ENTREPRENEURS' AND TEACHERS' PERCIEVED BUILDING CONSTRUCTION STRATEGIES FOR ENHANCING EMPLOYABILITY SKILLS OF STUDENTS IN TECHNICAL COLLEGES IN ANAMBRA STATE

OKOYE, PETER I.
piz.okoye@unizik.edu.ng
Department of Technology and Vocation, Faculty of Education, Nnamdi Azikiwe University, Awka

NWACHUKWU, CALEB C.
calebchisom4@gmail.com
08039135178

Department of Technology and Vocation, Faculty of Education Nnamdi Azikiwe University, Awka

Abstract

This study was targeted at determining entrepreneurs' and teachers' perceived building construction strategies for enhancing employability skills of students in technical colleges in Anambra State. The study adopted a descriptive survey research design. Three research questions guided the study. The population of the study was 184 respondents, comprising 70 registered building construction entrepreneurs and 114 building construction teachers in technical colleges in the State. Census sampling were used due to the population was manageable. The instrument used for data collection was 45 itemed researchers' structured questionnaire on four-point rating scale and validated by three experts. Cronbach Alpha was used to determine the reliability coefficient of the four clusters in the instrument which yielded 0.82, 0.81, 0.80 and 0.85 respectively with overall coefficient of 0.82. Mean was used to answer the research questions. The result of the findings revealed that all the items identified under blocklaying and concreting, carpentry and joinery, painting and decoration strategies were needed to enhance building construction employability skills by technical college students in the State. Based on the findings, it was concluded that the strategies under study, if properly followed could enhance employability skills of technical college students in building construction prior to their graduation. Sequel to the findings, it was recommended among others that school administrators should encourage teachers to integrate the identified strategies while teaching to enable the students acquire employability skills to thrive in the 21-century industry demands. Additionally, school administrators should synergize with relevant construction industries in order to avail students ample opportunity for hands-on learning.

Keywords: *Building construction, Employability skills, Entrepreneur, strategies, Teachers*

Introduction

In Nigeria, the National Board for Technical Education (NBTE) instituted technical colleges in order to equip students with employable skills, attitudes and knowledge to enter the labour market. This was done in expectation that these attributes would not only enable them to function effectively in the industry but also open their own enterprises. According to Federal Republic of Nigeria, FRN, (2013), technical college is a segment of technical and vocational education (TVE) designed to produce craftsmen at the secondary school level and master craftsmen at the advanced craft level. The programme is structured into trade modules consisting of five components, namely: General Education; Theory and Related Courses; Workshop Practice; Industrial Training/Production Work and Small Business Management and Entrepreneurial Training.

Sequel to the above, technical colleges admit upper basic education leavers into a 3-year full vocational courses leading to the award of National Technical Certificate (NTC) and Advanced National Technical Certificate (ANTC) leveraging the trade modules. According to National Board for Technical Education (2013), trades offered in technical colleges include: building/woodwork which covers block laying and concreting, carpentry and joinery, painting and decoration; electrical and electronic, automobile, mechanical technology among others. Each of these trades, is meant to inculcate in learners requisite skills and knowledge that would enable them to function efficiently in the industry, especially in building construction field where creativity is highly paramount.

Furthermore, as a programme of study, building construction was configured to equip students with knowledge, salable skills and motivation that guarantee success in the field of work. Hence, the major objective of building construction grapples with the production of artisans who would be able to carry out various tasks associated with the construction of buildings and structures by applying their skills and competencies. The peculiarity of building construction is found in offering lifelong education that enables students to acquire the necessary job-oriented knowledge, attributes and requisite skills to function independently as well as compete favourably in the field. The major goals and philosophies of building construction include: to produce competent graduates who should be able to perform different kinds of building-related tasks, namely, construction, renovation, demolition, relocation, maintenance, and repair of building structures as well as chimneys, waste disposal, fencing, landscaping, structural works using building equipment and tools (National Board for Technical Education, NBTE, 2010). Such graduates are also expected to design and interpret building plans, set out buildings, form block walls on the concrete foundation, level the building, design good roofing patterns and properly execute them. Additionally, they should be able to work with various materials, tools, equipment and machines in order to mould blocks, carry out preliminary site operations, concreting, block wall construction and finishing in building sites (Okparaeke, 2017).

Acknowledging that building is a closed structure with walls and a roof, Anele (2018) opined that it is one of the basic necessities of man, primarily as shelter from weather, security, living space, privacy, to store belongings and to comfortably live and work. Therefore, every member of the society benefits from building construction in one way or the other as industrial, commercial and residential to mention a few. This alludes to the fact that building is an indispensable facility to all mankind and as such should be prioritized starting from the impartation of knowledge and skills to the utilization or application of such skills and knowledge in executing works; bearing in mind the any failure in this regard could lead to the production of incompetent graduates who would neither do well in examinations or perform poorly in the industry. This phenomenon would be an aberration to the essence of introducing building

construction in the nation's education system. For proper impartation of building construction skills in students, appropriate strategies should be channeled towards organizing instructions and extra-curriculum activities in order to match theory and practical aspects of the programme to yield the expected learning outcome. The expected learning outcome of the programme in this context, entails production of competent experts who would teach in schools or field workers who would be charged with the responsibility of executing building construction projects.

To this end, therefore, teachers and field workers or building construction entrepreneurs are the focus of this study, as both are trained alike. In this study, technical teachers are viewed as trained personnel who can impart the pedagogical and employable skills in students in technical colleges, while the field workers or building construction entrepreneurs as the experts who specialize in constructing of buildings and structures. According to Okoro (2015) building construction teachers are professionals who have undergone training in technical programmes and are certified to teach technical subjects at the secondary and post- secondary school level. In order for building construction teachers to successfully prepare building students to meet the demands of the 21st century workplace skills, it is imperative to update and rejig their instructional delivery strategies. Such strategies would enable the teachers to create authentic classrooms and stimulate learning experiences to improve students' interest, academic achievement and retention of subject matters (Busljeta, 2016; Okoye, Okonkwo, and Onwusa, 2023). In the same vein, Jabli and Qahmash (2015) asserted that embracing appropriate strategies in teaching and learning would enable the learner to appreciate instructional contents, perform better in examination and possibly progress in the field.

Despite the lofty objective of the programme, some factors seemed to militate against the realization of such goals, namely: unconducive learning environment, ill-equipped classrooms or lack of basic learning gadgets or facilities, inadequate/epileptic power supply, insecurity due to cultism, acute shortage of funds, lack of functional equipment, dearth of competent and committed teachers among others (Okoye and Obiekwe, 2019). Over the years, these factors have tended to undermine the import of technical colleges, especially, building construction trade which was configured to prepare students to be able to work in the industry as employees or employers of labour. Unfortunately, the crop of building graduates turned out from the schools annually seem not to possess adequate skills to be able to perform effectively in their places of work, while others seem to be confused after graduation owing to lack of requisite skills to advance in the field (Madu and Okunna, 2014). This is really contradictory to the aim for which the programme was instituted, and probably one of the major reasons mediocre and quakes have taken over the industry; which could be attributed to incessant collapse of buildings across the country. This situation has subjected some building graduates to Keke or Okada operators while those that managed to secure civil service job struggle to meet up with their financial obligations, and the rest endlessly roam the street in search of job that is not forthcoming. Regrettably, the reoccurrence of these indices seems to fuel the amber of unemployment among young school leavers.

According to Erewani (2019), the level of unemployment in a state is indicative of the quality and quantity of available manpower thereof. Nzeagu (2017) also affirmed that the main cause of unemployment among school leavers is predominantly lack of training and employable skills. Of course, the major factors susceptible to this state of affairs, as highlighted above, have existed over a long span of years with little or no genuine effort to resolve them by government and its agents. Thus, making it imperative for teachers to strategize appropriately so as to realize the objectives of their lesson by impacting the students positively. This would help the students to acquire the necessary skill sets for optimal performance both within and outside school confines,

to reduce unemployment and ultimately contribute their quota towards the wellbeing of the society.

Strategy is planned series of actions for achieving something. According to Egbita (2010), instructional strategies are decisions about organizing people, materials and ideas to provide learning. Also, Hamza (2010) posited that applying strategy in teaching requires comprehensive instruction that includes attention to promote knowledge (what to do), procedural knowledge (how to do it), as conditional knowledge (when and why to do it) as a coherent and substantiated logic for making one set of choices rather than other. Operationally, strategy is total pattern of decision which shapes the long-term capabilities to the overall strategy. Strategy is the reconciliation of teaching requirements with operational resources (Umar, 2015). The ultimate and successful test of a good technical college is not how factual students can remember information but what technical skills they possess or perform in their technical fields of employment (Okoro, 2016). Sequel to the above, Mamman, Chadi and Jirgi, 2016 suggested the following strategies to improve skills as thus: establishment of more skill acquisition centres, adequate facilities, guidance and counselling units, training and retraining of technical teachers, establishment of functional skill acquisition centres at all institutions of learning and establishment of a special scheme whereby interested graduates will be supplied with take up equipment on non interest basis.

Although, various experts and schools of thought have reeled out different strategies that could be adopted to facilitate learning and foster employability skills among technical colleges students, the current study focused on strategies that would enhance acquisition of employability skills across various strata of the field of building construction needed for the students to perform optimally which include: block laying and concreting strategies, carpentry and joinery, painting and decoration, plumbing and pipe fitting. According to Okwelle and Dibua, (2018), the major objective of block laying and concreting trade is to inculcate in learners skills required in accomplishing certain tasks such as mixing of mortar by hand, moulding and laying of blocks, rendering of walls etc. The students are required to perform these operations using tools and necessary equipment while teacher or examiner assesses their performance based on their skills and competencies.

In the same vein, Carpentry and Joinery strategies deal with the acquisition of skills and techniques for designing, cutting, constructing, erecting etc. Its objective according to the National Business and Technical Examination Board (NABTEB, 2010) include to expose students to knowledge and skills in design, construction, erection and dismantle of various temporary structures. To accomplish all the objectives, the trade is structured into modules. An individual or student is expected to be drilled in all the modules before being certified as holder of National Technical Certificate (NTC), which qualifies the person to secure employment in industry (Oviawe & Anele, 2020). Also, Painting and decoration is the making of images, pictures or impressions on a flat surface. Odike (2018) maintained that painting and decoration is seemingly youth-oriented skills; and as such could douse youth unemployment and restiveness if accompanied by suitable strategies.

Acknowledging the inestimable and indispensable nature of building construction to human beings against numerous challenges that negate the learning and advancement of the programme as a panacea for unemployment and national development, it becomes imperative to embrace pragmatic but effective strategies that could enhance impartation of employability skills. Against this backdrop, the study aimed to determine strategies for enhancing employability skills among technical college students as perceived by technical teachers and field workers or building construction entrepreneurs in Anambra State.

Statement of the Problem

The introduction of building construction in technical colleges in the State is not only essential, but also an antidote for youth unemployment and societal wellbeing. This holds true because, the programme was configured to produce competent building construction graduates, who would be able to perform various building-related tasks, such as construction, renovation, demolition, relocation among others. As skills-oriented programme building construction graduates are supposed to possess the workplace skills and attitudes to easily gain employment or become self-employed or set up and manage their own enterprises after graduation. Regrettably, rather than progressing in the occupation, a handful of them have resorted to "KEKE or OKADA" riders, others engage in crimes and social menaces, such as burglaries, robbery, prostitution, drug addition, vagrancy among others, which often predispose them to depression, psychological trauma, anxiety, aggression, frustration, murder to mention a few. More so, a common observation has shown that some graduates and school dropouts today, do not want to work but want to become millionaires overnight while unemployment escalates. Even those that undertook their career in building construction, initially do not seem to have sufficient skills and competences to operate effectively, as such they are easily demoralized thereby paving the way for mediocre to dominate the industry, with various incidents of building collapse.

Among common factors attributed to this situation, lack of employable skills occasioned by inappropriate learning process appears to be prominent. Alluding to the foregoing submission, various schools of thought including the Chief Examiners' Report 2023 have underscored the poor state of the programme, and consequently stressed the need to re-strategize instructional process to bolster students' skills, confidence and competences. Against this background, the study tends to ascertain strategies that could enhance acquisition of building construction skills among technical college students to enable them remain in the field and progress in it. The study will also provide an empirical evidence for futuristic discourse.

Purpose of the Study

The purpose of this study is to determine entrepreneurs' and teachers' perceived strategies for enhancing employability skills of building construction students in technical colleges in Anambra State.

Specifically, the study will determine:

1. blocklaying and concreting strategies for enhancing employability skills of building construction students in technical colleges in Anambra State.
2. carpentry and joinery strategies for enhancing employability skills of building construction students in technical colleges in Anambra State.
3. painting and decoration strategies for enhancing employability skills of building construction students in technical colleges in Anambra State.

Research Questions: The following research questions guided the study:

1. What are the blocklaying and concreting strategies for enhancing building construction skills of students in technical colleges in Anambra State?
2. What are the carpentry and joinery strategies for enhancing building construction skills of students in technical colleges in Anambra State State?
3. What are the painting and decoration strategies for enhancing building construction skills of students in technical colleges in Anambra State?

Methods

This study adopted a descriptive survey design. A descriptive survey research design in the view of Akuezuilo and Agu (2018) is one in which a group of people or item are studied by collecting and analyzing data from a few people or item considered to be representative of the entire group, when the data are analyzed the findings of the study can be generalized. Thus, descriptive survey design was considered suitable for the study. The population of the study was 184 construction experts (comprising 70 registered building construction entrepreneurs (Ministry of Housing, 2024) and 114 building construction teachers) in Anambra State. Census sampling were used due to the population was manageable. The main reason for choosing experts in building industry and technical teachers as target population for this study was because of their wealth of experience in building construction work and instruction delivery.

The instrument for data collection for this study was researchers' structured questionnaire titled: Entrepreneurs and Teachers Perceived Strategies for enhancing Building Construction Employability Skills of Students (ETPSBCESS). The questionnaire consisted of 45 items covering the basic building construction skills. The instrument was divided into two sections (Sections A and B) in line with the three research questions that guided the study. Specifically, section A contained demographic data while section B contain cluster B1 to B3 each comprising 15 items each, and each addressing the three basic building construction strategies for enhancing employability skills of students in technical colleges. The questionnaire was a four-point response scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with corresponding numerical values of 4, 3, 2, and 1 respectively.

Results

Research Question 1: What are the blocklaying and concreting strategies for enhancing employability skills of building construction students in technical colleges in Anambra State?

Table 1: Mean Rating of blocklaying and concreting strategies for enhancing employability skills of building construction students, N=184

Blocklaying and concreting strategies for enhancing employability skills include	x	SD	Remark
1. Getting the students to read and interpret drawings	3.79	0.41	SA
2. Getting the students to analyze building plan work	3.50	0.54	SA
3. Ensuring that students use correct specifications for a given task	3.73	0.49	SA
4. Visiting blocklaying and concreting industry at the end of each lesson for better understanding of some building concepts	3.54	0.57	SA
5. Inviting blocklaying and concreting experts from industries to educate students	3.38	0.52	A
6. Allowing each student to demonstrate what has been learnt after each lesson	3.88	0.33	SA
7. Asking students to prepare ground for a given task or project	4.00	0.00	SA
8. Using modern hand tools for teaching during practical	3.69	0.53	SA
9. Using well equipped and organized workshop for practical	3.68	0.57	SA
10. Grouping students into small groups during practical for monitoring	3.71	0.46	SA
11. Assigning students to set out two abutments of the arch in	3.69	0.46	SA

Flemish bond of one block thick using blocks, line and pins			
12. Allowing building experts from building industries to drill students on innovative practices	3.60	0.69	SA
13. Mandating students to lay the two abutments with blocks up to 8 courses	3.87	0.42	SA
14. Mandate students to measure and set out accurately the span of the arch which is 2m	3.95	0.22	SA
15. Mandate students to fix the arch centers, struts and folding wedges on the 8th course of the abutments	3.56	0.50	SA
Cluster Mean	3.65		SA

Data presented in Table I show a cluster mean of 3.68 which indicates that technical college teachers and building construction entrepreneurs strongly agree that technical students in Anambra State needed all the 15 blocklaying and concreting strategies to enhance their employability skills.

Research Question 2

What are the carpentry and joinery strategies for enhancing employability skills of building construction students in technical colleges in Anambra State?

Table 2: Mean Rating of carpentry and joinery strategies for enhancing employability skills of building construction students, N= 184

Carpentry and joinery strategies needed for enhancing employability skills include	x	**SD**	**Remark**
16. Students embarking on field trips to industries	3.86	0.35	SA
17. Getting familiar with basics of measuring, cutting and how to implement this ability to work	3.73	0.45	SA
18. Regular practice by students	3.54	0.60	SA
19. Collaboration of students during practical lessons	3.88	0.33	SA
20. Being familiar on how to install structures and fixtures	3.59	0.50	SA
21. Get students to master the use of measuring tools and devices	3.91	0.29	SA
22. Students should be acquainted with various types of wood and their properties	3.46	0.50	A
23. Practicing with different tools	3.54	0.50	SA
24. Employing quality technical staff	3.82	0.39	SA
25. Involving students during practical lessons and maintenance work in the college	3.70	0.46	SA
26. Varying teaching styles, techniques or methods from time to time during lessons	3.48	0.54	A
27. Mastering the process of verifying trueness of structures using plumb bulb and level	3.52	0.69	SA
28. Using students centered teaching method for teaching carpentry and jonery	3.82	0.39	SA
29. Using well equipped and organized workshop for practicals	3.52	0.62	SA
30. Grouping students into small groups during classes and monitor them closely	3.79	0.41	SA
Cluster Mean	**3.70**		**SA**

Data presented in Table 2 reveal a cluster mean of 3.70 which implies that technical college teachers and building construction entrepreneurs strongly agree that technical students in Anambra State needed all the 15 carpentry and joinery strategies for the enhancement of employability skills.

Research Question 3

What are the painting and decoration strategies for enhancing employability skills of building construction students in technical colleges in Anambra State?

Table 3: Mean Rating of painting and decoration strategies for enhancing employability skills of building construction students =184

Painting and decoration strategies for enhancing employability skills include	x	SD	Remark
31. Practice consistently procedures in painting and decoration	3.75	0.44	SA
32. Exposing students to various painting styles	3.59	0.50	SA
33. Understanding colour types and their formation	3.63	0.62	SA
34. Students should carry out experiment with texture	3.95	0.23	SA
35. Examining every little detail to improve the work	3.86	0.35	SA
36. Having strong physical dexterity	3.59	0.56	SA
37. Encouraging students to learn from mistakes instead of being discouraged	3.73	0.45	SA
38. Ability to make up with completion date of each work and done competently	3.93	0.26	SA
39. Allowing students to maintain scale and proportion in decoration work	3.66	0.51	SA
40. Mastering how to understand customers' needs and demands	3.57	0.68	SA
41. Students should learn how to visualize	3.84	0.37	SA
42. Exposing students to the procedures in producing paint	3.70	0.46	SA
43. Knowledge of tool and brush to use for certain projects	3.75	0.44	SA
44. Making students become acquainted with painting tools and machines	3.86	0.35	SA
45. Students should be able to maintain and repair painting tools	3.75	0.47	SA
Cluster Mean	**3.74**		**SA**

Data presented in Table 3 reveal a cluster mean of 3.74 which indicates that technical college teachers and building construction entrepreneurs strongly agree that all the painting and decoration strategies underscored above are required for the enhancing their employability skills.

Discussion

Analysis of research question 1 which determined blocklaying and concreting strategies for enhancing employability skills of students in technical colleges showed that the identified strategies are needed for enhancing employability skills of students in building construction. The findings were in agreement with the finding of Bello and Osaigbovo (2020) who stated that brick/blocklaying and concreting works teachers and technologist need competency improvements for classroom management, planning instructions, evaluation strategies and different types of instructional techniques. According to the researcher, management should

evaluate and supervise building experts during teaching and learning because most incompetent teachers skip most curriculum content.

The findings in table 2 revealed that the building construction students in technical colleges need the surveyed carpentry and joinery strategies to enhance their employability skills prior to graduation. The finding concurs to the findings of Isa and Abdullahi (2020), that most elements of employability skills are not embedded into the curriculum of woodwork technical education (WTE). Also, that through effective implementation of project-based learning (PoBL), engaging students in activities that could enhance their creativity, critical thinking, communication skills and application of ICT in WTE teaching and learning, WTE student's employability skills will be enhanced. According to the researcher, school management and experts should evaluate students after teaching and learning to determine level of instructors' competency and utilization of teaching aids that facilitate learning and teachers should enhance collaborative learning.

The findings in table 3 therefore showed that training the students with the identified painting and decoration strategies will help to develop human capital that will ensure employment and or self- employment of students in technical colleges in Anambra State. The findings were in agreement with that of Bassey and Williams (2020) which revealed that the enrolment rate in the department of Fine and Applied Arts in the Colleges of Education in Nigeria continues to dwindle unabated due to the persistence on the use of conventional method of instructions and lack of interest of the path of the students as a result of uninteresting instructional approach. According to the reseacher, lack of interest and poor painting and decoration employability skills among students are indication of poor curriculum content administration by building experts due to lack of diligent supervision by the management.

Conclusion

Based on the findings of the study, information been gathered on the entrepreneurs' and teachers' perceived building construction strategies for enhancing employability skills of technical college students in Anambra State, were analyzed and interpreted. Based on the results, the researcher concluded that virtually all the strategies underscored above, in respect of blocklaying and concreting, carpentry and joinery, painting and decoration if properly harnessed could help to train and produce competent building construction graduates who would not only maintain or repair the 21st century buildings, but also contribute meaningfully towards the advancement of the industry.

Recommendations

Based the findings of the study, the following recommendations were made:

1. School administrators should encourage teachers to integrate the identified strategies in teaching to enable the students acquire employability skills to thrive in the 21-century industry demands.
2. The curriculum planners should review building construction curriculum to accommodate a mandatory 6-months and above industrial attachment to enable students acquire requisite skill sets to navigate the 21st century building advances.
3. Technical colleges should synergize with building construction industries in order to promote hands-on or lifelong learning would expose students to job opportunities.
4. Government should organize six months retraining programme for technical college building graduates to boost their proficiencies in employability skills, which would adequately predispose them for gainful employment in cognate industries.

REFERENCES

Adamu, A. A. & Saulawa, A. R. (2019). Skill acquisition in carpentry maintenance and joinery. *Journal of Art and Science, 1*(2),4-16

AkOkparaeke, G. (2017). Plumbing skills development for a healthy future. *International Journal of Educational Research and Development*, 7 (7),19-28.

Alfredas, S. & Aliyu, H. M. (2016). Work skills improvement need of graduates of technical colleges in motor vehicle mechanic practice for employment in modern Nigeria. *Nigerian Vocational Association Journal, 15* (1), 360-367.

Aliyu, L. P. & Mayur, Q. M. (2020). Innovative pedagogies for teaching block laying and concreting students on self-esteem in technical college in Northern Nigeria. *International Journal of multidisciplinary Research and Growth Evaluation. 38*(8), 871-877.

Anele A. (2018). New perspective of Entrepreneurial Development. Owerri: Klet-Ken Publishers.

Arthur, R. H. (2015). Plumbing work competency instrument in the field of civil engineering. *UNIZIK Journal of Technology Education*, *1* (7) 18-28

Audu, R. & Yusro (2016). Assessment of teaching methods that influence the acquisition of practical skills. *Asian Social Sciences*. *21*(20), 16-25

Audu, R. Y. (2016). Assessment of teaching methods that influence the acquisition of practical skills. Asian Social Sciences, *2*(7), 16-27

Ayonmike, S. C. (2014). Skill training in Nigerian technical colleges: Benefits and challenges. *Journal of Qualitative Education*, 6(1), 75-86.

Bakarl P. (2017). Safety practice skills needed by electrical electronics students of technical colleges in Ekiti State. *An Unpublished Master's Thesis*, Department of Vocational Teacher Education, University of Nigeria, Nsukka,

Dibua,P.O**.** (2021). State-of-the-art in teaching of Fine and Applied Art in college of Education in Nigeria. *African Educational Journal, 8* (3), 7-15.

Erewani, H. I. (2019). knowledge and skills needs of technical college graduates for self-employment in in metal work trade in FCT and Nassrrawa. *Universal Journal of Education and General Studies, 1*(4), 08-16.

Nzeagu, S. (2017). knowledge and skill needs of technical college graduates for self-employment in metal work trades. *Unpublished M.Ed Thesis,* Department of Vocational Teacher Education, University of Nigeria, Nsukka.

Ede, E. O & Olaitan, O.O (2015). The utilization of information and communication technologies (ICT) in the teaching of metal work for quality assurance of technical college graduates in South Western State of Nigeria. *Nigeria Vocational Journal 14*(2), 115-127.

Ede, E. O. (2001). Occupational analysis and course construction in Industrial Technical Education. Nsukka: Godjiksons Publishers.

Egbita, E. T. (2019). Assessment of availability and adequacy of workshop facilities for practical skill acquisition in technical colleges in the North East Geopolitical zones, Nigeria. *International Journal of Innovative Scientific and Engineering Technologies Research*, *4*(3), 7-15

Ekong, U. M, & Ekong C. U. (2016). Skills acquisition and unemployment reduction in Nigeria: A case study of National Directorate of Employment (NDE) in Akwa Ibom State. *International Journal Economic Management Sciences*, *9* (5), 52-60 DOI:10.4172/2162-6359.1000352, on 24 August 2024.

Emechebe, S. N. (2020). The production and utilization of skill - oriented graduates and the challenges of ICT in Nigeria. *UNIZIK Journal of Technology Graduates*, *2*(3), 40-60

Erewani, R. & Nzeagu, A. G. (2010). Strategies for improving building construction management skills of building contractors. *UNIZIK Journal of Vocational Education*, *5* (1), 4-15

Hamza, A. I. (2019). Technical college teachers in Nigeria: Issues, problems and challenges. *Mediterranean Journal of Social Sciences*, *2*(7), 57-65.

Eze, T. I. & Ezeani, N. P. M. (1995). Conceptual Issues on Social and Economic Implications of Vocational and Technical Education in Nigeria. Umunze: Research and Publication unit.

Ezeji, S. C. O. A. (1984). Building construction. London and New York: Longman Group Ltd.

Federal Government of Nigeria (2013). National Policy on Education, 6th edition. Lagos: NRDC Press.

Hamza, D. A. (2010). Skill improvement need of teachers of carpentry and joinery. *Industrial Technical Education Journal, 5* (2), 35-45

Ideozu, N. N. Samuel (2018). Brick laying and concreting as a veritable tool for gainful employment and self-reliance of students in technical colleges in rivers state. *Journal of Research and Method in Education, 4*(1), 20-30

Igwe N. (2011). Competency improvement of teachers in On-board diagnostic system for effective teaching of petrol engine maintenance in technical colleges in Nigeria. *Unpublished M.Ed Thesis,* Department of Vocational Teacher Education, University of Nigeria, Nsukka.

Ile, C. M. & Egboh, E. A. (2014). Fundamental Issues in Entrepreneurship. Onisha: Noben Press Ltd.

Odike, A. A. (2018). Availability and utilization of tools and equipment in implementing blocklaying and concreting curriculum in Enugu State. *International Journal of Innovative Social and Science Education Research*, *5*(2), 38-47 Retrieved from https://www.seahipublication.com, on 24 June 2024.

Jummai, T. O. & Chadi, Jirgi, S. U. (2015). The role of Vocational and Technical Education in Skill Acquisition in Nigeria. *Journal of Education and practice*. *6*(1), 5-20.

Madu C.O. & Okunna (2019). Entrepreneurship skill needs of final year students of Faculty of Education, Unizik Awka, for successful management of small and medium scale enterprise. *Unizik Journal of Education graduates*, 6(7),60-68.

Miller, A. (2015), Technical College in Nigeria: Issues, problems and challenges. *Mediterranean Journal of social sciences. 2*(7), 57-62.

National Board for Technical Education (2011). The development of national vocational qualifications framework (NVQF) for Nigeria. A Report of the national steering committee, Awka : NBTE Press.

National Board for Technical Education (2013). National technical certificate and advanced national technical certificate curriculum and module specification in building construction. Kaduna: NBTE Press.

National Board for Technical Education (2018). Building engineering Curriculum for HND. Kaduna: NBTE Press.

Umar, O. H. (2015). Information and communication technology and the management of schools in Nigeria. Bloomington: WestBow Press.

Nwana, S. E. (2019). Educational Technology in Digital Age. Awka: Kristophel Publishing Co.

Nwankwo, I. W. & Odoh, E. O. (2014/2015). Curriculum studies and innovation: the Nigerian perspective. Awka: Love-Isaac Consultancy Services.

Nwauzi K. K. (2021). Strategies for enhancing students practical skills acquisition in electrical installation and maintenance work in technical college in Rivers State, Nigeria. *Scientific Research Journal, 5* (2), 53-63. http://dx.doi.org/10.31364/SCIRJ/v9.j03.2021. P0321845, on 30 June 2024.

Nwazor, J. C. (2015). Vocational Guidance for Youth Development. Awka: Ifevic Publishers.

Nwokolo, J. O. (2015). Training skills relevant for employment in metal work industries in Nigeria: the way forward. *Nigerian Vocational Association Journal*, *1*(5), 28-36.

Okeke, G. C. (2016), Improving students skill acquisition through effective clothing and textile education in tertiary institutions in Anambra State. *Journal of Home Economics Research Association of Nigeria, 4*(6), 9-18

Okoli, J. I. & Constance, O. (2018). Adequacy of infrastructural facilities for skill acquisition in entrepreneurship development centers in tertiary institutions in Enugu State. *Journal of Technology and Vocational Education, 4*(9), 17-28

Okoro, A. U. & Busliketa, K. K. (2017). Blocklaying and concreting skills as a veritable tool for gainful employment and self-reliance of students in technical college in River State. *Journal of Research and Method in Education*, *2*(2), 6-7. https://doi.org/10.9790/7388-1202050110, on 26 August 2024.

Okoye, K. R. O. & Madu, A. A. (2016). Collaborative learning and skill acquisition in blocklaying and concreting work by students in technical colleges in Nigeria and Ghana. *Journal of Education Management*, *3* (2), 10-21.

Okoye, P.l and Obiekwu (2019). Assessment of workshop facilities management practices in technical colleges in Anambra State. *Unizik Journal of Education graduates*. *4*(8), 143-151

Okwelle, M. U. & Adamu, G. H. (2020). Enhancing employability skills of woodwork students through Project Based Learning. *Vocational and Technical Education Journal*, *2* (1)10-19.

Oladele, P. O. & Akeke I. (2015). Entrepreneurship development: A panacea for unemployment reduction in Nigeria. *Journal of Emerging Trends in Economics and Management Sciences*, *2*(4), 25-37.

Olawoyin, E. U. & Adegoke-Samuel, W. Y. (20189. knowledge and skill needs of technical college graduates for self-employment in metal work trades. *UNIZIK Journal of Education Graduates*, *7* (5), 9-18.

Okoye, P. I., Okonkwo, P. O. & Onwusa, S. C. (2023). Re-engineering Technology and Vocational Education towards Enhancement of Creativity and Security for National Development in covid-19 pandemic era. Unizik Orient Journal of Education, 10(1), 31-37.

Opkaraeke, S. A. & Anele, E. O. (2019). Competency improvement needs of teachers of blocklaying and concreting works. *Journal of Education and Learning*, *14* (2), 14-20. doi: 10.11591/edulearn.V14i4.1645, on 24 June 2024.

Oviawe, O. K. & Odike, F.l. (2023). Strategies for enhancing students practical skill acquisition in electrical installation and maintenance work in technical college and Rivers State. *Scientific Research Journal*, 4 (3), 14-22.

Saidu N. (2019). Adequacy and utilization of resources for skill acquisition in plumbing and pipe fitting trade in Yobe State Technical Colleges. *Journal of Education and Resources*, *6*(5), 20-39. Retrieved from: https://www.scribd.comsdocument, on 19 August 2024.

Umar, J. I. & Okoro, M. U. (2017). Carpentry and joinery skills required by technical college graduates for sustainable development in Edo and Delta State. *Vocational and Technical Education Journal, 1* (3), 8-18

Uwaifo, S. I. & Gabriel, O. T. (2017). Strategies for improving competencies of personnel in construction industries so as to reduce building collapse. *UNIZIK Journal of Education Graduates*, *4* (2), 50-59.

Uwaifo, U. F. (2016). Entrepreneurial skills and self-employment: A theoretical exposition. *International Journal of development and Economic sustainability*, *10* (5), 8-19.

Uzoagulu, A. E. (2011). Practical guide in writing research report in tertiary institutions. Enugu: John Jacobs Publishers Ltd.