring ICT skills will go a long way in assisting CTE students in the timely decision taken and effective operation in an organization. This implies embedding ICT skills as a component of entrepreneurship skills in the CTE curriculum could help develop students' skills in ICT for successful entrepreneurship after graduation.

Furthermore, entrepreneurship skill is appropriate for embedding into the curriculum of the CTE program perceived by 56.3% of participants on business planning skills. This implies that business planning skills could be considered as a component of entrepreneurship skills appropriate for embedding into the CTE curriculum despite 34.7% of participants' silence. In support of this, Mugiono, Prajanti, and Wahyono (2021) see business planning skills as an entrepreneurship skill component that is vital for every entrepreneur intending to operate a business enterprise. Also Shuaibu and Kamin (2019) listed business planning skills as a skill required by CTE students to be productive in their place of work after graduation. Moreover, management skill was viewed by 62.5% of participants as an entrepreneurship skill component appropriate for embedding into the CTE curriculum despite being silent by 37.5%, it will be accepted as a component of entrepreneurship appropriate for embedding into the CTE curriculum because JAMALUDDIN (2019) considers management skill as an entrepreneurship skill component for a business venture. A total of 56.3% of participants viewed interpersonal skills as a component of entrepreneurship skills that should be included in the curriculum of CTE. In support of this finding Ojo (2016) stressed interpersonal skills as a vital skill for students to learn in schools because possessing interpersonal skills by students will give them much confidence in how to effectively interact with customers in their working environments. Further 62.5% of

participants listed self-motivational skills as a component of entrepreneurship skills suitable for integration into the CTE curriculum. This implies that self-motivational skill is a component of entrepreneurship skill suitable for integration into the CTE curriculum despite being silent by 37.5%. This finding is in line with Mugiono et al. (2021) who sees self-motivational skill as an entrepreneurship skill component that every individual in self-employment or paid employment should possess. Marketing skill was perceived by 81.3% of participants as appropriate for the curriculum of the CTE program. This finding coincides with the views of Ojo (2016) that marketing skill is desirable for school curriculum for students to be acquainted with the skills for selling products. Financial management skill was listed as entrepreneurship skill appropriate for the CTE curriculum by 62.5% of participants. This is in agreement with the view of Olabiyi (2014) that financial management skill is a necessary component of entrepreneurship that students of CTE aspiring to be prospective entrepreneurs must possess before graduating from institutions, adding that possessing financial management skill by students could guarantee effective business transaction through appropriate handling of financial resources.

Findings on the creative skills component revealed 56.3% of participants accepted innovative skills as a component appropriate for the CTE curriculum. This is in line with C. Wang, Mundorf, and Salzarulo-McGuigan (2022) who asserted that innovative skill is a vital component of creativity skill which is required for a successful implementation of an entrepreneurship program. This could mean that innovativeness stands as a potent avenue in actualizing the success of entrepreneurship. Similarly, findings on self-confidence skills were accepted by 62.5% of participants, despite being silent by 37.5%, it is accepted as a component of creative skill appropriate for embedding into the CTE curriculum. In support of this finding, Umar (2009) sees self-confidence as a creative skill that should be incorporated into the teaching and learning process of courses with a more practical bent. He also added that once students form the habit of confidence at school, they carry it over to their place of employment. Buttressing this finding Shu, Ho, and Huang (2020) also stated that an individual entrepreneur who succeeds in any business venture can be helped by building self-confidence first. Further, findings on critical thinking skills show that 68.5% of participants considered it as a component of creative skills. In support of this finding Kelly (2020) said that students are expected to be creative to learn during their schooling because it is a core skill in an entrepreneurship organization to prepare their critical thinking ability. In line with that, the finding proved that self-evaluation skills show that 50% of the participants are of the view that self-evaluation skills should be included in the curriculum of the CTE program. This is in line with Shi et al. (2020); Ojo (2016) who provided a list of self-evaluation techniques for entrepreneurs to use while evaluating their personalities and skills within a company as majorly in the component of creative skills. Moreover, findings on idea

exploration skills show 53.6% have been opined by the participants as a creative skill component appropriate for embedding into the curriculum of the CTE program. This finding coincides with the view of Ehtiyar and Baser (2019) who listed idea exploration skills as a component of creative skills. In support of this finding also Umar (2009) disclosed that having the most idea for students to explore their ideas on issues of investigation is significant in terms of solving problems, particularly in the workplace. Equally, findings show a component of creativity skills has revealed 50% of participants considered curiosity skills should be incorporated into the curriculum of CTE. In line with this, Saptono et al. (2019) perceived curiosity skill as a skill that an entrepreneurship student should possess before graduation since it proffers every individual entrepreneur the ability to be more inquisitive about the business he/she is operating which prevents unnecessary loss in business. Conclusively, findings show that independent working skills revealed 68.5% of participants mentioned it as a creative skill component appropriate for embedding into the curriculum of the CTE program. Despite being silent by 31.5% independent working skills could be considered as a component of creative skill that should be incorporated into the curriculum of the CTE program. In conjunction with this finding, Tantawy et al. (2021) mentioned independence in work as a critical creativity skill in entrepreneurship which needs to be structured into entrepreneurship education programs to train students to acquire skills of being independence in decision making, as well as solving complex problems.

## **CONCLUSION**

Entrepreneurship and creative skills have been perceived to be vital indices for every successful business venture. Therefore, students in Nigeria could aid in possessing the necessary entrepreneurship and creative skills required by the wood and building construction industries by embedding the components of entrepreneurship and creative skills into the curriculum of the CTE program at the undergraduate level of Nigerian tertiary institutions. Findings from this study have revealed that entrepreneurship and creative skill components have not yet been incorporated into the curriculum of CTE programs at the undergraduate level in Nigerian tertiary institutes.

Equally, it is clear from the findings of this study that the consist of 7 entrepreneurship and 7 creative skill components are essential for embedding into the curriculum of CTE programs in Nigerian tertiary institutions. In this sense, entrepreneurship and creative skill components are inevitable to incorporate and restructure the curriculum of CTE programs at the undergraduate level of Nigerian tertiary institutions considering the global trend in employment sustainability which is geared towards entrepreneurship and creativity. At this juncture, it is recommended that the agencies concerned about running tertiary institutes in Nigeria take a bold step in restructuring the existing CTE curriculum at the undergraduate level of Nigerian tertiary institutes to integrate entrepreneurship and creativity skills components for employment sustainability among graduates

of CTE. Furthermore, it is recommended that government should ensure adequate provision of appropriate facilities for the effective acquisition of entrepreneurship and creativity skills by CTE students at the undergraduate level of Nigerian tertiary institutes.

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