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RESEARCH ARTICLE

**TRAINING ON METALS AND JEWELRY: A CONTEMPORARY EDUCATIONAL
ISSUE IN NIGERIAN HIGHER INSTITUTION**

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ABSTRACT

This paper examines training (education) in Metal and Jewelry as a contemporary and relevant issue in Nigerian Institutions of higher learning. It defines this discipline as a mode of education in which the learner is separated from the abstract nature of theories and concepts and is faced with more practical experiences. These practical experiences integrate the intellect, attitude and physical skills of the learner simultaneously into meaningful and productive experience. The study discusses the vast application potentials of the discipline (Metal and Jewelry) and the techniques of its instructional delivery, highlighting the major personal, institutional and structural constraints. There is a dire need for the establishment and institutionalization of a framework for full integration of metal and jewelry as part of the educational landscape of the country considering the impact it has on the range of factors and elements in our daily use. They are often used as objects of worship, objects of adornment; insignias, occupational tools, sport and games trophies, coins, security gadgets e.t.c. The use of a variety of media and method of instructions for interest and sustainable development will offer optimal benefit at minimal cost, without compromising quality and content. In spite of metal and jewelry to the growth of any society and nation, evidences abound that the Nigeria government and its institutions of higher learning are still on the periphery in realizing the full potentials of this discipline.

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INTRODUCTION

Concepts and designs, processes and products in metals and Jewelry are very old practices in Africa south of the Sahara. According to Skinner (2009) the arts date back prior to 350BC. Practices in metal and Jewelry became routine and the products popular because of the range of factors and elements to be served. Such factors include the following:

- Objects of worship
- Objects of adornment
- Insignias
- Occupational tools
- Sports and game trophies
- Security gadgets, etc.

The design concept stage

This is the stage where the imaginative process of ideas is brought to bear. At this stage, the mental strength of the metal and designer is challenged to process ideas and come with workable design that can solve an identified problem within a given period of time. A design concept statement briefly explains the visual direction one proposes for the solution. It provides the foundation and basic rationale for later choices you make with regard to colour, images, layout, typography, etc. A concept is the essence of the

innovative solution to a design or marketing problem - it's how you would describe the solution to someone else

Concept development and analysis

Concept development is the process of working on ideas to bring it to fruition, while concept analysis is the process of studying the functionality and workability of ideas to ascertain whether it could solve the identified problem.

Product development

Product development is the process of transferring ideas (abstract) to reality (concrete). At this stage, working drawings are being produced to guide the designer in the smooth execution of the project.

Working drawings contain all the information needed to make the design, including:

- dimensions
- details of components
- materials
- assembly instructions

Working drawings are normally done as orthographic projections.

Some products may need a section drawing to give extra structural information, or an assembly drawing to show how parts fit together.

Implementation/Application stage

This is the stage where the product that has been developed is practically applied on a problem which necessitated its design/development.

Evaluation stage

This is the stage where the judgement of how good, useful or successful the product is to solving a problem. Design ideas should be evaluated to make sure they meet product specification and are of a good quality. Evaluation can also check whether designs need to be changed to make them simpler to manufacture or enable them to be manufactured in higher quantities. To evaluate a design, the following questions should be considered:

1. Does it meet the design need or situation?
2. Does it meet the needs of the intended users?
3. Does it fit the purpose for which it is intended?

In recent times training in metal and Jewelry has gained acceptance and is widely accommodated and highly appreciated in the Nigerian educational system and industries. It is programme of studies with immense potentials to enhance knowledge and equip students with skills in the fields of industrial design, human capital development and communication. Working with metals from process to products has five interactive phases, which according to Fowler (2011) are:

- The design concept stage
- Concept development and analysis
- Product development
- Implementation/Application state
- Evaluation stage

These are all built into an overall concept of solving human and environmental problems the five parameters earlier mentioned provide fine details of disciplined enquiry, based on theorizing, philosophical analysis, historical investigations, project development, fault findings and analysis, and of course evaluation.

Process and Products

Metal and Jewelry in process and production, in conceptualization and use in teaching and in learning, has undergone several changes over the years. This, according to Cole (2008) is as a result of growing anxiety and changing trends. The study of the process and products of metal and Jewelry is an effective application of skills, values and attitudes in solving human problems with a view to increasing effectiveness and efficiency. It is a pragmatic field of study which is crucial to the development of human resources (Onwuka 2008).

Training in metal and Jewelry according to Moore (2006) will

accomplish the following:

- Training will develop the human capital
- It will provide important services to the industrial establishments.
- It will deliver relevant and high quality products.
- Will compel the staff and entire management to improve their knowledge and skills.
- Will increase the quality of other services provided through metal and Jewelry.

Developing Effective Curriculum

Developing effective curriculum of training in metal Jewelry must take cognizance of the following:

- To increase productivity with better quality service delivery and more efficient staff.
- To decrease (minimize) the need for supervision, thereby empowering employees to do the work themselves.
- To enhance the ability to incorporate new technologies, keeping up – to date with changing trends and the global best practices.
- To reduce the amount of work based injuries (accidents) and resources (time and materials) waste.

Besides effective curriculum adaptation there is the need for routine research, this will accomplish the following:

- This will ensure continuity
- It will help candidate meet and address new challenges and assume new responsibilities in terms of effectiveness, production and efficiency.
- It will increase job satisfaction, enhance the morale and motivation.
- It will enhance the branding image.
- It will enhance risk management.
- It will address varietal and numerous needs.

The training needs of the programme are numerous and varied. They include the following:

- To address the specify problem areas.
- To develop data for evaluation
- To determine the cost effectiveness and benefits of training.

Training marks the difference between successful and unsuccessful product services.

Moore (2008) further stresses that training will further accomplish the following:

- Develop management skills
- Promote better staff and trainees' relationships and effectively address organizational problems.
- It will address new challenges and promote career development plans.

Training according to Stasheff (2008) is a veritable tool for

effective service delivery. Several nations and organizations have through research and training explored human resources of the staff. This is because the level and rate of development are the essential functions of the degree of educational attainment.

Training Process

Training is a problem solving discipline in human learning. It has the capacity to identify and to proper solutions to problems through systematic approach to the development and improvement of complex integrated human and non-human resources. Metal and Jewelry is quite an eclectic field of activities borrowing ideas from fields of administration, psychology, philosophy, curriculum, arts and technology, communication, information management and allied discipline all embossed in a wealth of knowledge and skills and to be specific entrepreneur.

Works on metal and jewelry have prevailed and extensively flourished in many African countries thousands of years before the advent of colonials rule. The most important of these are works on ancestral figures and masks in bronze, household items and Jewelleries. The purely African influence and innovations can be seen in the accentuated parts such as the head being treated as a quarter of the whole figure. This is based on the ancient belief that the is the epicenter and sit of human intelligence. In depicting people and animals in their everyday activities and also in an attempt to enhance aesthetics through adornment, Skinner (2009) his write-up clearly stated that the in craftsmen did not seek to produce photographic likeness of human forms but to express their inner desires and convictions.

Concept and Nature Analysis

The concepts and nature of the works provided figures that were simplified and almost became geometrical shapes emerging in delicate subdued form. These forms harmonized with abstract backgrounds creating bold and simplified styles of social activities. The concepts and designs according to Moor (2008) were powerful and original takes primarily from the folk stories, from which they drew their inspirations. The surfaces of the crafts were covered with elaborate networks of abstract decorative patterns of stylized human figures, animals and masks.

African arts and crafts in wood, clay, metals and Jewelry are widely known to be analytical studies that are very refreshing, giving pleasure to the mind, and satisfying our sense of beauty. They made effective use of lines and forms, symbols, textures and colours to communicate ideas they held mystique in the minds of the people, with compelling effect, raising consciousness about issues and conveying simple information.

Metal and Jewelry in all reunifications has become important component in industrial design studies. It the process and products it has brought together variety of ideas, cultures and beliefs, across political, social and cultural borders, with freaks and thimble. These freaks and thimbles have extensively explained the theories and contending issues in the designs, productions and community dynamics, which

often see traditions and modern heritage at times work hand in hand, but quite often are kilometers apart.

Above all these concerns are the concepts and instruments, productions techniques and products which contain informational values, the goals and objectives leading to diverse strategies and technologies of management and production. These studies (pre-colonial crafts) were very imposing, symbolic and unique in performance,

Euro-African Perspectives

Today (in recent times), western industrial designers mimic the African arts and crafts forms to create structures that are both resilient and efficient.

They use panels patterned after African art forms to create materials that are stronger and lighter but with minimal structural demands and support.

CONCLUSION

Contemporary global trends and advancement in knowledge and technology demonstrates high standards in process and products to achieve these factors the following must be accomplished.

- Setting out the priorities
- Thinking ahead.
- Simplifying ideas (concepts and designs)
- Being decisive and organized
- Aiming at perfection

While high standards are reasonable and commendable one must be careful not to set standards so high that you invite disappointment and even failure. The reality is that many decisions industrial designs (creative works) involve uncertainties. Important decisions warrant research and deliberations. Research and deliberations according to Johnson (2009) will save time and minimize confusion, eliminate stress and point the way forward.

By thinking ahead one increases the level of productivity. Setting realistic goals prevents wandering aimlessly (aimless search) after abstract desires. Quite often abstract desires could be unrealistic or impossible to achieve. Consider your values and be guided by them. Your values will enable you to gauge what is good, important and worthwhile. Good values will enable you make set sound judgment. It will enable one set sound priorities and make the best use of time.

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