



Bamboo Technology As A Sustainable Vocation For Senior High School Visual Arts Graduates In Ghana

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Abstract:

Many Senior High School Visual Arts graduates have the problem of practicing Visual Arts after school partly because some are not well equipped with the requisite skill needed for job orientation while others are faced with the difficulty in acquiring the raw material necessary for the production process. However, they end up being unemployed and thereby increasing dependency ration. The study recognizes the identification of interested group of Senior High School Visual Arts graduates and training them the technical and vocational techniques to design and construct bamboo artifacts to be self-reliant. A total of 25 visual arts graduates were painstakingly gathered following the information of 3 month free computer literacy training programme for all visual Arts leavers that was disseminated through notice boards, FM stations and the churches in all the Districts in Assin North and South. The application of a well structured interview guide was substantial to the researchers which deepened the interest of the same group. The Action research method was employed to develop a new skill and solve problems through active participation. An interim comprehensive bamboo syllabus for Senior High School graduates was also designed. Schemes of work and lesson plans were developed to teach units of the syllabus. The training programme was run within six months. The result of the study indicated that, when the learners were given the technical training skill, they were equipped enough to create high standard bamboo artifacts for both local and external markets. Besides, it was revealed that skill training must not only be in theory but must be fully backed by practical demonstration.

Keywords: *equip, artifacts, skill, dependency, self-reliant*

1.Introduction

In 1987 the Government of Ghana had to restructure second cycle education realizing that the five years secondary school graduates were not getting employment as envisaged, hence the education Reforms. This was invariably, geared towards the psychomotor skill development thus equipping the student with vocational technical training (Ulbricht, 2001).

This is looked at as Vocation Education and Training (V E T) also called career and Technical Education (C T E) which prepares learners for careers that are based in manual or practical activities, and totally related to a specific trade, occupation or vocation, ([Http: //en. Wikipedia.org](http://en.wikipedia.org)) Visual Arts with reference to education, foster creativity by helping individuals to think, and act and feel creatively (Amenuke,et al, 1991).

Vocational education is related to the age-old apprenticeship system of learning (Broadhead, 2001). However, as the labour market becomes more specialized and economies demand higher levels of skill, government and businesses are increasingly investing in the future of education should be done right at Senior High School, with the aim of developing skill of students.

Ulbricht (2001) opines that art teachers often ignore teaching about careers in art for a variety of reasons. To him some teachers find that they are too busy. Some think that vocational education is not appropriate for the age of their students, while other teachers believe that it is beyond the scope of art education.

In the United States, Junior High School and High School have offered Vocational Courses such as wood, metal, drafting, leather etc. Federal involvement is principally carried out through the Carr D. Pekins Career and Technical Education Act (Pekins, 2002).

The Senior High School Visual Arts graduates have been saddled with acute unemployment situation because they have not acquired the requisite skill to explore around certain vocations to be self-sustainable.

Glenn(1980) and Beardshaw (1998), consider unemployment as the state in which a person is without work. Taylor (1988), stipulates that, the unemployed suffer a loss in self – esteem. Researchers have therefore found that, unemployment appears to link for variety of affliction, a greater incidence of heart disease, suicide, mental illness, and crime (Waldstad, 1930). It also imposes a cost on the economy in the distribution of national cake and also a loss in taxation (Steinbeck, 1939).

But it must be known that vocation establishes one firmly in an economically viable venture, because vocation controls the economy of a country. There is a category of Visual Arts students who leave Senior High School and do not find jobs that commensurate with their education because they lack competency based training to be self-employed.

Inbar (1998) proclaims that, perhaps, one greatest breakthrough in sustainable development in recent years, is that bamboo has a bright future as a naturally beautiful and incredible durable material that has several products from ordinary to meticulous. And that when Senior High school Visual Art leavers are exposed to the genuine technology of production can have a vocation with cheaper and faster source of raw material (False, 1993). There is also an indication that, simple tools and equipment can be developed even into more complex ones in the space of time, as bamboo technology is taught as a vocation in the Senior High School.

2.History Of Bamboo

Farrelly, (1995) introduces us to the oldest and the most remarkable resource on the planet.

The book of bamboo shows us how this versatile wood which is both sustainable and plentiful has been used for thousand of years to make items ranging from things needed for survival like clothing and housing to more exotic and luxurious objects like phonograph needles and children's toys as well as dozens of others.

Farrelly further tells us about the plants biology and life cycle. He gives tips on harvesting and planting and more about the ancient wood. Farrelly conveys the rich and timeless message on bamboo being strong, flexible and beautiful in both its natural and its finished states.

The New Oxford Dictionary of English, (1998) also defines bamboo as a giant woody grass which grows chiefly in the tropics.

Although forest areas in many countries have drastically decreased areas under bamboo, cultivation have progressively increased by almost three fold each year.

Gnanaharan (1997) stated that at present, the total bamboo growing areas of the world are up to 22million hectares. The science and technology content in the bamboo industry is steadily increasing and breakthroughs have been achieved in bamboo cultivation, processing and utilization.

The New Encyclopaedia Britannica (1984) states that, bamboo is any of the tall grasses comprising the subfamily Bambusoideae of the family poaceae. Bamboo therefore is a tall plant of the grass family. Due to its hollow form it is relatively strong and stiff. It can be cut and split with simple tools because of its stiffness and solid culm or stem. Bamboo has age-old connections with fishing, paper-making, landscaping, gardening, handicraft, the fine arts and poetry.

Janssen, (1982) communicates to us of knowledge both scientific and practical to those with little knowledge of the fabulous clumping bamboo of the world. The western world is not yet taking clumping bamboo serious.

Most Asian countries have these tallest growing varieties in abundance. Bamboo feeds them, houses them and shades their environment. It is used to make their musical instruments, cooking and eating utensils, furniture, hunting weapons and ceremonial artifacts. It even provides the reinforcement for their concrete roofs. Bamboo provides their carrying and storage baskets, lamps and lampshades, ropes and strings, roof tiles, hats and has hundreds of other practical and spiritual uses. Bamboo world distils simple practical advice using bamboo for wealth of applications. It draws on both traditional village technology and modern scientific research.

Trier, (2006) indicates Bamboo is one of the fastest growing plants on the earth, easy to harvest, alternatively flexible or stiff (depending on the location). It is used in diverse ways as flooring, building, furniture aeronautics and high-end racing bikes. Bamboo, a dynamic material has many uses across the design spectrum.

According to Pierce, (1993), quite apart feeding pandas and making a yummy addition of many Asian dishes, bamboo is also used as a building material and also for decorative purposes.

The culms are extremely sturdy and lend themselves to a multiple of uses. Stinger Ban for example, found a way to create lumber from laminated woven bamboo for a house he designed in Beijing. Other houses show of bamboo in more straightforward way, lining the ceiling or floors with stems or even forming walls. Bamboo is also used to construct furniture.

Pierce captures the many uses of bamboo in houses throughout China, Japan, Indonesia etc.

From the fore-going definitions, it comes to light that bamboo has several capabilities and possibilities. Therefore can be used in the production of several products from

ordinary to meticulous and that when S.H.S leavers are exposed to the genuine method of production can have a vocation with cheaper and faster source of raw materials.

3.Species Of Bamboo In Ghana

Bamboo in the country presently, have not been well managed, so most of them in the stands have no economic value. There is the need to facilitate the establishment of more nurseries and encourage establishment of plantation (Finnie,2001).

However, bamboo grows predominantly in areas of heavy rainfall. Such growing areas are Central Region, Brong Ahafo Region, Ashanti Region, Volta Region and Eastern Region.

Baah (2001) acknowledges the fact that Ghana boasts of seven known species of bamboo. They are bambusa bambos, bambusa vulgaris, bambusa var vitata, dendrocalamus strictus, bambusa aroundinacea, bambusa multiplex, and bambusa pervariabilis. Bambusa vulgaris is the indigenous of the species to the soils of Ghana.

Bambusa Valgaris is one of the bamboo species found in Ghana. It is yellowish and green. It grows to average height of 2,400cm and to about 12mm diameters (see plate 1) Anku Gollo(1984),says that it has a high nutrient level and that makes it susceptible to worm destruction.

Bambusa var vitata (yellow bamboo) is common in Ghana and can be easily propagated. A study conducted on this particular bamboo shows a very low resistance to biological deteriorating agents or pest and fungi. Though like all other bamboo varieties, bambusa var vitata has within its structure starch, wax, gum, and lignin which give strength to the material. The presence of sugar makes the material prone to insect pest.

Bambusa bambos

Bambusa bambos or Bambusa aroundinacea is regarded one of the bamboos that have some level of resistance to pest attack Studies have shown that this variety grow straight and they are the choice by most craftsmen in artifacts production. These types are commonly found around water bodies. Bambusa bambos has low sugar content due to its large culm size. The size enables for processes like lamination into boards for paneling and joinery.

Dendrocalamus is another species found in Ghana. This specie is identified as male Bamboo in India. The branches are curved with very thin leaves. It grows to about 80-100feet high (Baradep, 2001).



Figure 1: *Dendrocalamus species* / *Bambusa var vitata species*

Oxithrianthera abyssinica is yet specie on Ghanaian soil. This specie is found to grow in the dense clumps to the height of 1200cm. it has long culms. It is used for shelter, hedges and serves as wind break. Because of its heavy thicket, it is difficult to penetrate.

It also grows to a considerable height of 72feet to 900feet. The internodes or culms measure, 30cm to 46cm with the diameter of 3cm to 8cm. it is rather difficult harvesting *Bambusa arundinacea* due to its thicket with spines.

Baah mentioned two species found in Ghana *Bambusa guadua* and *Bambusa striata* (*Bamboo cramineae*). They are species found in Japan and China, indeed, they are of tropical

species. They are erect, strong standing plants that grow to height of 450cm with pendulus stem, which are yellow and green and are densely crowded together.



Figure 2: *Species of bambusa arundinacea found in Ghana*

Zhao, (1992) stipulates that, the fast growth and strong regenerating capability of bamboo help to draw attention in countries where the plant grows, resulting in the building up of industry based on bamboo.

4.Methods And Procedures

The area of study was Assin Fosu and its environs in the Central Region of Ghana. Action research was employed for the study. Carr & Kemmis (1986) elucidate that, action research is the conception of Teacher –as- researcher. It is invariably described as job related, through reflective teaching. Action research is problem solving, and that was what this study sought to do. The target group for the study was all Senior High School Visual Arts Leavers in Ghana. The size of population was limited to all Visual Arts Leavers in Assin Fosu District.

The first objective was meant to identify an interested group of Senior High School Visual Arts graduates who were unemployed and come out with a possibility to train them in Bamboo Technology in order to equipping them to be self-reliant.

The 25 students for the study were not identified so easily. They were not however, identified in Fosu Township alone; there were some from scattered localities such as Anyinabrim, Akrofrom, Nsuta, Praso etc. Reaching them took a lot of time energy and resources, Truly, getting them

understand the need to co-operate to get the study under way was painstaking. A well defined interview guide was constructed and used to interview them and their responses were recorded (see fig. 3). So much went into it to have them convinced. The following were some of the responses from the interview guide:

- Question: When did you complete Senior High School?
- Response: “I completed long ago” I completed in 1994” “in 1995” “in 1996” “in 1997” “2000” etc.
- Question: Why are you not furthering your education?
- Response: “My parents refused to take care of me.” I could not get a good grade in visual Arts”
- Question: What do you do at home?
- Response: “Nothing, I follow my parents to farm,” I am learning sewing,”
- Question: What do you do for a living?

- Response: “I am tired of being home without job, “ I am not doing any thing gainful at home.” “I am a driver’s mate (Aplanke), “ I am a store attendant.”
- Question: Have you looked for any job opportunity?
- Response: “I’ve tried in vain to securing a job,” “No job opportunities available,” “I’m now trying to travel to Accra to look for job,” “I’ve been to Kumasi for six months but I did not get any job.”
- Question: Why have you not been practicing art for a living?
- Response: “I’m not well equipped with skills in Art,” “I started something on graphics but with the advent of digital art, patronage dropped mercilessly,” “what I was taught in school is not marketable.”
- Question: Why don’t you learn any other trade?
- Response: “I wish I’m trained in art again,” “I’m only interested in practicing art,” I’m applying for an art school.”
- Question: Is bamboo scarce in your area?
- Response: “Bamboo thrives in town abundantly,” “Bamboo is common in my area.”
- Question: Is there any vocation in bamboo as material?
- Response: “No we only use it as firewood,” we use bamboo for fencing,” “we know of the bamboo industry in Assin Fosu that uses bamboo for chairs but we don’t have the requisite skill.”
- Question: Are you interested to earn a living from Bamboo?
- Response: Yes, but how do we? “can we also create something good? “I wouldn’t travel to look for job, if bamboo can be processed into marketable items.”



Figure 3: The Respondents Answering Interview Guide

Apart from about five (5) out of the twenty five (25) graduates who happened to be closer to the training center, the rest were given transportation fares to and fro every training session from the various nearby villages. Again, a computer training school adjacent to the training center agreed to provide 3 months computer literacy services to all the bamboo technology students for free.

Programmes taught were Excel, Corel Draw, Rhino, Maya, Real Draw, word etc. Aprons and some working tools were supplied by the researchers free of charge. These motivational tools helped to converge the Senior High graduates used for the study.

A well structured and organized Senior High School Bamboo Technology syllabus was developed by the researchers. Processes, skills, requisite tools and material necessary for the construction of Bamboo items were spelt out in sections and units. Each section of the syllabus was divided into five units, where a unit consisted of a body of knowledge and skill that form a logical aspect of the section. Most S.H.S Visual Arts graduates do not practice art due to their inadequate competency design level. The main objective of the study was to give an amplified design skill training to make them well equipped.

Design is a preliminary plan within a perceived work of Art. It is a vital concept that leads to the organization, arrangement or composition of a work. Design is a process or a result of a process (Amenuke, et al 1998).

Suttan and Cardine (1981) stipulates nine (9) Successive steps in preliminary design which were very useful and so adopted for the study.

- Identification of the problem
- Researching and gathering data
- Developing preliminary ideas
- Selecting a possible solution
- Refining the design
- Preparation of models
- Analyzing the design using standard formulas and information
- Experimenting your design
- Implementing the final solution

For competency based training, learners were passed through all the afore-mentioned design processes. The basic concept under creativity is design and construction. These are vital ingredients which are lacking in the teaching of visual arts which renders the student impoverished of design skill.

Based on the information given by the respondents, it was obvious to say that some Senior High School Visual Arts leavers are not self – sustained after completing the Senior High School Visual Arts Programme.

Learners were later on engaged in on the job oriented training, where they were taken through eight separate lessons with the aim of producing simple bamboo artifacts under a strict supervision governed by well set out lesson plan out of the syllabus.

Trier, (2006) postulates that, Bamboo stands a great possibility of being fashioned out into several artifacts across design spectrum. Some topics for discussion within the period of six months were:

- Designing (Preliminary design/ idea development)
- Designing and construction of bamboo bangles
- Designing and construction of Bamboo hair Clips
- Producing simple laminated bamboo
- Designing and construction of Multi purpose holder
- Sequence of operation
- Designing and construction of Bamboo curtain
- Designing and construction of Bamboo fruit trays

Simple locally manufactured tools like chisels, gouges, cutlasses, saws, clamps and hammers were provided. Correct handling and application of tools and materials were taught for efficiency. Lessons were structured such that researchers had to instruct and supervise works of each group and correct mistakes immediately.

5.Results And Discussion

Having taken a group of Senior High School Visual Arts Leavers, through a six months period of bamboo technology training, the under designed chart reveals the findings that were ascertained during the training. A pre-intervention test was conducted on 10th November, 2008 to weigh learner's skill level through drawing and construction assignment. Their performances were marked out of hundred percent as shown in pre-intervention score in fig.4. A post intervention test was again conducted on 20th March, 2009 to check the impact of the training as shown under post-intervention in Fig. 4 as well

CODE	SKILL LEVELS TESTED BEFORE AND AFTER TRAINING	SCORES MEASURED IN 100%	
		PRE- INTERVENTION SCORE	POST- INTERVENTION SCORE
1	Design Aspect	10	50
2	Tools and Material Handling	15	55
3	Transfer of Design	10	55
4	Measuring of Components	15	60
5	Assemblage	20	60
6	Finishing	5	55
7	Accuracy/Precision	10	50
8	Supervision Exposure	15	65
9	Motivation	10	65

Figure 4: Leavers' successive skills level development

In the course of the period of training three groups were made: Namely, Group A, Group B, and Group C each with a leader.

The reason for the groupings was to enable the researchers to deduce the pace, strength and weaknesses of learners and also for us to give a close supervision to the various fragments to ensure skill development. Training started on 10th November, 2008 with the scheduled time from 9:00am - 12:30pm. The programme ended on 19th July, 2009.

In all the ten lessons, the researchers observed and examined their actions critically as players and teacher facilitators to improving upon the performance of the learners.

This was done through demonstrations, thought provoking questions, leading questions and instant corrections after supervision. Therefore Fig.4 is interpreted as follows:

6.Design Aspect

The topic for discussion was preliminary design with the sub-topic using natural objects to create a jewel box. It was found out as the lesson progressed that most of the learners could hardly draw or sketch from any natural or artificial source. Some of them gave an indication that, they were not even taught idea development in their schools as visual art students. For example, one of them asked, “Sir, does it mean we have to plan a work before execution?”

Planning of the work leads to design. Design leads to the combination of elements and principles of design. Design without which no product can be made is paramount. It surprises one to note that, in the design class some members of group C found it difficult to draw perfect circles and other shapes with free hand. Some handled pencils during drawing as if writing with pen. There was problem of eye-to-hand contact with learners during look and draw exercises.

In the subsequent lessons, Group A stood outstanding in designing, Group C happened to be intermediary. Some learners were found copying other groups work. All because they lack the skill to design hence, there was not uniqueness in terms of variety, all because these artists remained copyists. The lack of skill has contributed to why they did not produce artifacts in any medium for sale to make them self –employed. However, by the end of the six months intensive job related training, learner’s design skill was positively affected because they could now design to a large extent in all the construction projects undertaken with them. That indeed increased the

design skill grade from 10% to 55% as their present level according to the researchers marking scheme. Performances were assessed out of hundred percent, (P/100%) where P= marks scored.

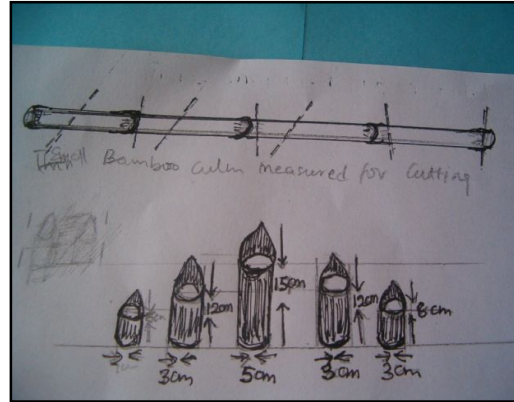


Figure 5: Stages 1 And 2 Of Design Process Of Multi-Purpose Holder By Group A

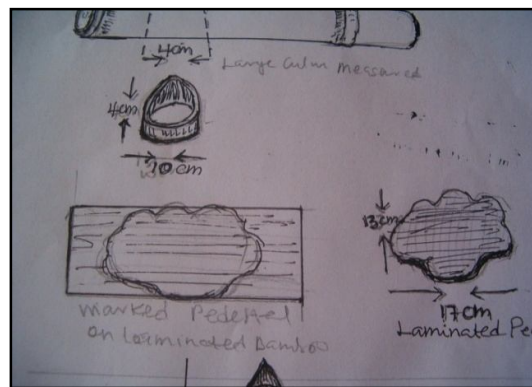


Figure 6: stages 3 and 4 of design process of Multi- Purpose holder by group A

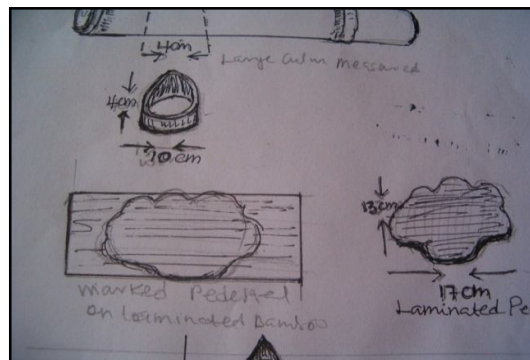


Figure 7: Final stage of design process of Multi-purpose holder



Figure 8: Finished multi-purpose holder

7.Tools And Material Handling

Learners were found to be battling with tools and materials. In a drawing exercise we had with them for instance, the learners had a wrong way of holding pencils. Where pencils were not properly held, shapes were created inaccurately. For example circles were not perfect as shoulders of curves were not sharp.

Handling of painting brushes was yet another problem found with learners.

Learners found it difficult to paint within margins. The reason was that learners' ability in handling brushes was such that brush strokes were found beyond margins when they painted. This situation came from the fact that Visual Arts teachers treat the subject more theoretical than the real practical sense.

Initially, when learners were introduced to the use of cutting tools like gouges, saw, chisels, and so on it was difficult for them to transfer their skill in handling simple drawing tools into such cutting tools. Some of the girls remarked that, they could not handle the saw, forgetting that training leads to perfection. However, by the second month of the training learners were able to handle some of the tools with flair. That sort of cutting outside marked areas, a feature of their former skill was improved upon gradually with time in the programme.

It is worthy of mentioning that, tool handling contributes so much in ones ability to construct after design and because these Visual Arts Leavers lack the acumen of tool handling there was no way they could construct art products and offer for sale to make them self-employed. For now, most of them handle tools perfectly, giving rise to accurate cutting effect into production.



Figure 9: Some Tools Learners Handled

8. Transfer Of Design

Symbols and motifs were used on artifacts as decorative patterns. These patterns were normally done on sketch papers before they were later transferred unto the main art piece.

What the researchers found was that, learners' transfer of design from paper to artifact was associated with inaccuracy. Designs on paper seemed rather bigger or smaller than the-transferred. Motifs and patterns did not look alike as on artifacts. Repeated designs were not proportional and rhythmic. The products could not meet the marketing standard due to low level of decoration on artifacts. The fact was that learners drawing skill of look and draw was too minimal. Having ushered them into that period of one- on- one training, eye- to- hand contact of learners improved very fast that, artifacts produced later met standards.

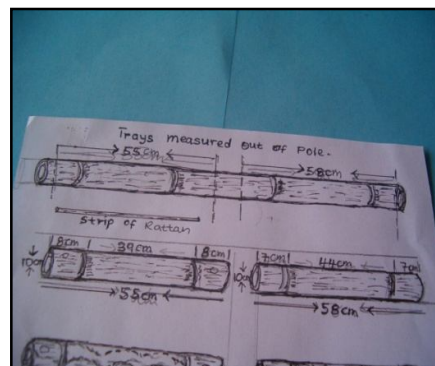


Figure 10 :Dimensions of bamboo fruit trays

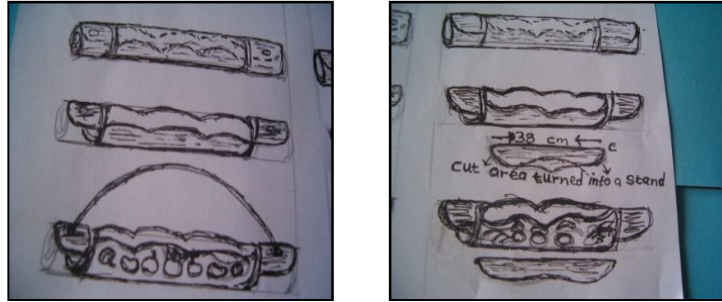


Figure 11: Preliminary designs of groups A and B



Figure 12: Learners transferring design



Figure 13: Transferred motifs in groove carving



Figure 14: Finished bamboo fruit trays

9.Measurement of Components

Early in the programme, learners did not put any seriousness in proportion of work.

Even though, they had an idea of measurement, stricter dimensions for standardization were not so much of their concern. The course instilled into them the importance of proportion during construction. Learners after being made to measure every step from design stage to assemblage gained a lot of experiences in component measurement.

Learners' horizon of measuring got broadened from the former lower level. In all the practical lessons we undertook with learners, special attention was indeed attached to each art piece.



Figure 15: Learners measuring Culms for standardization

10. Assemblage

One finding among the lot that stood outstanding was learners' quick adherence to change in their old sense of assembling practical works. Initially, they arranged components without taking care of principles of design. By the close of the programme, learners considered principles like rhythm, balance, proportion, repetition, contrast etc. into their compositions, bringing practical pieces to the standard needed for the market.



Figures 16 to 20 show learners assembling strips of bamboo into bamboo curtain

11.Finishing

Learners were able to design and construct alright. But the ability to finish the work left much to be desired. Finishing being the final touch of an artifact demands a special treatment. This treatment given to learners on finishing has led to the production of good finishing in bamboo pieces that worth the price. The learners were taught techniques such as spraying; painting; polishing and smoking . Their finished pieces were aesthetically pleasing compared to works done in the early stages of the programme. The indication that learners can resort to good finishing in the subsequent attempt was the high level of performance in some of the works they produced after the training.(See figure 21)



Figure 21: Finished works

12.Accuracy/Precision

Bamboo as a material is not as malleable to be shaped at ease. Yet, it takes a skillful bamboo artist to put it into various shapes. Learners were entirely new to the material, so precision was not obtained in the early parts of the programme.

But as lessons progressed, a reasonable amount of accuracy was exhibited in some worked pieces by learners through sketching and working along outlines. Whatever pieces that were designed at least had resemblance to the source from which came the preliminary idea.

13.Supervision

Supervision in practical subject teaching is vital. Where learners' activities are constantly supervised their output happens to be great. Supervision leads to perfection because it ensures on the job training, an ingredient needed in vocational training.

When the efforts of the learners were supervised, even within that short period there was a progressive performances with respect to design and construction.

This reveals the fact that, learners activities back at school were not seriously supervised hence their inability to be self – employed, having graduated as Visual Arts Students.

The three groupings that were constituted from the sample of twenty – two learners were given all opportunities of which supervision was one.

However, with regular supervision in all stages, improvement was seen to take place on the side of slow learners.

14.Motivation

It was found in the process that one reason for learners inability to practice art after school was that, little was done as morale booster when they were in school. To get learners' efforts coordinated towards a specific objective, motivation is quite important. In the absence of that, learners attitudes towards work becomes minimal. In the training, motivation in the form of encouragement, praises, supply of banana and groundnuts and at times the provision of gari and sugar, learners were motivated. As such learners' zeal and aspiration were higher.

15.Findings

As time was spent on pieces, standards were achieved whereas more and more pieces were produced.

The abilities they had before the programme were not enough for them to produce art pieces for sale. However, after the six months training, learners' abilities took a dramatic step ahead empowering them the skill to produce high standard artifacts.

Some sort of traditional influences and superstitions like days of felling bamboo or trees, days of crossings some river bodies and the negative idea of women using tools for carving in the locality were found to be hindrances for visual arts leavers to practice art in some areas . With persuasion and psychology, learners came to the realization that some of these superstitions and traditional adherence were enemies to progress. In view of that, the few girls amongst the group began to exhibit best work effort .No wonder the work of one of the girls whose father is a gold smith was adjudged the best when it came to individual creation. She fashioned out jewels from bamboo and also ladies belt in bamboo. Another result about the project was that, there was a complete relationship between aesthetics and human environment.

When the training section was over, learners were asked to produce bamboo items of their own choice. In a matter of two weeks, items produced were meticulous. This drew a lot of people into the training centre to watch and buy the exhibits. Many of these items were patronized at the show room ranging from one Ghana Cedi to six Ghana Cedis. Some orders were also placed for some of the items. Some were also sent to the National Centre for Culture in Kumasi for sale. The implication is that more interesting items can be produced, from bamboo and when these are produced a ready market exists for them. The fact that their works were sold was the best motivation they could have.

16.Conclusion

Since the methodology adopted in the study is supporting a change or promoting development, when a serious attempt was made to correct learners areas of weakness they equipped themselves with the needed techniques to benefit from bamboo as a material that grows abundantly and cheap to produce in the country. However, with the job related training of skills in this study, learners were again equipped enough to be creative to produce standard exportable bamboo products for both local and external markets. From the fore-going, it is sufficient to say that total awareness has been created for Visual Art Graduates and the Government on the other hand,to take advantage of the Industry. The study also goes a long way to enable researchers to direct their attention towards the technological advancement in the production of locally manufactured tools and equipment requisite for the Bamboo Industry in Ghana.

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