

CHAPTER

6

THE ROLE OF INDUSTRIAL DESIGN PRACTICE IN NIGERIAN DEVELOPMENT, VIS-À-VIS VISUAL COMMUNICATION DESIGN

Godwin O. Uka and Chidiebere O. Onwuekwe

Department of Fine and Applied Arts, University of Nigeria, Nsukka

Abstract

One of the cardinal objectives of the Federal Government of Nigerian policy on education is the acquisition of required creative skills, abilities and competence both mental and physical as equipment for individuals to live in and contribute to the development of the society. In cognizance of the above-stated objective, it is imperative to say that education is an integral part of formulating a national ideology for a developing country like Nigeria. This research paper discusses the role and contribution of industrial design in a developing economy

Introduction

Industrial design practice involves the application of design principles and techniques to the development of products and services that are aesthetically pleasing, functional, and user-centered. The industrial design process typically involves several stages, including research, ideation, prototyping, testing, and production. Industrial designers work closely with engineers, marketers, and other professionals to ensure that the final product meets the needs of the target audience and is economically viable.

Industrial design practice has a significant impact on the economy and society. Well-designed products and services can improve people's lives, increase productivity, and promote economic growth. In addition, industrial design can help to address social and environmental issues by promoting sustainable practices and creating products that are accessible to people of all abilities.

In recent times there is growing interest in the importance of industrial design. The reason for such growth and interest is that industrial design is being understood as a tool for enhancing products' international competitiveness. In the continued quest for appropriate growth strategies all over the world, the function of industrial design has become formalized in most developed and developing countries. Its practice is virtually established as the most viable tool for long-term corporate growth. Rapid technological development, fast-changing consumer needs and tastes, shortened product life cycles and intense market competition, among several other corporate strategies, are being re-defined by fundamental changes in the market, changes in industrial infrastructure and growing sophistication in consumer needs.

Industrial design is increasingly regarded as invaluable in resolving the complexities of changes with the emotional and practical needs of the consumer. In this way, design can greatly enrich the nature and quality of the end product. The importance and awareness of industrial design, especially in corporations is dramatically growing compared to the past. In the corporate management stage, nobody thinks that the corporate business can make success with out-of-date design quality because industrial design is directly linked to the competitiveness of the products and the image of the corporation.

Nigeria is a country in West Africa with a population of over 200 million people. Despite being rich in natural resources such as oil, gas, and minerals, Nigeria faces a number of developmental challenges such as poverty, high unemployment rates, poor infrastructure, and insecurity.

One example of industrial design practice in Nigeria is the work of Nigerian furniture designer, Oluwaseyi Sosanya. Sosanya's designs are inspired by traditional African art and culture and incorporate sustainable materials and production methods. Another example is the fashion brand, Maki Oh, which uses traditional Nigerian textiles and techniques to create modern, sophisticated designs. This reserag focuses on the role of industrial design practice in Nigerian development, especially in the Economic sector.

Design and the Industry

The beginning of the 21st century marks the Digital Age, it is clear that our lives have been transformed as never before. Information technology is redefining just about all the paradigms within which we live and work, and design will be foremost among new disciplines because of its unique capacity to interpret new technologies and make them accessible to everyone. More than ever before, the creative forces of design have affected the competitiveness of corporations and nations so much that the Digital Age will itself be, 'designed'; that is to say guided by knowledge, imagination and creativity. Therefore, designers become protagonists of a new era of demand and they reach the opportunity in a globalized world with many cultures in progress. There is a widespread idea in the corporate field that the concept of 'globalization'; the purpose of which is to cover the worldwide market with standardized products and the concept of 'localization' which is pursuing customers on the cultural achieved by industrial design.

The "visual communication" of ideas is crucial to all design activities. In industrial design and architecture for instance, the utility of the designer's product depends greatly upon the ability to communicate its function. The best designers take much care in integrating this visual language with their products. "Good design" is a marriage of form, content and function. In selecting the appropriate language for the solution, the designer must first of all truly understand the ramification of the assignment. The response to that problem must be limited, of course, to the operational life of the product. Therefore, for the designer "creativity" means his ability to work innovatively within the problem imposed by the client, with available technology, and with cognizance of the human social setting.

Design comes into play whenever it is necessary to give an appearance to a product idea, a corporate entity, or a brand. Design is concerned with the determination of a hitherto indeterminate form. To reduce it to a simple formula, we can say: "Design is the determination

of the indeterminate form of appearance”. Design is accordingly not concerned with imitating but with inventing. Design is external while art is internal. These can be explained in terms of the heart or the mind and the body relationship. Design is external in that, its forms and application extend basic human functions and needs. These pertain to three primary areas – *messages*; as in our needs to communicate with each other; *products*, which enables us to extend the mechanical function of the body; *environment*, or control of condition around us. Art is internal, in that its form affects the senses, and thereby influences the psyche, the emotion and the spirit. Unlike painting and sculpture, which are the realization of artists’ visions and dreams, design fills practical needs. A piece of graphics design or product has to be placed before the eyes of the public and to convey a predetermined message. An industrial product has to meet consumers’ requirements.

A good design, in short, is the best possible visual expression of the essence of “something” whether this is a message or product. To do this faithfully and effectively, the designer should look for the best possible way this “something” can be shaped, made, distributed, used and related to the environment. His creation should not only be just aesthetic but also functional, while reflecting or guiding the taste of time. Design as a profession today is too generalized at best, and, at worst, it is misunderstood. It becomes a catchall for any forming or communication endeavour which does not bear the label of fine arts. The meaning of design can be approached from two different perspectives: Firstly, design is the basic, intelligible order of a system or structure evident in any form. The graphics designer, industrial designer, or architect may often use such an order as a vehicle by which other functions or messages are made manifest. Secondly, the design profession is a problem-solving activity. The problem or task most often originates with someone other than the designer. This is the client. Design in this sense will therefore preclude a significant vital index of development. And development itself is considered a significant function of design; purposeful planning and structuring of resources to attain a desirable standard in the improvement of life and the general human environment. The role Industrial design plays in the attainment of objectives and in the radicalization of the visions and inspiration of mankind is the preoccupation of industrial designers.

Industrial design is an important aspect of human daily life. This is so because all products that are used, operated or seen by people depend critically on industrial design for commercial success. With this in mind, a convenient means of assessing the importance of industrial design along two dimensions.- Economics and aesthetics. President Bill Clinton during President Olusegun Obasanjo’s visit to Washington on the 29th of October 1999 stated: Nigeria is a pivot on which the future of all Africa and much of the world will turn. The actual realization of the above-stated fact can only start from the institutions of learning. There is, therefore, a great need for a re-focus that will compromise re-thinking, re-discovery, and re-shaping the dignity of man, thereby re-designing the world around us.

The proper management, implementation and achievability of the national objectives have almost eluded Nigerian as a nation. It becomes imperative to say that, Nigeria's society is at a cross-road when compared with other developing and developed nations, where exploration of creative and innovative ideas and skills is the order of the moment. The present study is designed to investigate the role of industrial design in Nigerian development; this can help solve the Nigerian developmental process. This paper therefore, is advocating the exploration of ideas,

concepts and skills in our creative thinking through indigenous design, in salvaging the nation from its present state. Graphic / Industrial design is a creative process that employs art and technology to communicate and present ideas, with the control of symbols, types, colours and illustrations, the designer produces visual compositions meant to attract, inform and persuade a given audience. In other words, designers in the art of visual communication involve the use of images, words, and ideas to give information to the viewers. It can be used for advertising, for entertainment intended for the mind with the control of symbols, types, colours and illustrations.

Industrial design in a broader dimension is a process of creating the appearance of any design presentation or in website in an attractive, logical manner. When done successful it attracts attention, adds value to the message, enhances readership and readability, simplifies, and crate unity in a work of art. The design can all so be looked at as the process of visual communication and problem-solving using one or more of typography, photography and illustration. Design can aid in selling a product or idea. It is applied to products and elements of company identity such as logos, colours, packaging and text as part of branding design. Branding has increasingly become important in the range of services offered by designers. Graphic designers often form part of a branding team. Other examples of design for entertainment purposes include novels, vinyl album covers, and comic books. This could also include artwork used for T-shirts and other items screen printed for sale.

Creativity and Innovation: the drivers of Industrial Design

Creativity throughout history has been a subject of extensive study from the perspective of behavioural and social psychology, cognitive science, artificial intelligence, history, fine arts, industrial design, and research design among others. Art is a part of the organic process of human evolution and therefore, it is something quite different from more or less arbitrary and ornamental activities, which are all the functions that people usually ascribe to it. A work of art, therefore, requires from its creator broad and scientific knowledge of the elements represented combined with extraordinary skilful techniques by an impelling and emotional urge to create.

Creativity and innovation are essential drivers of industrial design. Creativity is the ability to generate new and original ideas or concepts, while innovation involves transforming these ideas into practical solutions that add value to the market. In industrial design, creativity and innovation are critical in developing products that meet the needs of users and solve complex problems.

Industrial designers need to be creative to develop unique and original designs that stand out in the market. They need to have a deep understanding of the needs and preferences of the target audience, as well as the latest trends and technologies in the industry. By combining this knowledge with their creative skills, industrial designers can develop innovative designs that are not only visually appealing but also functional and user-friendly

Creativity is more closely related to thinking abilities and to attitudinal development. It is a continual process for which the best preparation involves creativity itself. The act of creativity can be seen as that which provides the urge for continuing exploration and discovery. Every child is born creative. The urge to explore, investigate, and discover, what is on the other side of the screen is not limited to human behaviour, but is experienced by the whole animal kingdom, (Lower Field and Brittan 1975). For meaningful and purposeful creativity, the psychological and

physical restrictions that the environment puts in the way of developing the individual who inhabits his natural curiosity and exploratory behaviour must be considered seriously. One of the most commonly agreed-upon components of creative thinking is the ability to produce a large number of ideas. In a general sense, the idea of creativity means different things to different people in the world.

In design education, scholars are always stymied by the need to make judgments about student evidence of creativity and most times feel the need to but rather to accept any industrial product as an example of creative response. This dilemma raises the issue of thinking about creativity at several levels and rendering judgment accordingly. The more we try to define creativity by identifying with specific sets of values, meanings, beliefs, and symbols, the more our creativity will be focused on how values, meanings, beliefs and symbols are formed, and the greater the chance that our creativity will become less restricted (Bolaji 2007).

Runco (1994) opines that creativity is in terms of cognitive processes that lead to an original and adaptive insight, idea or solution. Thus, creativity is the most essential of all human resources and skills (Bolaji 2007). Akinboye (2004) sees creativity as a tool that propels organizations, catapults careers, and generate potent growth and viable outcomes. Creativity is at the heart of design, at all stages throughout the design process. The most exciting and challenging design is that which is truly innovative; the creation of a radical departure from anything currently on the market (Baxter, 1995). For sustainable development in industrial design as it affects Nigeria, creativity, generative thinking, perception dynamics, and constructive and design thinking should be the keywords. This is because creativity is an amazingly complex behaviour that is multi-factor ally determined .

Innovation; this is also important in industrial design because it involves the development of new and improved products and services that meet the changing needs of the market. Innovation can come in the form of new materials, production methods, or design techniques. By incorporating new technologies and approaches into their designs, industrial designers can create products that are more efficient, sustainable, and cost-effective. Moreover, creativity and innovation also play a crucial role in enhancing the competitiveness of industries. By developing new and innovative products, industries can differentiate themselves from their competitors and attract more customers. This can lead to increased sales, revenue, and market share.

Creativity and innovation have been identified as important drivers of industrial design. Here are some references from books and academic journals that support this idea:

"Design Thinking: Integrating Innovation, Customer Experience, and Brand Value" by Thomas Lockwood and Edgar Papke. This book argues that creativity and innovation are essential in industrial design, and that designers must be able to develop new and original ideas that meet the needs of users.

"Innovation and Entrepreneurship: Practice and Principles" by Peter F. Drucker. This book emphasizes the importance of innovation in industrial design and argues that companies must continually innovate to remain competitive.

"The Role of Creativity in Product Innovation" by V.K. Narayanan and G. Srinivasan. This article explores the relationship between creativity and innovation in industrial design, and argues that creativity is a key driver of innovation.

"Design Thinking and Innovation at Apple" by J. M. Carroll and D. D. Thomas. This article explores how Apple has used design thinking and innovation to develop products that are both aesthetically pleasing and functional.

"Creativity and Innovation in Product Design" by N. A. Tsekoura and D. V. Pouloudi. This article argues that creativity and innovation are essential in product design, and that designers must be able to balance these two elements to create products that are both innovative and functional.

These references demonstrate that creativity and innovation are essential drivers of industrial design. Designers must be able to develop new and original ideas, incorporate new technologies and approaches, and balance creativity and innovation to create products that meet the needs of users and enhance the competitiveness of industries

The Challenges of Industrial Design Practice in Nigeria

Industrial design practice in Nigeria faces several challenges that hinder its growth and development. Some of these challenges include:

Limited Access to Funding: One of the major challenges facing industrial design practice in Nigeria is limited access to funding. Industrial designers often require substantial capital to invest in materials, equipment, and technology to create their designs. However, the lack of access to funding makes it difficult for designers to bring their ideas to fruition.

Limited Local Production Capacity: Another challenge is the limited local production capacity in Nigeria. The lack of adequate infrastructure, such as power and transportation, makes it difficult for designers to manufacture products locally. As a result, many designers are forced to outsource production to other countries, which increases the cost of production and limits the potential for economic growth.

Poor Intellectual Property Protection: Intellectual property protection is weak in Nigeria, which makes it difficult for designers to protect their designs from infringement. This has led to a situation where many designers are reluctant to share their designs or invest in the development of new products.

- **Limited Market Opportunities:** The Nigerian market is still largely dominated by imported products, which limits the opportunities for local industrial designers. This is partly due to the high cost of production, which makes it difficult for local designers to compete with imported products.
- **Limited Education and Training:** There is a shortage of qualified industrial designers in Nigeria, and the quality of education and training in the field is often inadequate. This limits the potential for growth and development in the industry.

To address these challenges, the Nigerian government and other stakeholders need to invest in infrastructure, provide funding and support for local designers, and strengthen intellectual property protection. In addition, there is a need for more investment in education and training to develop the skills and expertise required to support the growth of the industry. One way that industrial design can contribute to Nigerian development is by helping local businesses and entrepreneurs to develop new products and services that meet the needs of Nigerian consumers. By creating products that are designed specifically for the Nigerian market, industrial designers can help to spur economic growth and create jobs.

Conclusion

From the beginning of human civilization, humans have been particularly attracted to graphic design and have used it for decoration as well as to symbolize power. From murals to geometric designs on buildings to handmade illustrations, graphic design has been part of human expression for ages. Flags and coins of emperors were perhaps the first examples of logos and branding.

Creativity and innovation are critical drivers of industrial design. Industrial designers need to be creative and innovative in developing unique and original designs that meet the changing needs of the market. By incorporating new technologies and approaches into their designs, industrial designers can create products that are more efficient, sustainable, and user-friendly. The use of creativity and innovation in industrial design not only adds value to the market but also enhances the competitiveness of industries. There are benefits associated with this dispensation that are rooted in exploration and innovation. Thus, there are far-reaching benefits for any developing nation that makes creativity the centre of its philosophical ideology. Methodologies that aid exploration and discovery of potentials, and a problem-solving ability which allows the learner the opportunity for creativity should be the focus of any curriculum transformation.

Creativity is not only about the development of innate ability but also about the development of skills borne out of constant practice or training. Therefore teaching and learning processes that encourage memorization should be demystified. Skill acquisition through technical and vocational training should be given priority. It is a known fact that creativity leads to productivity and development in all tiers of national endeavour. Creativity and innovation are critical drivers of industrial design.

Industrial designers need to be creative and innovative in developing unique and original designs that meet the changing needs of the market. By incorporating new technologies and

approaches into their designs, industrial designers can create products that are more efficient, sustainable, and user-friendly. The use of creativity and innovation in industrial design not only adds value to the market but also enhances the competitiveness of industries

References

- Akinboye, J. O. *Creativity, Innovation and Success* Ibadan-Nigeria, Stirling - Hordens Publishers (Nig) Ltd, 2004.
- Baxter, M.R. *Product Design, Practical Methods for the Systematic Development of New Products*. New York. Chapman and Hall, 1995.
- Bolaji, S.D. *Akinpelu's Educational Philosophy and its Implication to Educational System in Nigeria*, Unpublished Master's Thesis Submitted to the Department of Educational Foundations, Faculty of Education, University of Lagos, 2004.
- Doodles, Crafts and Designs: Industrial Drawings from the Smithsonian*, Smithsonian Institution Libraries, 2004.
- Federal Republic of Nigeria, *National Policy on Education* 4th edition, p.6 (Nerde Press, Lagos Nigeria) 2004 "[http://en.wikipedia.org/wiki/Industrial design](http://en.wikipedia.org/wiki/Industrial_design)
- Lower Field and Brittan, L. *Creative and Mental Growth*, New York. Macmillan Publishing Co. Inc, 1995.
- Runco, A. M. *Encyclopedia of Human Behavior* (New York: Academic Press Inc), 1994.
- Torrance, E.P. "Non-test ways of Identifying the Creative Child in Gowan, Demas and Torrance (eds) *Creativity, Its Educational Implications* New York pp58-60, 1967.
- Design Week. (2018). "The rise of African industrial design."
<https://www.designweek.co.uk/issues/16-22-april-2018/the-rise-of-african-industrial-design/>
- Nigerian Tribune. (2021). "The beauty of Nigerian furniture designs."
<https://tribuneonlineng.com/the-beauty-of-nigerian-furniture-designs/>
- Sosanya, O. (n.d.). "Oluwaseyi Sosanya furniture design." <http://www.ososanya.com/about/>