

Synthetic Twine Macramé Production: An Avenue for Economic Empowerment in Nigeria

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Abstract:

The Nigerian Government is doing her best to cushion the effects of unemployment in the country by introducing industrial policies aimed at promoting small-scale industries. But to an extent, there is still large scale unemployment. Therefore, the study sought to introduce the craft of macramé as an effort towards small medium enterprise (SME). The materials employed in this study are synthetic twines. The twines were collected in assorted colours, and were further sorted, measured, counted and knotted into fashionable female bag and footwear accessories. The study explored the Square Knot, Josephine Knot and Over hand knotting techniques of macramé. Synthetic twine has been discovered to be an affordable, durable, strong and available material with bright colours for the production of fashionable female accessories that could be admired and used by lovers of hand crafted bag and footwear accessories. It has also been gathered from this study that synthetic twine macramé can be of great advantage if properly engaged by individuals to boost entrepreneur and small scale business for economic empowerment of Nigerians.

Keywords: Synthetic twine, macramé, skill acquisition, economic empowerment

1. Introduction

Macramé is a fascinating art that is part of textile and fashion design, it involves the use of knots to create intricate patterns instead of loom weaving or knitting. Macramé knots are widely used in designing items ranging from those of utility to those of decoration, furnishing, or as accessories, using different techniques to make them attractive and beautiful. Macramé has long been in existence with different kinds of strands or ropes being employed in the process of making different items and activities especially those that involve water emission. The present society is such that people are exploring all possible ways to curtail the rising scourge of unemployment that has bedevilled it. The art of being creative in terms of vocational skills acquisition to be self-reliant is an aspect that so many people are into now for the sake of survival. According to Okewu and Jonathan (2014), creativity is the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods, interpretations, etc.; originality, progressiveness, or imagination. Okewu and Jonathan (2014) opined that Creativity occurs when a person, using the symbols of a given domain such as music, engineering, business, or mathematics, has a new idea or sees a new pattern, and when this novelty is selected by the appropriate field for inclusion into the relevant domain. Therefore this research is aim at exploring the production of synthetic twine macramé into fashionable female accessories as an avenue for economic empowerment in Nigeria.

Wise Geek (2014) referred to twine as a narrowed fabric composed of any of several different types of materials and used in a variety of ways. In crafting, twine is used for knotting, knitting, crocheting, macramé, upholstering, rug-making, jewellery making and key chains. Cabrera (2013) added that Twine is any type of thin cord used to tie things together. He classified twine into two categories, the natural fibres - such as hemp or cotton and synthetic twine such as those made out of nylon. Synthetic twine which are strong, colourful, durable, available and affordable had been tested and proved to be a suitable material for the production of fashionable female accessories through macramé.

According to TargetWoman.com (2014), Macramé is an art of decorative knotting without using needles or hooks, by using a series of knots, creating many ornamental patterns. Macramé can be created using any kind of material, for example fine thread can be used to make macramé lace. By a special technique, the macramé craft keeps the knots in place while the work is being done. Synthetic twine macramé is a skill that requires few instruments and can be practiced by anyone with passion for hand-crafted products with or no experience including children. Target Woman further observed that besides the many decorative items and useful products that macramé creates, there are other benefits derived from macramé. The hobby and skill of macramé means different things to different people, some twine and a few basic knots are all a hobbyist needs to explore the

immense possibilities that macramé offers. Macramé is not just a decorative and functional art, it's fun, creative, therapeutic, satisfying and it offers with it a great opportunity to be explored.

According to Amble (1987) A functional piece will have to conform to its intended purpose in terms of size, texture, and finishing techniques. The art of macramé does not require sophisticated instruments and years of experience to practice it, it is also therapeutic in nature, pulling and working of the cords help to strengthen the hands, arms and loosen the joints. Some people find that macramé as an art of repetitive knots used to create designs, is also meditative bringing with it peace and calmness of mind.

Ada (2011), opined that the concept of vocational training is indeed seen as the type of education in which skills and abilities are acquired to practice that which have been learnt for useful productivity. According to Patrick and Nasakhara (2006) in Ada (2011), vocational education is designed to develop skills, abilities, understanding, attitude, work habits and appreciation, encompassing knowledge and information that are needed by workers to enter and make progress in employment on a useful and productive basis. It contributes towards the development of good citizens by developing their physical, social, civil, cultural and economic competence.

Skill acquisition is a systematic process of imbibing new ideas and knowledge of executing accurate professional functions while skill development is an essential aspect of empowerment, which builds an individual to be self reliant, (Kennedy, 2013). Skill acquisition development and income generating activities are a possible solution and strategies that are fundamental for economic empowerment.

Economic empowerment is the ability to bring a change to ones economic status by becoming self reliant. Macramé skill is a talent that if duly employed and explored can give a better chance to individuals and communities of becoming a stronger player in the global market place. Entrepreneur empowerment is the process of acquiring opportunities that if well utilised can lead to self-sufficiency eliminating prospected poverty and unemployment. Macramé skill can be hereditary and can be passed from one generation to the other. Therefore, this study is aimed at improving and encouraging small scale businesses for boosting economic growth in Nigeria.

Entry into macramé making business can be easy because of the relatively small amount of capital needed to purchase materials and tools to start the business. A new entrepreneur needs just to have design flair for macramé, a niche in textile business and a small working capital. The simplicity of the central process of macramé making (using knots to create intricate patterns), is what makes the entry into its business easy.

Macrame making can be developed into a viable textile cottage and small scale industries, which according to Dutsenwai et al (2010) are direct avenue of empowering many individuals and groups from different categories of Nigerians, by providing them with variety of job opportunities ranging from production and marketing of both raw materials and the finished products. Other important contribution is that of revenue generation for all the three levels of government in Nigeria. This will stimulate sustainable commercial and industrial growth as opined by Dutsenwai et al (2010).

2. Materials

Materials employed were: Synthetic Twine, Measuring Tape, Scissor, Candle, Matches, Rubber bands.

3. Designing

The designing stage involves the sketching of the macramé bag and footwear designs, see plate 1a-1e. It was further redesigned using computer aided design, see plate 1f-1h. Colours were introduced according to how they will be employed during the production.

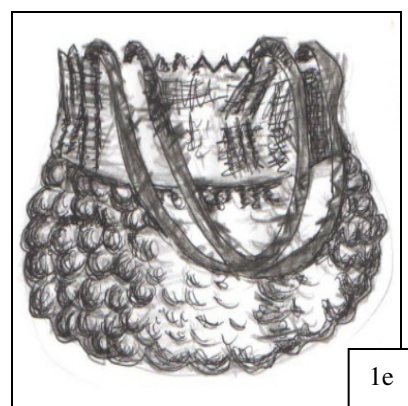
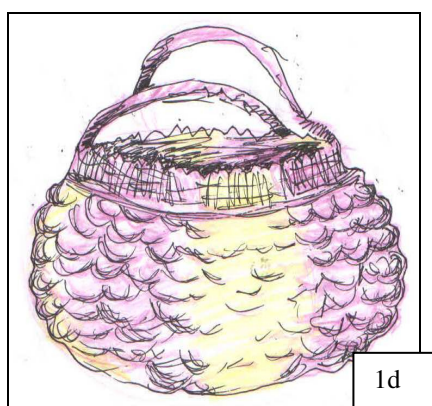


Plate 1a-e: Macramé footwear and bag accessories sketches

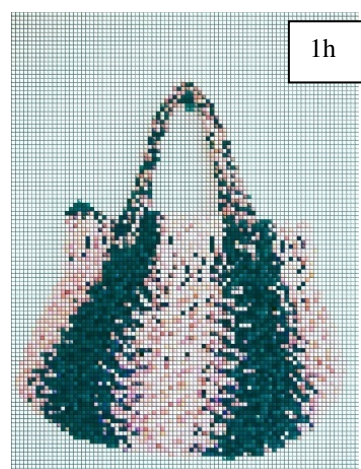
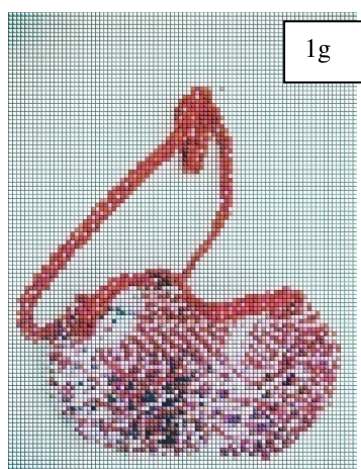


Plate 1f-h: Macramé footwear and bag accessories computer aided designs

4. Production

4.1.1 Material Preparation

Synthetic twine were obtained in wraps of different colours, see plate 2a. The twine were unwrapped, see plate 2b. It was then measured into desired length for knotting depending on the design to be produced, see plate 2c. The twine was counted and arranged according to how they will be employed in the knotting process, see plate 2d.



Plate 2a: Multiple colours of synthetic twine wraps



Plate 2b: Unwrapping of synthetic twine wrap.



Plate 2c: Measuring knotting yards.

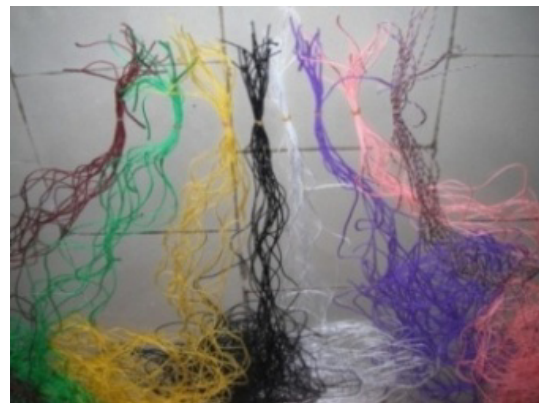


Plate 2d: Sorted strands

Table 1: Measurement of Synthetic Twine Employed in the Production of Fashionable Female Bag and Footwear Accessories:

	Number of Twine Strands	Length of Twine Strands
Body of the bag	104	5 metres each
Handle of bag exterior	64	9 metres each
Handle of bag interior	64	7 metres each
Base of the bag	24	4 metres each
Foot wear rope	28	6 metres each

Materials estimation for the production of advanced tote bag accessories shows that the body of the bag consumed 104 strands measuring 5 meters each. , 128 strands measuring nine 9 meters each were used for the

bag handle, the base of the bag took 24 strands measuring 4 meters each, while the foot wear accessories took 28 strands measuring 6 meters each. From the above analyses of twine material estimation, it is important to note that the bigger the bag the more materials it consumed.

4.1.2 Macramé Knotting of Bag Accessories

Square knot, Josephine knot and Over-hand knot were the knotting techniques engaged, because of their design patterns. Square knot is the basis of many designs according to (Hoeschen, 2014) while Dunmire (2014) identifies square knots as the primary knots for macramé.

Over hand knotting technique was employed at the beginning of the production to start the handle knotting at the centre to give an equal measurement, see plate 3a. Square knotting technique was adopted to knot the bag handle, see plate 3b. Single square knots were knotted, sorted and counted into the number needed for the design, see plate 3c. Alternating square knotting method was used to join the single square knots together, it was repeated several times to form a tight and neat rim for the bag design, see plate 3d.

Josephine knots were then introduced in working out the bag body, because it has a larger knotting pattern that enlarges the bag body and help in defining the shape of the bag also candle light was used to replace short strands during the knotting process. See plate 3e. Alternating square knotting style was also adopted in ending the knotting process thereby gathering the loose weaving together again, see plate 3f. Overhand knotting was used to tie the excess strands together, the excess strands were trimmed and melted, also see plate 3f.

Excess strands were trimmed and melted before the base was weaved, see plate 3g & 3h. Lastly alternating square knots was still employed to knot the bag base with the aid of the melted excess strands, see plate 3i. Plate 3j shows the bag base from the interior while plate 3k shows the bag base from the exterior. Lining material was sown into the interior of the bag and zip was attached and properly finished, see plate 3l & 3m.



Plate 3.3a: Over – hand knots for handle weaving.



Plate 3.3b: Handle weaving in process.



Plate 3c: Single square knots



Plate 3d: Attached single square knots to handle for bag body weaving

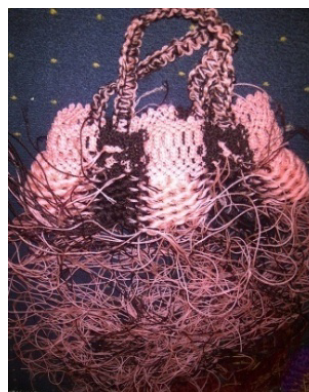


Plate 3e: Showing Square knotting technique at the bag rim and Josephine knotting technique on the bag body



Plate 3f: Completed bag body before trimming



Plate 3g: Trimming of Excess Strands with candle light



Plate 3h: Outcome of the trimming



Plate 3i: Bag base weaving



Plate 3j: Bag base from the interior



Plate 3k: Bag base from the exterior

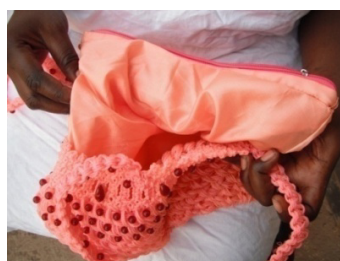


Plate 3l: Putting of lining into the bag Interior



Plate 3m: Fixing of interior lining unto the bag

4.1.3 Weaving and Fabrication of Foot Wear Accessories

Weaving of the foot wear accessory followed the same steps as that of the bag knotting, the twines were sorted, measured, and counted. Single square knots were knotted and alternating square knotting technique was adopted in joining the weaving strands together and weaving continued to the desired length. Foot-wear accessory were produced in line with the designed sketch.

The study employed the assistance of a shoe maker in producing the foot wears. The processes involved were, sorting of footwear ropes, designing and making of the footwear inner layer and soles, lining of the footwear accessory and the selection of mode. The footwear ropes were measured and sized on the mode, gum was applied unto the inner layers, soles and ropes were all fixed together carefully to produced the completed foot wears.



Plate 4a: Sorting of the footwear ropes

Plate 4b: Footwear inner layer and soles

Plate 4c: Lining of the footwear ropes



Plate 4d: Footwear Modes



Plate 4e: Measuring and Sizing of footwear rope design

Table 2: Cost Implication of Materials Used in the Production of Fashionable Female Bag and Footwear Accessories:

Materials	Quantity	Cost	Total
Twines	20 wraps	N100/wrap	N2,000
Lining	One Yard	N120/yard	N120
Zip	One Zip	N50	N50
Foot wear	1	N650	N650
		Grand total	N2820

Cost estimation for the production of advanced tote bag accessories shows that N2820 was used for the production of both the bag and foot wear accessories. The bigger the bag the more money it consumed. Macramé advanced tote bag of this nature can be sold for twice the amount used in the production and above depending on the buyer. Therefore it is worthy to also note that macramé skill is a gainful employment with profit.

5. Production Results



Plate 5a: Purple - white foot-wear



Plate 5b: Pink-black foot-wear



Plate 5c: Green - orange foot-wear



Plate 5d: Multi-Coloured purses



Plate 5e: Purple-pink cross bag



Plate 5f: Red-white cross bag



Plate 5g: Multi-Coloured Tote bag



Plate 5h: Cream-brown school bag



Plate 5i: Brown-white tote bag



Plate 5j: Orange-white tote bag



Plate 5k: Pink-brown tote-bag



Plate 5l: Black-white tote bag

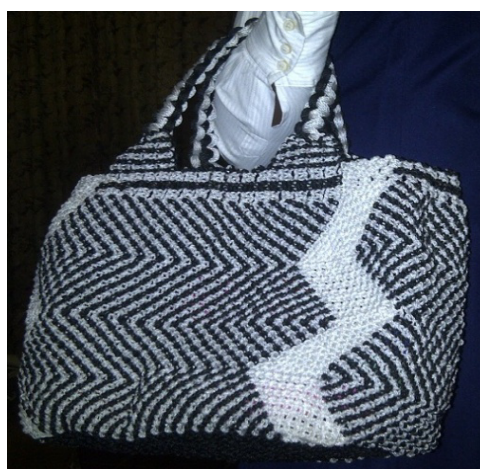


Plate 5m: Black-white tote bag

6. Summary

Macramé designing is an easy craft to learn but requires a lot of dedication, discipline and commitment in order to be creative in producing products that can complete successfully with contemporary accessories in the market.

Therefore to acquire the skill of macramé, the learner must be creative, diligence, patience, interested, courageous, submissive, and having aptitude among other qualities needed for skill acquisition.

Overhand knots, Square knots and Josephine knots among other macramé techniques as employed in the study have proved to be very effective and reliable in evolving firm and strong female accessories. They exhibited unique design patterns that if well manipulated by designers can boost marketability of the products.

The study has revealed that the skill of Macramé if properly learnt and utilised can be a lucrative job opportunity, since it is a skill that can be practiced by anyone with interest, materials and tools for macramé are readily available and very affordable.

The study has proven that the art of synthetic twine macramé dress accessories could be a strong entrepreneur skill that can lead to a better growth in the socio-cultural and economic empowerment of individuals and communities by creating job opportunities and self reliance.

7. Conclusion

In conclusion the study shows that twine material are affordable, durable, available and can be used conveniently. Therefore designers and entrepreneurs venturing into small scale businesses should take advantage of this fact to further maximize the availability of synthetic twine material for income generation for livelihood.

8. Recommendation

This study was limited to the use of synthetic twines as a medium, other twines could be discovered and engaged for macramé general dress accessories production. The study employed the square knot, Josephine knot and overhand knot techniques of macramé, further study can be carried out using the Barry knot, Lark's head knot, Double half hitch knot and Bobbles knots macramé techniques for their unique patterns and designs.

REFERENCES

- Ada P.O (2011). *Industrial Design as a Vehicle for Vocational Training and Self Reliance: Textile Design in Particular*, DID Design Journal of Industrial Design, Volume 1, Review 2, PP. 66-71
- Amble L. eta'l (1987). *Complete Guid to Needle work*, Published by Readers Digest Association Limited, Italy. PP. 356-370.
- Cabrera . H (2013). *Types of Twine*, retrieved http://www.ehow.com/info_8181727_types-twine.html
- Dutsenwai, S. A, Saleh, R and Dutsenwai, A. S (2010) Consequence of Government Surpport to small scale Textile Industries for National Development. A paper presented at the 12th Annual National Conference of the National Association for Advancement of Knowledge (NAFAK). Monday 15th – Friday 19th March 2010, at Kaduna polytechnic, Kaduna State.
- Dunmire C. (2014). Exploring Macramé Knotting and Other Fiber Arts <http://www.creativity-portal.com/howto/artsandcrafts/macrame.html>
- Hoeschen D. (2014). *Basic Macramé Knots* <http://stonebrashcreative.com/MacrameTutorial.html>
- Okewu E.J. and Jonathan E.D.(2014). *Creative beads embellishment on ceramic wares in Nigeria*. IOSR Journal Of Humanities And Social Science (IOSR-JHSS) Volume 19, Issue 9, Ver. II (Sep. 2014), PP 00-00 e-ISSN: 2279-0837, p-ISSN: 2279-0845. www.iosrjournals.org
- Kennedy E. U. (2013) Status of technical education curriculum programme for skill acquisition in a dynamic society, British Journal of Education Vol.1, No.1, pp.42-51. Published by European Centre for Research Training and Development UK (www.eajournals.org)<http://www.eajournals.org/wp-content/uploads/Status-of-Technical-Education-Curriculum-Programme-for-Skill-Acquisition-in-A-Dynamic-Society.pdf>
- Target Women (2014). How to Macramé. <http://www.targetwoman.com/articles/macrame.html>
- Wise Geek (2014). What Are the Different Types of Twine? [.http://www.wisegeek.com/what-are-the-different-types-of-twine.htm](http://www.wisegeek.com/what-are-the-different-types-of-twine.htm)
- Vivika H. D. (2013). Basic Tips for Sewing Beads on Fabric. <http://www.quiltingdaily.com/blogs/quilting-daily/archive/2013/08/27/basic-tips-for-sewing-beads-on-fabric.aspx>

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