
PROMOTING CREATIVITY AND INNOVATION THINKING IN TERTIARY INSTITUTIONS: A PANACEA FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

Educational system need to adapt in order to provide the wealth that an increasing part of the world population is getting used to; we are on a track to ecological and resource collapse if actions are not taken soon. Creativity and innovation will have to play a key role in the process of changing or revamping institutions and industrial society. The educational programs in the institutions currently seem to be emphasizing more on theoretical and non-practical educational matters. Students thus appear not to be introduced into and challenged by intuitive ideas and thoughts provoking potentials. As a result the creative and innovative potential within individuals which if inspired could cause students to contribute immensely to the development of the country are left dormant.

Keywords: Creativity, educational system, innovation, sustainable development

INTRODUCTION

Strategies used to solve individual and societal problems in the past cannot adequately address today's problems. Over time, humanity has witnessed issues emerging from "disintegration of society; malfunctioning of socio-political-economic system; discommunication in human affairs; inability of educational systems to transmit educational values; gnawing pain of hunger (Andrew, 2015). Hunger diminishes peoples' capacity to work and predispose them to disease. Hunger also impairs children's ability. This condition is worse in the developing countries of the world, Nigeria inclusive.

Measures to reduce poverty have been initiated and discussed at both international and national levels. It has been recognized that poverty would be reduced considerably if people are helped to improve on their traditional work designs (Emma, 2016). Initiatives taken to fight and eradicate poverty in Nigeria include the creation of National Directorate of Employment (NDE), operation feed the Nation (OFN), Better life for Rural Women, Family Economic Advancement programme (FEAP), Education Trust Fund (ETF), Petroleum Trust Fund (PFT), National Agency for Poverty Eradication Programme (NAPEP), National Resources Development and Conservation Scheme (NRDCS) and a lot more programmes in the country (Joyce, 2016).

These efforts made by various Nigerian Governments to cushion the effects of poverty in the country have failed as a result of dishonesty, cheating, and excessive pursuit of material things (wealth) by the few Nigerians who are either in power or within the corridors of power. Besides, it appears that efforts directed sustainable development in Nigeria fails to emphasize creative and innovative thinking (Oliver, 2017). This study therefore seek to explore the concept of creative and innovative thinking and determine its role in sustainable economic development.

Creative and Innovative Thinking

People who have done the best over the long haul are those who are the most creative and innovative (Newman, 2018). They are people who use innovative ideas to come up with unique solutions. In other words, they are able to leverage their creativity and their innovative capabilities to attain long-term success. Infact, all institutions can be more creative and innovative no matter their expertise, when they apply creativity and innovation to everything they do.

James (2016) opine that creativity is a function of knowledge, curiosity, imagination and evaluation. The greater the knowledge base and level of curiosity, the more ideas, patterns, and combinations achieved, which then correlates to creating innovative products. But merely having the knowledge does not guarantee the formation of new patterns. The bits and pieces must be shaken up and iterated in new ways. Then the embryonic ideas must be evaluated and developed into usable products. In other words, it is a process, the mastery of which requires understanding three important levels of creativity: discovery, invention and creation (James, 2016). Creativity and innovation are complementary but different concepts. Creativity refers to generating new and novel ideas; while innovation refers to the application of an idea. So, innovation is applied creativity.

Innovation and creativity have becomes critical skills for achieving success in business; and the new for creative problem solving has become a management problem that require creative insight in order to find suitable solutions (Siltala, 2018). Creativity is the ability to produce unique new ideas, and innovation is the implementation of that creativity, whether that is a new idea, solutions, process, or product, creativity is the driving force behind innovation and looking at things from a different perspective (Siltala, 2018).

Creativity involves breaking down and restructuring our knowledge about a subject in order to gain new insights. Business creativity is what keeps businesses alive and thriving (Edward, 2014). It is a thinking skill that all workers posses, but few are given the means and opportunity to use. Newman (2018), opinion that creativity and innovation within well-run businesses is a serve path to success, stimulating creativity and creative problem solving lead to improvements in the process of solving problems; propel innovative; increase productivity; and provide competitive edge. Newman (2018) states that creative ideas and innovative approaches can come from almost anywhere including from partners, customers, employees, and marketing experts.

Creativity, Entrepreneurship and Innovation Linkage

The industrial production function creates technological changes. Research and Development is an essential component of the technological change process. Once research is done, the results need to be applied to make production less costly, or to produce goods and services that have never been produced before. This is the role of entrepreneurship. Creativity is the ability to generate novel and useful ideas. Creativity therefore can come out of the research process. It is the seed of innovation but unless it is applied and put into practical reality it is still just an idea. According to Nasir (2016), creativity is thinking of something new while innovation is the implementation of something new.

Entrepreneurship involves noticing something that nobody has noticed before. Entrepreneurs are people who are alert enough to spot previously unseen profit opportunities and then act on them. The connection between entrepreneurship and economic growth is that these previously unnoticed profit opportunities must

come from somewhere, and the most common source of profit opportunities is the insights of other entrepreneurs.

Entrepreneurial ideas arise when an entrepreneur sees that the ideas developed by earlier entrepreneurs can be combined to produce a new process or output. Holcombe (2014) states that entrepreneurial insights lay the foundation for additional entrepreneurial insights, and drive a growth process. The Schumpeterian view holds that there is no profit without development there. According to Holcombe (2014), entrepreneurial insights create new market niches that go along with innovation. This creation of market niches is the key link between entrepreneurship and economic growth.

Tertiary educational institutions in Nigeria can encourage and managing innovation by:

Creating innovation oriented tertiary institutions: Institutions in Nigeria have specific mandates involving teaching and applied research with practical work forming a major component of the education deliverables. Unfortunately, the practical content of most curricula are neglected. Tertiary institutions have to change the present mind set on theoretical knowledge acquisition to innovation and entrepreneurship

Problem-solving centered education: Our education system has to focus more on problem solving teaching methods with competency based outcomes. Project or Problem Based Learning (PBL) or Cooperative and Contributive Learning (CCL) that is, PBL adopted to the conditions of emerging technologies and developing communication and information infrastructure have become the standard methodologies for teaching and learning which our lecturers and students have to imbibe.

Enhancing students' creativity and innovation capacity: According to Yue Xiao (2014), creativity of undergraduate students is enhanced through thinking, personality and wisdom. Enhancing creativity in thinking includes convergent, divergent and dialectical thinking. Enhancing creativity in the area of personality includes determination, inquisitiveness, endurance, optimism, humor and independence. The aspects of wisdom that can be used to enhance creativity include the spirit of seeking for the truth and verifying things. The successful practice of creativity requires people to be confident, treating the conflict relationship between creativity and sticking to the old way and resolving the conflict relationship between theory and practical effect.

Establishment of Students' Innovation Clubs: In order to stimulate creativity and innovation in students, Tertiary institutions can establish students' innovation clubs for brainstorming sessions for generation of novel ideas that can be commercialized. Regular competitions can be organized with awards to outstanding innovations.

Establishment of campus incubator (Innovation Center): Colleges and tertiary institutions campuses are warehouses of innovation, as students grow through education and experimentation in school. To help foster this innovation, many colleges and universities in Europe and America have opened business incubators, helping students and others in their communities to make their innovative dreams a reality. These incubators offer a great opportunity for students to start up their businesses in the campus before graduating. The incubator gives students the chance to learn through experience with opportunities to work through a business concept in the Student Business Lab, get involved with startups, and take part in competitions and conferences for entrepreneurs.

Enterprise development for revenue generation: Funding of engineering technical and vocational education and training is capital intensive. Governments at all levels in the country have been unable to invest significantly in tertiary institutions. Tertiary Institutions have to find ways of generating internal revenues for investment in their systems. Commercialization of staff and students research project outputs either solely or in partnership with private investors will stimulate the culture of campus enterprise development for internal revenue generation and promotion of innovation. Tertiary institutions can establish industrial parks, warehouse and innovative enterprises. These enterprise parks will become further learning centres for students and staff.

Establishment of funding window for commercialization of innovative research projects: Project funding has always been a critical element in sustainable development. Tertiary institutions can create funding windows for commercialization of innovative projects through Micro Finance banks, Cooperative

Society funds and linkages with government enterprise funding agencies such as Bank of Industry, Agricultural and Rural Development Bank and Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) intervention programmes.

Encouraging aggressive Research: Tertiary institutions should encourage aggressive research particularly applied research that can lead to new products development or better methods of solving community problems.

Create strong industry collaboration and partnerships: The collaboration and partnership with industry and government will create opportunities for students' real work industrial experience and members of staff to update their knowledge and skills on application of technology in industry.

Improve Academic Staff Quality and Teaching Methods: According to Jian (2014) high level quality personnel is required to strengthen the innovation ability of students. They postulated that innovation oriented institutions enhance the innovation capacity of students. Our Tertiary institutions should be innovation driven with a wide range of innovation courses with highly qualified teachers. Teaching methods have to change towards interactive engagement and practical demonstrations. Innovation hardly thrives in the environment of poor quality education. We have to manage quality of education well in order to effectively manage innovation.

Create enterprise programmes for multi skills development: Multiple skills development has become essential in economies with limited opportunities for employment. Multi skilled people easily get profitable engagements.

Emphasis on laboratory/workshop practices: In order to fulfill the mandate of providing highly skilled middle and lower level manpower for the country, Tertiary institutions have to lay a lot of emphasis on the practical component of education. A lot of creative and entrepreneurial ideas for innovation come from practical work experiences.

Establish best staff researcher and best student project awards: This will create good incentives for active and innovative researches by members of academic staff and dedication of students to turning out innovative projects.

CONCLUSION AND RECOMMENDATION

The failure of past attempts to enhance third world development through transfer of advanced technology from developed nations has prompted the current emphasis on encouraging creativity and innovation in indigenous people. Besides, it has also been acknowledged that traditional ideas and primitive techniques that had served well for decades are currently relegated and downgraded by foreigners and indigenous people alike in anticipation of the fancy and assumed superior ideas and hardware brought in by the colonial masters and merchants (Emma, 2013).

There is today little concern by the indigenous people to build local capabilities to learn the new technology, master it, and adapt it to local environment (Oliver, 2017). Again, most surprising is that many Nigerian students prefer taking instruction on foreign ideas, imaginations and innovations (Joyce, 2016). As a result, the Nigerian youths who are regularly exposed to, in most cases, the abstract theories and principles on technological innovations become equipped with minimal knowledge on the workability of the foreign practices.

Consequently, most Nigerian students graduate without meaningful engagement on vocations that should offer them a means of livelihood. Worse still, the educational programs in the country also tend to produce no solution because most students appear not to be encouraged to generate and nurture their ideas into reality due to so much formalized system of education that offers little or no challenges. It is in this awareness that the authors have presented this paper giving every available guide, to their knowledge, to generating and increasing creativity in individuals and encouraging, innovation spirit in individuals too.

It is within the sphere of the issues discussed that the study recommends that enabling study conditions should be made available within academic environment by providing teaching materials and educational experiences that should orientate students toward intuitive thinking and imagination; and that academic activities at the undergraduate levels should have the contents re-structured to enhance skill acquisition and in the interim permit learners to ask questions about a situation, penetrate the situation, gain insight on the nature of the matter, and devise a workable solution.

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