International Journal of Innovation and Applied Studies
ISSN 2028-9324 Vol. 9 No. 2 Nov. 2014, pp. 897-905

http://www.ijias.issr-journals.org/

BOOSTING THE BOLGATANGA BASKETRY INDUSTRY: INPUTS FROM THE INDIA-AFRICA CRAFT DESIGN INITIATIVE

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ABSTRACT: The Upper East Region of Ghana is home to myriads of authentic handicraft products. Majority of the indigenes however, depend heavily on basket weaving to earn extra income to supplement gains made from subsistence farming, petty trading, and rearing of animals. Over the years, sales of the basket wares have fallen drastically, largely due to stale products. This is precariously affecting the earnings of the artisans. The India-Africa craft design initiative therefore aims at developing a range of innovative woven products to boost the fortunes of the industry.
The study was an output from the various India-Africa craft design project phases in Ghana. Data was collected using interviews, semi-structured questionnaires, observations and focus group discussions of the participating artisans, project consultants, technical experts, exporters and exhibition attendants. The study was also supported with photographs of some of the newly designed products. From the findings obtained, it is quite apparent that with the relevant artistic and technical inputs, the grass woven products from Bolgatanga and its environs, popularly known as "Bolga baskets" could be restyled and integrated with materials such as leather, wood, calabash, metal and bamboo, to become an acceptable export commodity, which could generate substantial income for the artisans, the region and the nation as a whole.

KEYWORDS: Basketry, baskets from Ghana, Bolga baskets, integrated woven wares, woven guinea grass products

1 INTRODUCTION

Basket weaving is one of the oldest handicraft traditions known to man. It is believed to precede pottery production. These woven items showcased "people's perceptions of the environment, conceptions of the self and modes of economic interaction, social hierarchy, and division of labour" [1].

The art of creating woven objects especially containers using plant-based materials such as twigs, grasses, osiers, bamboo, rushes, or man-made materials such as plastics, is referred to as basketry [2] , [3]. According to reference [2], archeological evidence from Egypt, Peru, Southern Spain, Switzerland and Jarmo indicates that the art of basketry was known to civilizations of the Neolithic period. Reference [4] details that the term "basket" is etymologically derived from the Greek word *kophinos*, meaning "basket woven from plaited branches and twigs". The source adds that Sumerians produced and utilized baskets to bury their dead as early as 4,000 BC, and that the use of baskets was mentioned extensively in the Bible, giving us a fair idea of its production and usage over the years.

Typically, it is documented that in Africa, Asia, Oceania, Europe, Middle East, Mediterranean regions and the Americas, spiral coiling, sewed coiling, knotted coiling , twining, plaiting, check weaving, twilling, stake and strand, wicker work, crossed-wefting, diagonal weaving, twisting, looping, assemblage and half-hitch construction techniques were used by craftsmen around the world to produce woven objects [5], [2], [1], [3], [6].

Materials employed by skilled weavers around the world in fashioning basketry objects comprised assorted leaves, grasses, stalks, bamboo strips, tree barks, split rattan lengths, rashes, roots, acrylic threads, polyurethane strips, and plastic-

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coated wires [5], [1], [2]. Reference [5] expatiates that dyes made from roots, leaves, fruits, vegetables, spices, animal waste as well as synthetic sources were used by artisans in Africa to pigment their materials.

Since the discovery of basket fragments and pollens in entombed graves by archeologists, many scholars have speculated on the usage of basket objects by past civilizations. The consensus is that the basket wares were used for everyday activities such as storing and serving of food, harvesting and transporting, liquid containers, sieves, strainers, filters, granaries, mats, snares and fish traps. Woven materials were also employed as; ornaments, children's toys, boats, assorted furniture, fashion skirts, loincloths, raincoats, shoes, hats, helmets, amours, shields, purses, combs, headdresses, jewelries and even as special containers for boiling and cooking food, as found among the Hupa Indians of northwest California [2], [4].

Africa is endowed with tremendous basketry products designed and crafted to meet the various needs of the societies that evolved them. Chad, Ethiopia, Ghana, Cameroon, Somalia, Congo regions, central and eastern Sudanese districts and the cultures of the Great Rift Valley are all reputed for crafting exquisitely fine and subtle basket wares, with complex decorations for diverse uses [5] [2]. Reference [5] elaborates that African basketry possesses some lesser known functions which include its usage as currency by the Mbun people of the Democratic Republic of Congo, fertility objects in Ghana, and as a sling in Somalia. The source exposits further that in Ethiopia; basketry items crafted as plates and lidded containers, played an important role in the traditional and ceremonial rites of the Harari ethnic group, who used these items as dowries, ceremonial gifts, as well as ornamental objects for decorating homes. Among the Zulus of South Africa, reference [7] writes that 'Pear-shaped *ilala* palm baskets with lids were crafted specially for newly married women, to be sent to their father-in-law's compound. The Zulus of South Africa are reputed for developing their basketry industry collectively to aid in lifting the rural poor from the doldrums of poverty and to promote African identity [8].

2 RESEARCH PROBLEMS

The handicraft industry in the Upper East Region of Ghana centered on the weaving of baskets and hats, vegetable tanning , production of leather articles such as bags, puffs, bracelets as well as textile weaving and its subsequent sewing into smocks. These craft articles were usually sold by the artisans to supplement gains made from subsistence farming, petty trading, and rearing of animals. Even though all the above products have assisted in varied ways to draw attention to Bolgatanga and the Upper East Region as a whole, the woven grass products affectionately referred to as 'Bolga baskets' could be said to have played a greater role in putting Bolgatanga on the world handicraft and tourist map. The industry which has a great potential for self-employment and livelihoods melioration in the region, is predominantly a cottage-based preoccupation of the indigenes of Bolgatanga, Talensi Nabdam and Bongo, all in the Upper East Region of Ghana. Reference [9] cited the Centre for National Culture in Bolgatanga, explaining that the basket weaving tradition could be traced to the 16th century. The first historical record of the industry, according to the source, dates to the 19th century; prior to the commercialization of the products, the basket wares were mainly used by indigenous households to strain *pito* beer during the preparation of the beverage, the source adds. It is estimated that about 10,000 natives of the Upper East Region actively practice the art form [9].

For more than 20 years, basket products from Bolgatanga have been exported to Europe, USA and Japan [9]. Reference [9] cites the Ghana Export Promotion Council, explaining that the export of "Bolga baskets" peaked in 2001 with an annual sale of USD 4,766,737, but declined to USD 225, 270 in 2004; this decline in export earnings, the source adds, is more than 89% within four years. Generally, most of the exporters of "Bolga baskets" interviewed by the author have lamented about the low volume of exports over the years. Even though various reasons could be assigned to the downturn of the industry, some of the exporters attributed the worsening situation to the absence of trendy products which could compete favourably with similar products from other parts of the world. It is known that buyers from large retail outlets such as Cost Plus, World Market, Target and Pier 1, are always on the lookout for new and stylistically innovative products that conform to modern trends [10]. It is worth noting, however, that "Bolga baskets" are reputed for their excellent strength and plasticity, giving the products some superior advantage on the world market [11]. Equipping the weavers therefore to evolve new products constantly to feed the export market, would really go a long way in boosting the fortunes of the industry. Indeed, it is the above constraints that necessitated the intervention from the internationally reputed National Institute of Design, from Ahmedabad, India, with assistance from the Indian Government, and supported by the Department of Industrial Policy Promotion, Ministry of Commerce and Industry and the Ministry of External Affairs to empower the artisans from the Upper East Region of Ghana, to come out with innovative and voguish products to boost the fortunes of the industry, under the India-Africa Craft Design Initiative.

The objectives of the study are;

i. To document the practical and artistic assistance given by the design experts from the National Institute of Design, India;
ii. To showcase some of the products that would be created during the training programme;
iii. Identify challenges that might ensue during the workshop; and
iv. To assess the impact of the new products on spectators who would be participating in the end of programme exhibition.

This study would greatly help in fully appreciating and replicating the design experience among the wider artisanal communities in the Upper East Region.

3 RESEARCH METHODS

To be able to ascertain and describe the aspects of the phenomena under study and offer ideas for subsequent investigations, the descriptive research design was adopted [12]. The population of the study comprised all participating stakeholders of the India-Africa Craft Design programme in Ghana. A sample size of 73 respondents was obtained using both convenience and judgmental sampling techniques. Accessibility and expertise were the major considerations for arriving at the above sample size. The primary data for the study was collected during the various phases of the product design and development training workshop at the Head office of Aid to Artisans Ghana, in Accra, through interviews, semi-structured questionnaires, observations and focus group discussions. The judgmental sampling method was used in sampling the six design professionals from India's National Institute of Design, who mainly facilitated the training activities. Equally, two project consultants from Aid to Artisans Ghana and the New Basket Workshop (South Africa-based NGO), an officer from Center for National Culture (Bolgatanga), four exporters of Bolga baskets, as well as the 25 artisans who participated in the training workshop were selected using the judgmental sampling methods. The convenience sampling techniques was however, the ultimate choice adopted in sampling the 38 exhibition participants for data extraction. The study was supported with secondary materials from books, journals and online articles. The data was analyzed using Microsoft Word Table structure [13]. This was done by transcribing, reducing (selecting, focusing, simplifying, abstracting and transforming) and displaying the data. Throughout the entire qualitative data analysis process, momo-ing was done to record reflective notes. Emerging patterns were identified based on the objectives of the study; enabling conclusion drawing and verification [13].

4 RESULTS

The India-Africa Craft Design Initiative was a special intervention developed and packaged by the Indian Government in May 2011 during the India Africa Summit-II programme, with the aim of enhancing income generation opportunities. The project largely targets rural craftswomen in Ghana, Ethiopia, Zimbabwe, Malawi and Zambia. The scope of the project includes; training of trainers, collaboration on product development, product range diversification and brand building. The project was mainly implemented by the reputable National Institute of Design, from India with assistance from other local and international experts.

In Ghana, the project spans seven months (October 2013 – April 2014). It commenced with a familiarization and assessment study in October 2013, to the Upper East Region by the consultants and design experts. This was to study the basketry industry in the region and to tailor appropriate design interventions suitable for the artisans in the industry. In December 2013, a team comprising 25 artisans from selected communities in the Upper East Region, the project coordinator from Aid to Artisans Ghana (NGO), a lecturer from the Integrated Rural Art Department, Kwame Nkrumah University of Science and Technology, and an officer from the Upper East Regional branch of Centre for National Culture travelled to India to participate in a workshop at the National Institute of Design, Ahmadabad campus. The two-week workshop created the relevant platform for the visiting Ghanaian team to exchange views, marketing experiences and expertise with Indian artisans, academics, non-Governmental organizations, retail specialists and design students. As explained by some of the artisans who embarked on the trip, the visit broadened their creative experiences and challenged their design capabilities. The trip, the artisans add also conditioned them for the intensive practical workshop they participated in on their return to Ghana.

4.1 RAW MATERIALS, TOOLS AND EQUIPMENT

The main raw material used in the Upper East Region for weaving is the dry stalk of the guinea grass (*Panicum maximum*), popularly called "straw" by many people in the Bolgatanga basketry industry. This is a perennial tufted grass with creeping

rhizome [14]. Other grass species such as *Vetiveria nigritana* are also sometimes used [11]. During the training workshop however, the researcher observed that guinea grass was the sole grass species used in weaving the articles. Other materials used during the workshop includes; wood, bamboo, rattan canes, calabashes, leather, iron rods, electrical fixtures, basic dyes, acetic acid, sodium chloride, wood polish, detergent, and antirust paint. All the above materials were sourced locally, with the exception of some of the leathers, which were brought from India.

Various tools and equipment were used during the workshop. These comprised; welding machines, electric grinders and drills, gas burners and cylinders, weighing scales, as well as vices and clamps. Others are; rubber gloves, nasal masks, stainless steel pots and spoons, plastic containers, working tables, awls, punches, tape measures, styrofoam and wooden moulds as well as cutters.

4.1.1 MATERIALS PREPARATION

Many materials were specially prepared prior to the actual weaving and integration processes. The specific and relevant preparation methods used are captured below.

4.1.2 GUINEA GRASS STALK

The first step in the grass stalk preparation is splitting. This was done by biting a channel in the middle of each stalk and pulling it apart with the hand (Fig. 1.). The divided parts were then twisted together on a rubber slipper positioned on the thigh of the artisan (See Fig. 2.). It was observed that some of the grasses were also used whole without splitting them.

4.1.3 DYEING

The twisted materials were dyed in different colours using basic dyes. Prior to the dyeing process, the twisted materials were soaked in water overnight. Subsequently, the materials were thoroughly washed with detergents and rinsed in clear water the following morning before dyeing. The design experts explained that the cleaning process was a crucial procedure which removes dirt and other natural coatings from the grass, enabling high dye absorption.

The grasses to be dyed were initially weighed on a scale to determine their weight. Subsequently, about three gallons of water (enough to cover the goods to be dyed) was heated on a gas burner to a boiling state, and five table spoonfuls of sodium chloride was dissolved and poured into it. Just after that, a levelled tablespoon (This quantity was used to dye a bundle of grass) of the desired direct dye was mixed with a small quantity of water and added to the boiling water. The grass was then lowered into the dye-bath and dyed for about 15 minutes. The grass was briefly removed from the dye bath and about one-fifth part of a litre of acetic acid was measured and poured into the boiling dye-bath. The goods were again lowered into the dye-bath, weighed down with sizeable stones and dyed for another 20 minutes. The goods were then removed and rinsed rigorously in clear water and dried. After the grasses have been adequately dried, samples were collected for the preparation of a colour recipe booklet.

4.1.4 LEATHER

The leathers used during the workshop were moulded on a pre-designed wooden blocks, cut into assorted geometric shapes and laces (thongs) or punched out with various punches and awls for the purposes of grass integration.

4.1.5 BAMBOO

The bamboos used during the workshop were generally dried ones. Most of the culms were split into the desired strips manually, dressed with sharp knives and sanded down smoothly with sand paper. Some of the culms were also processed whole by just scraping off the outer surfaces and sanding them smoothly.

Fig. 1. Splitting of guinea grass.

Fig. 2. Twisting of grass.

4.1.6 IRON RODS

Largely, half-inch and quarter iron rods were used. They were fabricated into armatures for lamp shades, chandeliers, frames for window blinds and other assorted stands. The rods were manually shaped and welded. The fabricated items were grinded with an electric grinder and coated with antirust paint.

4.1.7 WOOD

Assorted wood species were used. The wood was cut to the desired sizes and lathed or just finished-off with a jack plane, and then sanded smoothly and coated with wood polish. Various holes were bored on some of them to enable grass integration or the passage of electrical wires.

4.1.8 CALABASH

Varied sizes of calabashes were used. These were rigorously cleaned with detergents and thereafter, holes were bored on their edges or in the middle of some of them to enable integration of grass or electrical wiring. Some were also dyed with basic dyes into different colours.

4.2 WEAVING, MATERIAL INTEGRATION AND FINISHING OF PRODUCTS

All the products were woven based on predesigned sketches and dimensions created by the design consultants and the artisans. In some instances, moulds were used to aid the artisans in getting the required shapes and forms. Severally, the researcher has observed some of the weavers un-weaving and re-weaving their products just to ensure that they conform to the agreed specifications. The two main weaving methods used during the workshop were “twinning” and the “stake and strand” techniques, which the weavers specialized in. The twinning method involves the pairing of two horizontal (weft) strands around vertical ones (warp), while the stake and strand technique consists of interweaving two sets of strands (a vertical stable strand with horizontal movable ones).

Entirely grass-woven products were started by knotting strands of straw into warp and weft spider-like forms and skilfully woven upwards, incorporating warp straws and geometric motifs as required. The integrated products were largely commenced by looping the vertical strands of the grasses through bored holes on the integrating materials - wood, calabash and leather. In some cases, thongs of leather were woven into the body of the products and subsequently braided around pilled grasses to form handles for the baskets (fig. 6. (right). Woven grass was also integrated with punched-out leather buttons to serve as necklaces (see fig. 5. (left).

The rims of the products were finished-off by lashing them into round, flat or looped edges. The looping techniques were specifically used in finishing woven floral products and some hats. The method used for integrating bamboo with the grass was mainly through sandwiching. The vertical walls of the woven grass trays were firmly sandwiched between two circular strips of bamboo manually (fig. 3. (left). Some woven lamp shades were also mounted on prepared bamboo culms. Slender rattan canes were also incorporated into woven floral works to form the stems of these daintily woven articles (figure .5 (middle). Generally, rolled, moulded or woven handles, made from straw, wood and leather were affixed to some of the products to serve as shoppers, carriers or just to serve as hand-holds.

The products were finished by trimming loose strands of grass and sometimes leather off the body, rim and handles of the woven products using sharp cutters. After wards, electrical fixtures such as lamp holders were incorporated into some of the products.

4.3 IMPROVEMENTS

The artisans interviewed at the close of the workshop generally agreed that there were innovative improvements on their artisanal practices. They believed the introduction of acetic acid in the dyeing mix; grass soaking and cleaning processes; preparation of colour recipe manuals; the ability to sketch; leather weaving and its unique integration into the body of some woven products; new techniques of weaving complex shapes and forms, as well as the creative integration of calabash, bamboo, metal, wood, leather and rattan with grass, were novel stimulants that would impact positively on their work.

4.4 SOME SELECTED PRODUCTS FROM THE WORKSHOP

At the close of the training programme, 36 new product lines were developed. The total number of articles produced, however, stands at 108. These comprised lighting objects, furniture, puffs, shoppers and carriers, jewelry, hats and other personal and lifestyle accessories. Captured below are some selected products created at the workshop.

Fig. 3. Assorted Table Wares

Fig. 4. Lampshades &Chandeliers

Fig. 5. Necklace (Left), Flowers (Middle), Bracelet (Top Right) & Utility Basket (Bottom Right)

Fig. 6. Shopping Baskets

5 DISCUSSIONS

Findings from the study revealed that complex multi-shaped integrated products could be fashioned from grass and other materials by artisans from the Upper East Region into attractive and utilitarian products for both the domestic and international markets, with a bit of assistance. It is also evident that even though guinea grass alone could be woven into wonderful products, integrating it with materials such as leather, wood, calabash, rattan, bamboo and metal could greatly improve the allure and value of the products.

Holistic product design and development paradigms were adopted by the design experts during the training workshop. The artisans were strongly encouraged to learn and gain appreciable control over basic design and production principles such as sketching, colour harmony, symmetry, colour recipe development, adherence to measurements, and neat finishing of products. Armed with the above principles, it is anticipated that the artisans could inject the above artistic and production ideals into the basketry industry to ensure that products created meet very high quality standards and expectation of buyers.

The programme provides an opportunity for the artisans to travel and interact with design experts, other artisans and marketing experts from India. This cross-cultural experience is expected to broaden the artisan's perspective of the handicraft industry as a whole.

A cross-section of the exhibition attendants (Ghanaians and expatriates) interviewed said they were impressed by the new products developed by the artisans, and would be happy to buy and use some of the products. This shows that the new products have good market potentials and could compete if well promoted. The exporters were however of the view that unless more artisans were trained to weave the new products, it might be very difficult to meet export deadlines.

6 CONCLUSIONS & RECOMMENDATIONS

The project has really helped in broadening the horizon of the weavers from the Upper East Region of Ghana. Findings ensuing from the workshop showed that with a bit of assistance, the artisans could design and produce trendy products to sustain the basketry industry and improve on their living conditions. Generally, it was realized during the training workshop that integrated woven products could really be more alluring than crafting with the guinea grass alone.

There is an urgent need to organize further training programmes in the Upper East Region to train other artisans in the industry to master the new products. This would enable the artisans to quickly produce appreciable quantities to meet both local and international demands.

There is the need for the Government of Ghana to see the basketry industry as an important income generating sector worthy of capital injection, in order to transform it into an organized, competent and viable commercial sector to attract the youth.

The Bolgatanga Municipal assembly should consider collaborating with the Ministry of Food and Agriculture to cultivate guinea grass (*panicum maximun*) along the river banks and other water bodies in the region, to provide the needed raw materials to feed the industry. The matured grasses could be harvested and sold to the artisans at a reduced cost.

There should be an annual regional bazaar to promote the creative works of the artisans. This, apart from attracting tourists to the region, would also assist in offering an appropriate platform for marketing the basket wares produced by the weavers.

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