

Design Education and the Nigerian Economy

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ABSTRACT—*A look at the history of Nigeria reflects that in all spheres of life, nature has provided for the country to be a high performing economic success. Nigeria, the largest in Africa, is rich in human, cultural and natural resources. Nigeria could be described as the Greece of Africa. The influence of Nigerian arts, crafts and design have been felt strongly in other parts of the world. It is lamentable that while most emerging economies are harnessing design education for development and improving quality of lives of their citizenry, the Nigerian political climate has not enabled the formulation of strategic policies that can boost industrial climate of the economy. This has not provided the support and appropriate infrastructure for indigenous design education and development capabilities. The paper takes a look at the current political policies of Nigeria, its economic reality in the absence of formidable design groups and design policy that can enhance indigenous technical knowhow. The paper also examines the value oriented benefits inherent in design education as experienced in developed economies and how it can be channeled to make its contributions to grow the Nigerian economy.*

Keywords--- *Industrial design Education, cultural heritage, design policy, Nigerian economy*

1. INTRODUCTION

In the pre-colonial era, the role of arts and craft could not be over emphasized in all facets of life in Nigerian traditional societies. According to Ogunduyile, Kayode and Ojo (2008), art was a synthesis of cultural formation and also an encouragement of the creative spark in individuals. In architecture, textiles, ceramics, painting, graphics, glass, jewellery and in the provision of household and farm implements, the traditional craftsmen/artists met the needs of the Nigerians. During this period, the arts and cultural practices flourished for centuries. Records of works of the Benin bronze castings, the Ife bronze figures, the Esie stone carvings, the Bida brass making, weaving, dyeing and textile activities were all over the nooks and crannies of various communities in Nigeria. Regenerations and reproductions of the art pieces were manifested through the apprenticeship system. The apprenticeship system was associated with values and norms that fostered good relationships between the master-craftsmen and the apprentices. The apprentices became masters after they had learnt the ‘basic principles’ of the crafts and later graduated to working independently. This was how the generations of Nigerian artists, designers and craftsmen were able to sustain the profession until today.

The colonization of Nigeria between the late 1900 century and 1960 when she became independent has been described as a period that has serious devastating effects on the country’s arts, crafts and indigenous technology. Ade-Ajayi (1979) opines that the colonial control weakened capacity of Nigerians to innovate and develop their indigenous technology further. Lawal (1990) and Deng (1990) notes that the traditional order, creative and artistic endeavours, political and traditional economic structures were disrupted. The brain washing spilled over to the independence in 1960 and post independent period when Nigerians embraced the consumption of imported goods with little confidence in their own local products. The situation developed to a point when Nigerians were described as being torn away from their past.

The emergence of art and craft schools began to manifest before the post-colonial times. The first attempt to introduce fine art into the Nigerian educational curricula was in 1897 at the Hope Waddell Training Institute, Calabar (Wangboje, 1969). The institution was established by Free Church Mission in 1895. Before then, Aina Onabolu (1882-1963), a man considered to be the father of Nigerian contemporary art, had established the basis for modern art training in the early 20th century. Aina Onabolu, a London and Paris trained artist, noted that the black people had great potentials and ability to express themselves freely in drawing and paintings. Based on this conviction that art could reach

its peak in Nigeria if properly handled, he persuaded the colonial government to appoint Kenneth Murray in 1902 to further assist the country to strengthen art trainings and practices. He advocated that art training should be based on African culture and not 'art for art sake' as was the practice in Europe.

Kashim, Ogunduyile and Adelabu (2011) and Ojo (2000), note that during the post independent era institutionalized training in art started at Yaba Technical Institute later referred to as Yaba College of Technology in 1952. Art as a course of study also started at Nigerian College of Arts, Science and Technology (NCAST) Ibadan, the same year but after two years the programme was transferred to Nigerian College of Arts, Science and Technology, Zaria, Kaduna State. Other universities, such as University of Lagos, University of Ife, now Obafemi Awolowo, and University of Nigeria, Nsukka came up to form the first generation Universities. In order to meet the educational and technological developmental needs of the nation, government at all levels in Nigeria put up various educational and developmental strategies. These efforts led to the emergence of the second, third and fourth generation Universities in addition to those set up by private organizations. Today, Nigeria has more than one hundred and seventeen universities. Out of this number, sixteen are Universities of technology while about sixteen out of the one hundred and seventeen offer design courses in architecture, industrial design, graphics, ceramics, textiles, glass technology, jewellery, fashion, interior decoration, metal, and sculpture.

The concept of education at post independent era was to be a cure for all societal ailments: poverty, unemployment, industrial stagnation, technological backwardness and many other; it has been generally conceived that only educated populace can command the skills necessary for sustainable economic growth and a better quality of life (Olubadewo, 2007). The inclusion of fine and applied art courses was to contribute meaningfully towards the eradication of the identified areas of challenges.

2. THE CONCEPT OF INDUSTRIAL DESIGN

Cope (2009) notes that 'design' generally has double meaning because it describes the intrinsic structure of an aesthetic object and the act of constructing it. Design therefore has to do with structure, form and function. It is also an act, a manifestation of agency, a process of transformation. Wilber (1979) describes industrial design as those phases of education which deal with industry – processes, products, materials, organization as well as the problems resulting from industrial and technological nature of the society. Generally, industrial design, according to Pulos (1978) is concerned with improving usability, formal properties of products by making the product aesthetically pleasing and satisfying the psychological needs of the users. It also considers the exploitation of variety of materials, finishes and processes to achieve desired formal properties as well as acting as a link between marketing and manufacturing for local and external markets.

Heskett (1980) looks at industrial design from the angle of commercial and industrial activity. However, from whatever angle one looks at industrial design, based on its practice in Europe, it is a pillar to a sustainable economy and it is given adequate recognition. In the word of Tezel (2009), there has been a national coordination between the means of economy – the politics, industry and education. The importance of industrial design as being expounded in the Asian countries presently in their developmental efforts cannot be overemphasized. It is being used as a strategic tool for effective competition in the globalized markets.

The Encyclopaedia Americana (1982) opines that the development of formal programme in industrial design was first instituted in 1870 at the Imperial Technical Railway School in Moscow. The United States followed suit in 1876 with emphasis on the aesthetic dimension of industrial and household products. With established foundation to build upon, Walter Gropius in 1919 started a design school. 'Bauhaus' which was commended by Bayer (1959) for its achievement in synthesizing technology and art. With time, the concept of industrial design widened its scope to the manufactured products by industrial processes which came up after the period of Industrial Revolution. Through the knowledge of mass production as propagated by industrial design, it became easier for mass production to meet the needs of the society. The role of design in a developing economy as noted by Tezel (2009) includes: to stimulate a country from technology stagnation; to allow design talents within the country to absorb the continuous flow of technology and adapting them to local condition of manufacture; to bring out products to satisfy cultural and social needs of the people; to generate employment; to play a vital role in searching for alternatives and innovating usable products as well as helping to evolve new strategies of design to reach the vast masses.

3. EMERGENCE OF INDUSTRIAL DESIGN EDUCATION IN NIGERIA

The nomenclature 'industrial design' was first of all used in the Nigerian educational system in 1977 when a new department was carved out from the Department of Fine and Applied Arts of Ahmadu Bello. The programme was craft based in graphics, ceramics, textiles and glass technology. At the early stage of the programme, there were many teething problems. These included inadequate grasping of the concept of industrial design, confusion as to what the curriculum should look like and what equipment and facilities to provide, lack of recognition as there was no difference between the fine art programme and the new industrial design programme. The apathy towards fine art as a

course of study and as a discipline was extended to the new programme since both programmes emphasized drawing skills which were considered as programmes for the dullards and those who cannot make it in life. Crafts which provided the foundation for the new programme lost its status and have also become a neglected area of human activity due to the availability of cheap imported substitutes.

Industrial design was introduced to Nigeria at the instance of an individual who felt strongly about the issue of mass production. Few other universities; Federal of Technology Akure, Federal of Technology, Yola, and Abubakar Tafawa Balewa, Bauchi went head long to pattern their curriculum after that of Ahmadu Bello with the hope that all the benefits that are accruing to it in Europe will be derived. However, this has not been so because industrial design in Nigeria from inception till now has not been based on any demand from domestic industry nor from global marketing activities. Hence it has been largely disconnected from the on-going in the industry and has not enjoyed government patronage.

The Nigerian political leaders have not considered the programme as a tool through which developmental economic strategy could be achieved. It is obvious that other universities running the Fine and Applied programmes, such as Obafemi Awolowo, Ile-Ife, of Port Harcourt, Port Harcourt, Delta State, Abraka, of Maiduguri, Maiduguri, of Uyo, of Nigeria, Nsukka, Imo State, Ladoke Akintola of Technology, Edo State, Ekpoma, and Abia State, are not in a hurry to embrace the 'industrial design' nomenclature because of its inability to meet the needs of the Nigerian society. The institutions could not see how design which is often associated only with aesthetic aspects of objects could be effectively translated into mass production in the industry.

4. NIGERIAN ECONOMIC PLANNING

After independence, the emerging government in Nigeria was eager to import economic development policies and patterns from the developed countries. The overriding priority was how to transform the nation socially, economically and politically. As the country had no control of the materials and means of production, the Nigerian government decided to import technology on a turnkey basis. Adegoke (2004) notes that the Nigerian government believed that with some modest investment in indigenous manpower training, technological transfer will take place progressively and lead to industrial transformation. Manufacturing industries were set up, and universities were coming up with relevant programmes to provide the required manpower needs. Design courses also emerged along with other courses. There was adequate planning to fund imported technology. Research institutes were set up to provide up-to-date information for development and transformation. Giwa (2004) observes that with all the planning, the government did not appropriately channel its efforts toward the adaptation of imported technology in a way that can lead to sustainability and for local use. Industrial design was not seen as a driver tool for technological adaptation and sustainable innovation. It was not even seen as a way of developing the local industries. Since the industrial design curriculum development was handled with levity-because it was developed by individuals who have no industrial experience, there was a total disconnect between the programme in the Universities, Ministry of Science and Technology and the relevant industries. A programme that naturally should have produced individuals who are well grounded in industry related creative skills, and with ability to conceptualize practical innovative ideas turned out to be more of theories with little or no practical orientation. This seems to have led to inefficiency and ineffectiveness in manpower production for developing the various subsectors of the Nigerian economy. The inability of the Nigerian government to put in place strong economic and educational policies has made the National Economic Empowerment and Development Strategy (NEEDS) of 2005 to describe Nigeria as one of the weakest economies in the world.

5. EVALUATION OF CURRENT SITUATION

In view of the importance of industrial design education to sustainable economic and technological development in Nigeria, it is pertinent to look at the current situation. The first step is to examine the subject offerings at the primary school level. The situation of art and craft at the primary school level is nothing to write home about. After independence in 1960, handicrafts assignments were given to pupils with exhibition of their creative works. This was to encourage them to further create one item or the other and to develop their sense of aesthetic appreciation. However, today, the teaching of art and design has been expunged from most of the primary school curriculum. Where they exist, the subjects are usually left in the hands of unqualified art and design teachers who had no interest in the subject. Pupils are allowed to submit craft items for scores of pay for the physical items they should have produced.

The Nigerian educational policy is based on the 6-3-3-4 system. That is, six years in primary school, three years in junior secondary school, three years in senior secondary school and a minimum of four years in the University. At the junior secondary school level, art and design is made compulsory without qualified teachers, relevant and adequate facilities. At the senior secondary school level, art and design are made optional. As a result of the negative attitude towards vocational skills, very few students often chose to do art. At graduation, a secondary school having a list of about three hundred graduating students may have just four students who chose art and design and most times it is obvious that the few graduating students will surely not be able to fill the quota required for art candidates in the existing

Universities offering the industrial design courses. Since the design departments must survive, admissions are extended to those who were unable to gain admission to their desired courses in other fields. In order to make them fit, the first two years are spent on teaching the basics of industrial design. Students specialise in any aspect of industrial design in the third year and graduate the fourth or fifth year. At graduation, the level of creative experience students acquired cannot be described as adequate as most of them are often not been able to develop robust sense of creativity, imagination and design initiatives required in manufacturing industry. At the end of the day, the unemployment situation in Nigeria worsens while the manufacturing industries are not better off. Since most of the graduating students were not properly grounded in practical aspects of the programme, they often found it difficult, in addition to other factors, to set up small businesses.

6. THE WAY FORWARD

Industrial design as a course of study and career is recognised internationally, therefore there is a need to revisit its objectives at all levels of education in Nigeria. Having the appropriate background at both primary and secondary school levels will afford the students the opportunity to harness art and culture which are essential components of holistic education, a prerequisite for the total development of individuals.

There is also a need for a sound policy for industrial design education as it is being practiced in Turkey, Japan, India and other developed countries. The new policy must take cognizance of the unemployment situation in the country. The program must embrace more practical training in technical and aesthetic skills to make the potentials acquired more useful in the industry. In looking at industrial design holistically, efforts should be made to revive art and craft at the lower rung of education. A new policy would make it compulsory for Universities offering industrial design to link up with industry and allow students to interact with supervisors from the industry. The industrial design should be revamped with adequate funding to equip the design studios as well as functional equipment and facilities. The creative potentials of students in the production of items ranging from matches to farm implements would have far reaching positive effects on the economy. Industrial design has to do with materials, processes and products, therefore there must be a strong linkage with engineering and in other fields.



Fig 1a: Fertilizer distributor

Source: Research works by Students of the Department of Agricultural Engineering, Federal University of Technology, Akure, Nigeria



Fig 1b: Honey Extractor

Source: Research works by Students of the Department of Agricultural Engineering, Federal University of Technology, Akure, Nigeria

Industrial design teachers should be given more encouragement to work more with students in practical classes. Teachers' promotions at tertiary level should not be based only on a number of publications but also on a number of exhibitions of personal creative endeavours in local and international scenes. The industrial design must embrace entrepreneurial and marketing skills. There are talents and effective designs that must be promoted at global market. Industrial design must involve the private sector players, non governmental agencies to achieve the desired transformation. Industrial design associations are also important in ensuring that the programme is being inspired by real world issues. The industrial designers in Nigeria must wake up from their slumber to represent the profession to business, grass root, government and other bodies. It is obvious that Nigerians designers' potentials and ingenuity will be fully tapped if industrial designers and other skill development programmes are backed up appropriately by government policy. It is on record that designers in Nigerian universities and talented individuals have been developing valuable prototypes which only need to be given encouragement and financial support.



Figure 2: Prototype Design of Test Kiln
Designed and fabricated by students of Industrial Department of the
Federal of Technology, Akure



Figure 2: Prototype Design of Ball mill
Designed and fabricated by students of Industrial Department of the
Federal of Technology, Akure



Figure: 3 Prototype Design of Electric Potters Wheel
Designed and fabricated by students of Industrial Department of the
Federal of Technology, Akure

7. CONCLUSION

The Nigerian economy has all it takes to develop economically, industrially and technologically as the resources, talents and potentials for development are available. What needs to be done is for the country to fully develop strategies to take advantage of the above. Industrial design must be regarded as technology education and must be made compulsory at both primary and secondary school levels. The factors that have made the majority of the citizenry to be poor must be looked into seriously; it is a fact that no nation can develop with haphazard educational and industrial policies and inadequate plans for its skill development programmes. If industrial design is well planned for, along with other vocational courses, graduates will become more useful and relevant to product manufacturing industries, become self reliant and entrepreneurial activities will increase. Graduates of industrial design and others in engineering will be more challenged to design not only for handcrafts but for the industry, if unguided importations of goods are stopped and efficient infrastructure and facilities provided for design schools. The present industrial designers in higher institutions,

irrespective of their degrees, must seize every opportunity available in retraining programmes to update their practical experiences; strong collaborations with their colleagues in international design associations will go a long way in realigning their practices with globally accepted standards. The nation will have to be more serious about research and development as well as sustainability of innovation which is under the ambit of effective product design policy as it is the case in India, Japan, and Turkey. The level of poverty ravaging the economy will be reduced substantially if students at all levels are exposed to design and vocational experiences. The economy and its various policies will also be better for it if the problem of corruption is dealt with headlong. It is necessary to add that all is not lost, and there is a hope that the Nigerian economy will become prosperous if all hands are on deck with apparent sincerity and straightforwardness.

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