

ENHANCING CREATIVITY AND INNOVATION AMONG WOODWORK STUDENTS IN TECHNICAL COLLEGES IN ONDO STATE, NIGERIA

ADANRI Idowu Olabimpe

Vocational And Technical Education, Faculty Of Education, Ekiti State University,
Ado Ekiti

Abstract

This paper examines the importance of Creativity and innovation in woodwork trades in Ondo state western Nigeria. Nigerians believe that technical colleges Education system are meant for people of lower aspiration, or less academic abilities this notion is not true ,technical colleges is meant for excellent students who can be creative and innovative in woodwork. This article focuses on creativity and innovation in woodwork and It also examined technical problem and work environment that support creativity and innovation , Technical college is the key that transform the economic development of any nation, alleviate poverty and improve quality of life Therefore, the orientations have to change and it's time for parents, guardians and community leaders to encourage the children to learn skills and the government to mobilize resources and pay attention to Technical colleges education as a sure way for Nigeria growth development through personal creativity and innovations on the profession. Vocational and Technical Education (VTE) system play a crucial role in the social and economic development of a nation. Due to this education dynamic nature, they are continuously subjects to the forces driving change in the schools, industry and society. Often shaped by the needs of the changing economy and local community, the challenges and opportunities are unique, Law (2005). This article is not referring to the issue of value and importance of VTE but how to ensure its relevance, responsiveness, quality and values in an increasingly Nigeria economy through enhancing creativity and innovation in woodwork trades. Lack of technological innovation has affected creativity, entrepreneurial spirit and transformation of the Nigeria economy thereby depreciating the country's economy. Nigerians import everything from foreign country neglecting Nigeria products while we are languishing in poverty with low level standard of living. Many graduates of vocational and technical Education from secondary school, N.C.E, Polytechnic and university are jobless because they lack creative and innovative skills. Nigerians must gear up to safeguard Nigeria future and wealth by adopting and tapping from TVE experiences, embrace and enhance Technical colleges Education system Dike (2006). Empowering the people with technical skills would enhance their productivity and national development.

Keyword: Enhancing, creativity, innovation, Woodwork, Technical college, Ondo State , Nigeria.

Introduction

Technical and vocational education (TVE) courses were introduced for students to apply what they learnt in school even if the education terminates in technical college. The National Policy on

Education 2018 stipulated the main feature of the curriculum activities for technical college shall be structural in foundation and trade modules the curriculum for each trade shall consist of five components which are general education, theory and related courses,

workshop practice, industrial training/production work and entrepreneurial training and that technical college will be vocational and academic to expose the student to a variety of knowledge which will help them discover their talents and abilities which could be further developed at the technical college or in higher institution. The beneficiaries at this level will be exposed to junior secondary school leaving examination at the end of three years and their performance will be determined in conjunction with the continuous reports FRN (2014). This will enable the career officers to determine their area of interest into which they could best be suitable. It is in confirmation with "UNESCO (2023) stated that vocational education is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupations or trades. Vocational education may have work-based components example apprentice.

Background of Technical colleges

Critical analysis of Nigerian education system indicated that we still practice what we inherit from the British government which was targeted towards academic; to produce clerical staff, interpreters, clergy men, tax collectors, to support the colonial administration for effective imperialism. They were concerned mostly about the missionaries and the exportation of raw material for the industrial development of Europe. Since then, high premium was placed on white collar jobs, this led to the poor interest of students, parents, career counsellors and other people in TVE. The inferiority complex critical analysis of Nigerian education system indicated that we still practice what we inherit from the British government which was targeted towards academic, According to Fafunwa In Ikpe (2010)

owing to the acute shortage of trained European surveyors in the colonial territory, the survey school was opened in Lagos in 1908, the institution was relocated to the present site at Oyo, in 1934 Oyo state. In the same spirit, the Yaba higher college was established in 1930 first as a medical school, and later courses were added around 1936. The trade school offers pre-vocational course to students who have completed full primary school course. The course lasts for three years and leads to the award of national technical certificate (NTC) conducted by national business and technical examination board (NABTEB) the technical subjects most commonly, offered are technical drawing, mechanical technology, electrical technology and building technology.

Technical colleges admit students who have completed the trade schools course and offer full vocational courses which are of three years duration. Students could be transferred from secondary technical school to technical colleges at the end of 5 years course. Students take advanced national technical certificate ANTC examination which replaces the city and guilds of London institute. The motto of technical college is MENTE MANIBUQUE (hand and brain). Therefore, vocational education is that of form of education which is obtained at the technical colleges. This is equivalent to the senior secondary education (S.S.E) but designed to prepare individual to acquire practical skills and scientific knowledge and attitude required as craftsman and technicians at sub-professional level.

Technical and vocational education is the education that prepares people to a skilled craft as an artisan, trade as a tradesperson or work as a technician. Technical and vocational education is the education for work that prepare individual to be

gainfully employed with or self employed with requisite skills. The genesis of technical and vocational education training in Nigeria dates back to pre-colonial era, people adopted it to meet their daily needs. It was practiced in families while, Training in it occurred under apprenticeship system. Missionary schools excluded it from the curriculum in favour of literacy education. Technical education is referred to as training in theoretical and practical basic science skills and knowledge related to careers

Successful completion of such program lead to labour-market relevant vocational qualifications acknowledge as occupational-oriented by the relevant national authorities and / or the labour market. According to the definition by UNESCO and the International Labour Organization (ILO), Technical and Vocational Education (TVE) refers to “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life” UNESCO and ILO, (2001). . With this definition, TVE can be acquired before, during and after the academic education including polytechnic and university. Therefore it is independent of students academic status, sex and age; in fact, it is even better and advisable for academically good student or graduate to go for TVE because they will be able to bring in creativity and innovation.

Problems of Technical colleges’

The certificate rating in Nigeria makes it easy for graduates with academic qualifications to get jobs than for those with technical qualification, the rating of the certificate and the level

or salary attached to it make a mess of technical qualifications and discourage people taking up the profession. In fact, trade test certificates 1, 2 and 3 do not have any value like OND, NCE and SSCE. In advertising for jobs, either in government or industries, trade test certificate has disappeared as selection criteria. Another factor that creates the inferiority complex is the selection process for the colleges; citizens were made to understand that students with low marks (poor academic performance) were to be pushed to technical colleges either from primary school or from junior secondary schools. The students with highest marks would scamper for few spaces in the federal government colleges, the unity schools or the gifted schools fully funded by the federal government. With these barriers place on technical college no students are eager to apply for study in technical colleges to study any trades most especially woodwork.

Creativity and innovation in woodwork is the ability to imagine, develop, express, encourage, and apply ideas in ways that are novel, unexpected, or challenge existing methods and norms. For example, we use this skill to discover better ways of doing things, develop new products, and deliver services in a new way. Creativity involves having the idea; innovation involves getting it to market as a product or service creativity and innovation skills help students come up with new, unique, or “outside the box” ideas, or to approach something differently than in the past— both at work and outside work. A curious mindset that finds inspiration from a broad range of experiences and perspectives helps develop creativity and innovation skills. Employers are increasingly seeking people who can apply creativity and innovation skills to come up with new solutions or approaches to tackling challenges. With

strong creativity and innovation skills, instructors can also support and inspire others to develop their own creativity and innovation in woodwork. Skill competences (2021)

Creativity is the spark that ignites innovation, but other skills—like collaboration— provide the fuel that keeps it going. Being innovative involves many other important skills. Innovative people are: Adaptable, Collaborative, Communicators, Problem Solvers, Creative, innovative people face walls all the time. It could be a supervisor who does not want the extra work of trying new things, or investors who are afraid of risk. Overcoming these barriers takes persistence, courage, and self belief, but this can be hard in a world that sometimes is stacked against people. Race, gender, and sexual orientation can all be walls that people have to climb, but how do people do that? 1. Be true to your values and principles. 2. Find others like you. 3. Don't struggle alone, get help. 4. Take the long view. Walker (2002)

The “3i” creativity model developed by Natalie Nixon, explains that creativity requires three capabilities: a. INQUIRY: The ability to ask questions, re-frame questions to address gaps in information, and discuss different ideas with others in an open-minded way.

b. IMPROVISATION: The ability to observe carefully and use those observations to build ideas without being held back by existing concepts, rules, structures, and practices.

c. INTUITION: The ability to listen to your subconscious (receive a ‘gut feeling’), and use the feeling to help you do things like find patterns in things that seem unrelated. Along with inquiry, improvisation and intuition, Nixon stresses that truly creative people have a powerful combination of WONDER and RIGOR. Wonder being

open to ask, ‘what if...?’ It requires an open mind that sees beyond what is, and allows consideration of what might or could be. Rigour understanding students subject fully so that they can make sound judgements about creative ideas that might go outside the norms. In other words, to think ‘outside the box’ students must have a good understanding of what is in the box! Rigor also speaks to having the perseverance needed to get the level of understanding to help students move through creativity to successful innovation. The interplay of wonder and rigor is also important. As Nixon suggests, (2020) opportunities for WONDER are found as students pursue a RIGOROUS understanding of a field, and students can't sustain that effort for RIGOR without the joy of WONDER. Michalko (2011) suggests the “SCAMPER” checklist to help students think creatively and innovate. Think about a subject from the simple (like, how to improve the ordinary paperclip), to the complex (like, how best to reorganize your business), and apply the “SCAMPER” checklist of questions. SCAMPER means: S Substitute, C Combine, A Adapt, M Modify, and P Put to another use, E Eliminate, R Reverse.

Students in woodwork should try some of the following tips to build creativity

1. Try new things: Being open to experience stimulates your curiosity and emotions. Try to break habits (new furniture, new bed shows, new routes to work).
2. Just do it: Don't think about it too much, try it! You are more likely to be creative if you try more things. Not everything will work, but the odds are in your favour.
3. Reflect Think about each creative experience: Did it work? Why not? The more you allow yourself to

- feel deeply, the more likely you can connect to your creativity.
4. Journal Keep a record of your ideas and reactions to the day so student remember inspirations and use them in new ways.
 5. Think outside the box: The more students recognize the boundaries of their own experience and comfort zone, the more students will explore outside it. Avoid worn paths of thought. Listen to other people. Don't rely on your first answer to a problem.
 6. Students should let their subconscious do its thing Often creative ideas emerge when they are relaxing or having their "down time" like exercising, having a shower, daydreaming, or sleeping.

Work environment that supports creativity and innovation:

Creativity and innovation should be able to:

- celebrate and supports students and their work.
- encourage the expression of students interests and personalities (celebrates diversity).
- seek input from students regarding decisions and considers that input.
- encourage debate (allows both expression and a diversity of views).
- Provides respectful consideration of ideas and a rationale for decisions taken.
- make the workspace comfortable, interesting, and flexible if possible.
- Gives time for reflection and wonder.
- encourage adaptive processes and is open to change
- accept that creativity brings risk. Failures can spark great creativity!
- provide opportunity for learning on the job.

The challenge for leaders is to learn how to think differently — and even more powerfully, how to think differently together. Udall, (2014)

The term creativity and innovation are often used to mean the same thing, but each has a unique connotation.

Creativity

Creativity is "the ability to bring something new into existence". This definition emphasizes the "ability", and not the "activity", of bringing new things into existence. A person may therefore conceive of something new and envision how it will be useful, but does not take the necessary action to make it a reality. Creativity is characterized by to perceive the world in new ways, to find hidden patterns, make connections between seemingly unrelated phenomena and to generate solutions Ezemno and Offor, (2012). It is a phenomenon whereby something new is created which has some kind of subjective value, turning new and imaginative idea into reality. It is also the tendency to generate or recognize ideas, alternatives or possibilities that may be useful, ability to transcend traditional ideas, rules, patterns, relationships or the like, to bring new products. Creativity is defined as the ability to develop ideas that are unique, useful and worthy of elaboration. It involves the use of ideas (working on ideas) until something comes out of it. Creativity is the ability to solve problems, fashion products and define new questions in a particular cultural setting. This implies that what is considered creative in one setting, may be a regular occurrence in another. The key word to creativity therefore is an insight which emphasizes the mighty or ability to see a new thing (Ohizees, 2006). Creativity ensures that

individual is involved in initiating new projects, creating opportunities while solving problems. Creativity also ensures that individuals learn to produce practical solutions to newly defined initiatives. These and other things are what creative problem-solving in the realm of creativity encourage. In getting creative people to work together, heterogeneous mix of preferred creative process style outperforms teams with homogeneous mix in innovative work (Don. 2004). The creative process, a complicated process, involves the ability to generalize, evaluate, design, troubleshoot, Academic Excellence make decisions, create, modify, simplify, synthesize, hypothesize, and learn new skills. These new skills can be learnt through Technical and vocational Education and Training and in Technical colleges in Nigeria.

The Creative Process

Clearly, action by itself has no meaning; it is of little value to simply “do things” without having inspiration and direction. Entrepreneurs need ideas to pursue, and ideas seldom materialize accidentally. Isaac Newton may have been hit on the head by a falling apple, but he discovered gravity through a lifetime of scientific investigation. Ideas usually evolve through a creative process whereby imaginative people germinate idea, nurture them, and develop them successfully. Various labels have been applied to stages in the creative process, but most social scientists agree on five stages that label: an idea germination; preparation, incubation; illumination, and verification. In each stage, a creative individual behaves differently to move idea from the seed stage of germination to the last stage of verification, and as we can see, behaviour varies greatly among individuals and their ideas. Creativity

has been highlighted as essential skills for the 21st century in Nigeria, especially if we consider that the skill can promote human potential by eliciting positive aspects of the individual

Creativity is the intellectual ability to make creations, inventions, and discoveries that brings novel relations, entities, and/or unexpected solutions into existence. Creativity is a gifted ability of humans in thinking, inference, problem solving, and product development. Wang (2013). Creativity at work is the process, outcomes, and products of attempts to develop and introduce new and improved ways of doing things. The creativity stage of this process refers to idea generation, and innovation to the subsequent stage of implementing ideas toward better procedures, practices, or products. Creativity can be understood as being a multidimensional construct, involving cognitive variables, personality characteristics, family, educational aspects, and both social and cultural elements. These dimensions interact with each other according to individual thinking and creative styles and are therefore expressed and found in many different ways. Stenberg (2010), Creativity and innovation can occur at the level of the individual, family, work team, organization, or at more than one of these levels combined. Whereas creativity has been conceived of as the generation of novel and useful ideas, innovation has generally been argued to be both the production of creative ideas as the first stage, and their implementation. Neil, A et al. (2014) Therefore, the creative phenomenon has been studied under the most different approaches

1. Idea Germination, The germination stage is a seeding process. It is not like planting as a farmer does to grow maize, but

more like the natural seeding that occurs when pollinated flower seeds, scattered by the wind, find fertile ground to take root. Exactly how an idea is germinated is a mystery; it is not something that can be examined under a microscope. However, most creative ideas can be traced to an individual's interest in or curiosity about a specific problem or area of study.

2. Preparation or Concentration- you need to concentrate on the information and become immersed in it. Much of the information refers to facts, inference, speculation and opinion, all must be treated in its own merit. And dreaming up the alternative without refining or evaluating them
3. Incubation- Indicates that during the period of incubation, no voluntary or conscious thinking of the problem occurs. Incubation may be facilitated when the problem in hand is deliberately set aside from consciousness by a period of rest or by handling other problems. He regards the second as more economical since it could set in motions a series of incubation leading to several
4. Illuminations or Insight – Research shows that letting your mind wander in this way leads to

Idea generation, the new seeding stage of a new idea recognition

greater

Preparation conscious search for knowledge radicalization

Incubation subconscious assimilation of information finalization

Illumination recognition of idea as a being feasible, realization

Verification application or less

creativity , This is extremely important stage because sometimes it takes days, weeks, months, even years, this period, the problem conquering solution flashes into person mind at an unexpected time, it spark the creativity epiphany, it fosters intuition for new products and creative execution.

5. Verification and applications- the process of verification is continuous and very often we find that creative individuals, revise, modify, or change their idea. The individual tries to verify whether the solution is correct, valid and reliable in terms of existing knowledge. Verification procedure includes gathering support evidence, using logical persuasions and experimenting with new idea. The above process is a systematic process of applying creativity and innovation to the needs and opportunities in the market place; an innovation is the ability to apply creative solutions to those problems and opportunities in order to enhance people's lives. As an Entrepreneur, you must be disciplined in carrying out this task.



to prove idea has
value validation

Fig 1 Creativity process

Innovation

Innovation has been valued as a necessary individual characteristic in the global Innovation: Taken as a concept of multidisciplinary interest, research on this phenomenon has been developed in several areas of knowledge including administration, education, economics, psychology and sociology, among others. As a concept, innovation has been defined as the development of the product or practice of new and useful ideas to benefit individuals, teams, organizations or a broader range of society. Bledow, R. et.al (2009). Innovation is the process of doing new things. This distinction is important. Ideas have little value until they are converted into new products, services or processes. Innovation means a deep thought that brings new ideas, renewing, changing or generate new plans or theories. It also means a vision which tends to creating new prototypes, either from extinct products or present ones, this serves as a platform in which new ideas are being created. Throughout history, great innovations have periodically occurred to thrust humankind forwarded with new technologies, new industries or new economic system. Technical and vocational students need to be groomed on how to fathom new ideas basically for improvement in their field of study. Innovation therefore is the transformation of creative ideas into useful applications, but creativity is a prerequisite to innovation. The Organization for Economic Cooperation and Development (2016), The Oslo Manual

for measuring innovation defines four types of innovation: product, process, marketing and organizational innovation.

Product innovation: A good or service that is new or significantly improved. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics.

Process innovation: A new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

Marketing innovation: A new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

Organizational innovation: A new organizational method in business practices, workplace organization or external relations.

Creativity and innovation skills have been a critical for achieving success in any trade and profession. Albert Einstein said that “insanity is the process of doing the same thing over and over again and expecting different result”. While creativity is the ability to produce new and unique ideas, innovation is the implementation of that creativity – the introduction of new idea, solution, process or products. It is advisable to introduce creativity and innovation to the curriculum of TVE schools so as to prepare the mind of the students about the challenges and the prospects of

technical education, just like the entrepreneur study was introduced to secondary and tertiary education in Nigeria. They would be trained on ways of solving problems, implement solutions, There is absolutely nothing

that creativity cannot be applied to, either through procedure, practices and the products, most of the creativity in vogue today is the packaging of the products, that makes the goods stands out among others

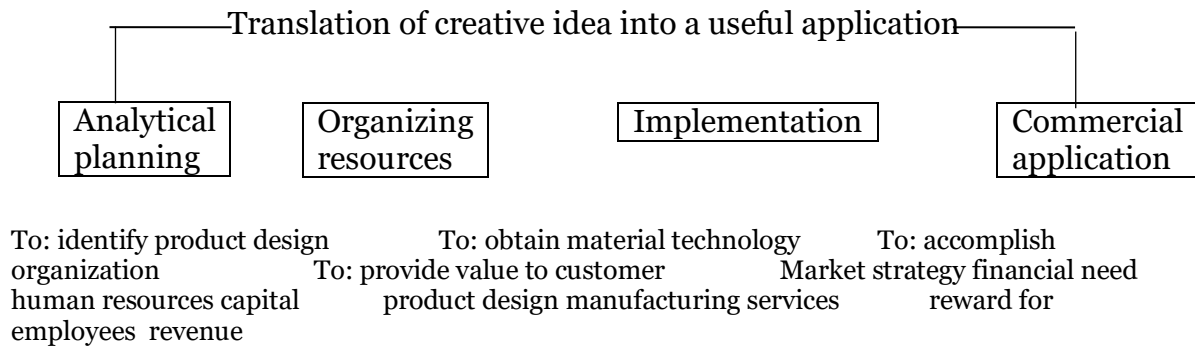


Fig 2: Elementary innovation process

The problems facing creativity and innovation in woodwork

Creativity and innovation in woodwork can face various challenges including

- Traditional methods: woodworking has a rich tradition of using established techniques and design, which can sometimes stifle creativity and innovation of artisans are reluctant to deviate from these norms
- Limited access to materials: depending on the region, woodwork may have limited access to diverse and sustainable wood types, which can limit their creative possibilities
- Skills and educational gaps: developing innovative woodworking techniques often requires specialized skills and knowledge, which may not be readily available to all artisans.
- Market demand: commercial woodworkers may be constrained by market demand, which may over prioritize traditional or mass-produced items over unique, creative pieces

- Safety regulations: safety standard and regulations in woodworking can limit the use of certain materials or processes, affecting creativity Design trends: rapidly changing design trends and consumer preferences and can make it challenging for woodworkers to keep up and remain innovative

The strategy involved in enhancing creativity and innovation in woodwork

Woodworking creativity and innovation involve a combination of traditional techniques and new ideas. These are some strategies to foster creativity and innovation in woodworking

- Learn the basics: start by mastering fundamental woodworking skills and techniques, a solid foundation is essential for exploring creative ideas
- Experiment with materials: don't limit yourself to just one type of wood, experiment with different types, grain, and finishes to discover new possibilities.

- Sketch and plan: before starting a project, sketch your design ideas and create detailed plans, this helps you visualize and refine your concept.
- Up-cycle and repurpose: give new life to old or discarded wood by repurposing it into functional and artistic pieces
- Incorporate other materials: integrate non-wood elements like metal, glass or resin into your projects for added flair
- Joinery techniques: explore various joinery methods beyond the standard one, dovetails, mortise, and other joints can be adapt and combined creatively
- Mix styles: blend tradition and contemporary woodworking styles to create unique and innovation pieces.

Conclusion

Creativity and innovation can set in to improve on their various trades and professions; many developed countries have survived through this method Gang (2004) stated that there is need for reformation of educational system, he emphasized on re-design of syllabuses and curricula approach. A comprehensive reform towards technical and vocational education and a deliberate attempt to uplift the program is the only means to technology retrogression in the Nigeria Ojimba (2012). Educational curriculum should portray creativity for the country to develop technologically and alleviate poverty in the country.

Creativity and innovations have variously been associated with major cultural and intellectual movements, types of educational institutions and the facilitating role of government. Therefore, creativity and innovation

rests on the people, educational institution and the government. Arora (2015) emphasis upon more formal scientific and technical training in educational institutions provided a breeding ground for creativity and experimentation in Woodwork industry in the late twenty century. The British 'industrial revolution' from the late nineteenth century was closely associated with the beginnings of a shift from a cottage system of outworkers using hand tools in cotton manufacture to the deployment of machine tools located in centralized factories. Therefore, for technical colleges and a nation to survive, Nigeria need to go back to the basics, develop the technical college's educational system and encourage creativity and innovation.

Recommendation

Technical and Vocational Curriculum must includes hand-made works, starting from modification which enable the students to create new products. Appraisals of the Instructors in technical and vocational colleges should include "what they produce in a session" which will allow the students to liaise with their lectures and brings new ideas. Standard and well equipped workshop and laboratories must be built in each technical colleges of Education. Students of the technical colleges should be compelled to go for industrial attachment programs in the industries based on their field of study, in order for them to learn more and have a tangible idea of what to do and how to make new things. Technical and vocational students' final project must be construction not research or abstract write-up which must be strictly monitored by their supervisors. Board for Adult, Technical and Vocational Education should make provision for affordable materials and

components for practical out of the departmental fee paid by the students to aid the less buoyant one. Workshop and trainings should be organized for students and instructors while the instructors should be sent out for trainings for them to be conversant with the new development in their field because technology advances on daily basis. Therefore

- i. Government should restructure technical college's educational system by paying attention to TVET and make appropriate policy that would create new dynamics for technical and technological training in Ondo state, Nigeria.
- ii. Elementary skills and principles should be introduced in primary schools to orient the children early enough towards technical and vocational education, the training and career guidance needs to be strengthened in all the primary and post primary institutions on the importance of technical colleges so as to bring to attention of the learners the opportunities that exist in these areas of study.
- iii. Creativity and innovation to be included in the curriculum of Technical colleges Education system, as it is a learning skills that require understanding and specific skills.
- iv. It is recommended that government should give orientation and campaign on the importance of technical colleges in Ondo state for the development of the country through its art exhibitions, mass and social media. The government should also acknowledge and reward innovation to encourage others.
- v. Development of industrial sector would make jobs available for graduates of technical colleges in Ondo state and in Nigeria as a whole.

References

- Arora, R. (2015). Making innovations Happen: Fostering Innovation by inducing foresight, 2nd Edition. Create Space independent publishing platform, South Carolina. U.S.A.
- Alwasilah, A. C. (2002). Vocational Education must provide students with life Skills. The Jakarta post, November 2. Creativity in Technical Vocational ... 71
- Bledow, R., Frese, M., Anderson, N., Erez, M., & Farr, J. (2009). A dialectic perspective on innovation: Conflicting demands, multiple pathways, and ambidexterity. *Industrial and Organizational Psychology*, 2(3), 305-337.
- Bolaji, S. (2007). Evolving Creativity in Nigeria Education: A Philosophy Paradigm. A Conference Presentation at Philosophy of Education Society of Australasia.
- Chinwe, M. O (2008). Nigeria Imperative for Youth-Led Entrepreneurial Development. Centre for International private Enterprise. U.S.A Chamber of commerce.
- Dawodu. R.A (2000). Revance of Technical Education as an agent in achieving National Development. A paper presented at the 6th National Annual conference of National Association of Curriculum Theories, Ondo State University, Ado Ekiti. Nigeria.
- Dike, V. E. (2006). Vocational Education: Missing link in 'Nigeria's Development Policy. Online: http://vwww.nigeriavillagesquare.com/articles/victor-dike/vocational_education-missing-

- link-in-nigeria-s-developmentl-p-2.html, March 2, 2006.
- Don, A . (2004). Neglect of Technical. Vocational Education increases Youth Unemployment. The Vanguard, December 23. Federal Ministry of Education (2003). Education Sector Report
- Esslingen, Germany. Law, S. S. (2005). Dynamics and Challenges in Vocational Education and Training Federal Republic of Nigeria (2014). *National Policy on Education*. Lagos: Government Printing Press.
- Ibukun W.O, Aboluwodi A, (2010). Nigeria National Policy on Education and the university curriculum in history: implication for nation building. *Journal of education and practice*. 1(2):9-16
- Law, S. S. (2005). Dynamics and Challenges in Vocational Education and Training – The Singapore Experience, ITE Paper No. 7, *Institute of Technical Education*, Singapore.
- Neil A., Kristina P., Jing Z; (2014). Innovation and Creativity in Organizations; A State-of-the Science Review, Prospective Commentary, and Guiding Frame Work. *Journal of managements*. (2014) Organization for Economic and Cooperation Development (2016). Innovation strategy. Retrieved August 27, 2019.
- Pukett. J, and Davidson, J, Lee, E. (2012). Vocational Education, The missing Link in the Economic Development. Boston Consulting Group.
- Skills/Compétences (2021) Canada 294 Albert Street, Suite 201, Ottawa, Ontario K1P 6E6 Fax: (613)691-1404 Toll Free: 1(877) 754-5226
- Sternberg, R. (2010). The Nature of Creativity. *Creativity Research Journal*, 18(1), 98.
- UNESCO (2001) 31st General Conference Session, 15th Oct.- 3rd Nov., 2001, Paris