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Design and Production of Textile Mural: Combination of Computer Aided Programmes and Conventional Methods, An Alternative Innovative Approach

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Abstract
This novel textile mural production technique involves combination of digital printed fabric on flex sheet in conjunction with conventional appliqué and embroidery techniques. It was art-based studio research design that made use of exploration and experimental methods in the execution of four murals with different scenery. The works depict various activities within the Textiles section programme, Faculty of Art, College of Art and Built Environment, KNUST as a case study with the intent to promote and educate the populace. The activities were arranged into different scenery out of which four were selected for production. Step-by-step universal design methodology was carefully followed to ensure precision and easy reproduction of the murals. Flex sheet was used as substrate for the print out of the final works on which dyed, printed and woven fabrics were fixed to complete the sceneries. Wooden frames and transparent polyethylene rubber were used for the finishing of the works for them to be able to withstand harsh weather condition in order for them to be suitable for both out-door and in-door purposes. Background lighting system was installed within the frame to enhance their aesthetic appeal. This work was set to address the cumbersome, tedious, time consuming processes involve in conventional production of textile mural; cutting of pieces of textile materials and fixing them onto a substrate by applique and embroidery techniques. The importance of this alternative method is that it takes care of all the setbacks in the convention method as well as ensures precise and accurate reproduction of the work if need be. These were successful test projects that have set a new pace in design and production of textile mural. Combination of computer-aided design programmes like Adobe Photoshop CC and CorelDraw applications enable easy reproduction of textile murals in relatively shorter time with much precision and good finishing. Textile artists and interested researchers can now explore this new area of research for national development.
Keywords: textile, mural, Adobe Photoshop CC, CorelDraw, flex sheet, appliqué, embroidery

1. Introduction

A mural is an extremely large work of art, most often a painting applied to the surface of a wall, ceiling, or floor for aesthetic and didactic purposes (Wisegeek, 2012). Mural can be referred as fresco and it could be applied to or made integral part of the surface of a wall, ceiling or floor (Adams, 1999). Murals can be made as sculptures, paintings, ceramics, mosaic, digitally printed and in many other forms. In Ceramic mural production, any tile or fired clay that is glazed with a design or a number of such tiles that are individual segments of a larger design and fixed to a wall or floor can be referred to as a mural (Tarantino, 2011; Donkor and Howard, 2014).

Conventional materials and techniques used in textile mural production comprise pieces of printed fabric, tie-dye, woven cloth that are fixed to a substrate by appliquè, bonding and embroidery. The production process is tedious and time consuming resulting in high cost of a product (Howard and Opoku-Asare, 2012). Whiles textile mural may take about a month on the average to produce a medium size, sculptural/ceramic/wall painting mural may take even longer period of time in its execution (Donkor and Howard, 2014). Textile mural is mostly limited to indoor use due to its inability to be able to withstand harsh weather conditions whereas sculptural and ceramic murals are much more resilient to different weather hence they are most suitable for outdoor use. In line with the limitations enumerated above that textile murals face, this work sort to address the challenges by the introduction of additional materials and combination of new technique with conventional ones to come out with more resilient textile mural that could be produced in relatively shorter time, allow for easy reproduction with precision, less cost effective and suitable for both outdoor and indoor purposes. New additional materials, tools and techniques that were incorporated in the design and production process include: flex sheet, polyethylene rubber, with Adobe Photoshop CC and CorelDraw computer soft ware programmes respectively. The former was to address the challenges faced in terms of durability whereas the later has a competitive advantage of fast, easy reproduction and cost effective production process.

1.1 Historical Background Of Murals

There have been historical records of murals since prehistoric era. Typical examples are those discovered in 1879 in the caves of Altamira (Northern Spain). Ancient Egyptians decorated the walls of their palaces and tombs with brightly painted murals (Howard and Opoku-Asare, 2012).
Historical record has it that the development of cave art coincided with the displacement of Neanderthal man by

anatomically modern man, starting around 40,000 BCE. It was from about that period that the earliest rock art began to emerge in caves and rock shelters around the world, but especially throughout the Franco-Cantabrian region (Age & Painting, n.d.).

Cave paintings created by primitive people are found on every continent. The oldest ones were made about 35,000 years ago. Cave paintings in Europe and Africa often show images of hunting and daily activities. In the Americas and Australia, on the other hand, the paintings tend to be more symbolic and less realistic. Don Marcelino and his daughter found the first cave paintings in 1870 in Altamira, Spain. They were painted by the Magdalenian people between 16,000-9,000 BC. This would have been 11,000-19,000 years ago. These paintings at Altamira are mainly of the bison. Many of the bison are drawn and then painted using the boulders for the animal's shoulders. The Hall of the Bulls is the most impressive. It is composed of horses, bulls, and stags. Some of the animals have been painted over, suggesting that different groups of people might have lived in this same cave (Scholastic, 2012).

Cuevas de las Manos (Cave of the Hands) is located in the Rio Pinturas ravine, northeast of Santa Cruz, Argentina. Its rock walls display numerous hand paintings in vivid colours. The Tehuelche (tuh•WEHL•cheez) people created the paintings between 13,000 and 9,500 years ago.

Plate 1. Cuevas de las Manos, Argentina

Cave Paintings at Tassili n'Ajer, Algeria depict women, children, and cattle. It is located in at Tassili n'Ajer (tah•SEEL•ee nah• ZHEER). The site contains more than 15,000 images. They depict shifts in climate, animal migrations, and changes in human life with the oldest paintings dated back to about 6000 B.C. Images continued to be painted until around the second century A.D.

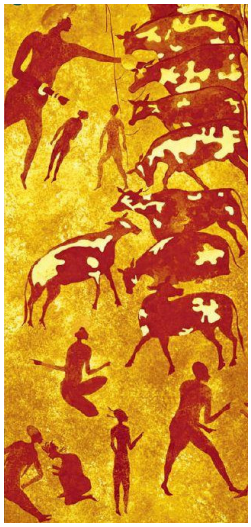

Plate 2. Cave Painting at Tassili n'Ajer, Algeria

1.2 Types Of Murals And Techniques Of Production

A mural is determined by the method, technique and material of media used. The common ones known include painting, sculptural, mosaic, cement, textile, collage and ceramic (Wikipedia, 2014). Related literature reviewed confirms that famous murals are in the wall paintings, some them include: Fresco painting by Michelangelo. It is a technique of mural painting executed upon freshly laid, or wet lime plaster. Water is used as the vehicle for the pigment to merge with the plaster, and with the setting of the plaster, the painting becomes an integral part of the wall; A mural of Roman-Egyptian mummy portrait executed on wood showed strong evidence that the medium was composed of beeswax and soap. Experimental studies with a wax-and-soap technique showed that this painting technique allows reproduction of the physical characteristics of many Roman-Egyptian encaustic mummy portraits with greater accuracy than the fresco painting technique (Cuní, Cuní, Eisen, Savizky, & Bové,

2012).

Sculptural mural is a pictorial representation on a wall using relief techniques with any sculptural media like clay, cement, stone, Plaster of Paris (P.O.P), among others. The figures can be directly modeled on to the wall or made in the form of panels and fixed to the wall (Donkor & Howard, 2014). Sculptural mural usually form part of the architecture of the building. Plate 3 shows an earth-sculptural mural by Juana Alicia. The design has been made in raised and sunken reliefs making the work look three-dimensional.

Plate 3. Tierra Earth–Sculptural mural by Juana Alicia

In ceramic mural, coloured tiles with motifs are used to express an idea or concept. Tiles of varying sizes, colour and motifs are arranged to create meaningful picture based on general principles of design. It may be attached to a wall or done on a wet plaster. The tiles are polished and glazed enhancing their appearance and durability. Example is "The Olive tree of Jerusalem" by Balian Plate 4.

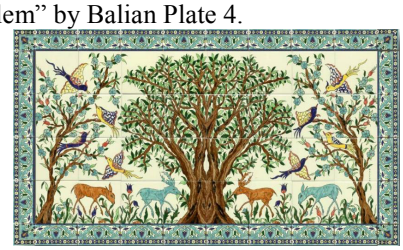

Plate 4. The olive tree of Jerusalem mural by Balian

Fabric mural is the use of textiles materials, processes and technique to create pictorial designs to be attached to walls. Textiles materials such as printed fabrics, woven fabrics and dyed fabrics are used to create desired effects and patterns in a picture. Appliquè, embroidery and use of adhesive are some techniques used to join or secure the pieces of fabric together. Simplicity of forms and organization of design elements are very essential factors in mural production (Howard and Opoku-Asare, 2012). Murals based on fabric and textile techniques seem to have limited application probably because of their susceptibility to deterioration with age. Since creativity through experimentation underlies innovation, textile murals can serve as a hatchery for new ideas in studio art production. Plate 5 is a fabric mural composed with the theme "The Pride of Ghanaian Women". Cut pieces of printed and woven fabrics were used with appliquè, embroidery and bonding as the technique of application to secure them together.

Plate 5. **"**The Pride of Ghanaian Women" by Howard and Opoku-Asare

Mural design is conceptualized to conform to activities that are significant in the environment where it is to be used (Howard and Opoku-Asare, 2012). The mural artist must conceive pictorially a social, religious, or patriotic theme on the appropriate scale in reference both to the structural exigencies of the wall and to the idea expressed (Encyclopedia Britannica, 2014).

Digital Mural is an alternative approach to hand-painted or airbrushed mural that can also be applied to wall surfaces. Already existing murals can be photographed and then be reproduced in near-to-original quality. The disadvantages of pre-fabricated murals and decals are that they are often mass-produced and lack the allure and exclusivity of an original artwork. The Frescography technique, a digital manufacturing method (CAM) invented by Rainer Maria Latzke addresses some of the personalization and size restrictions (Wikipedia, 2014).

Plate 6. CAM designed Frescography by Rainer Maria Latzke

Intensive literature reviewed show a gap in application of computer aided design soft wares like Adobe Photoshop CC and CorelDraw in production of textile mural for which this work sort to combine the use of these software and the conventional techniques of appliquè, embroidery, bonding etcetera to come out with an innovative, efficient and aesthetically appealing forms of Textile murals to enhance our environment.

2. Materials And Methods

Conventional materials used in the production of Textile mural include; fibres, yarns, printed, woven and batik tie-dye fabrics. The work adopted art studio-based research design that employed experimental and exploratory methods. Art studio-based research involves systematic use of the artistic process, the actual making of artistic expressions in all of the different forms of the arts, as a primary way of understanding and examining experience both by researchers and the people that they involve in their studies (Mcniff, 2007). In addition to the conventional materials the experiment sort to introduce new material like flexi sheet as a substrate, stiffener that is a non-woven material that was used to interfaced the other materials for the purpose of embroidery, tracing wheel that is a hand held device use to trace pattern, design or cutting line from one material unto another. It was used to transfer designs and mark out stitching lines and thick transparent polyethylene that was used in framing the finished works to serve as protective covering against unfavorable weather conditions. Appliquè, embroidery and bonding techniques were combined to successfully fix the selected materials together.

2.1 Design Development

In the design development process for these textile murals, the universal design method was used. It states among other things that although steps of the design process may differ, the basic design procedures remain the same. The recommended steps are as follows:

a. Writing and reviewing a specification; specification is an absolute must, especially as it serves as guide for choosing the right technology and tools for the work.
b. Choosing technology and tools; Specification will help you to find technology and pricing that best meet your requirements. You can then choose tools that work well together and with the device and technology that you have chosen.
c. Verification; this is a ‘super step’ because it comprises several other steps of the UDM. The exact steps that make up verification are open to argument and vary according to the type of device that you are designing, but you can generally break verification into the following steps, each of which is essential to the entire process: simulation, design review, synthesis, physical implementation, and formal verification.
d. System integration and test; At the step for system integration and test, you are responsible for determining that the entire system, including the device that you have designed, works correctly (Zeidman, 2002).

Summary of UDM steps is illustrated in Fig. 1.

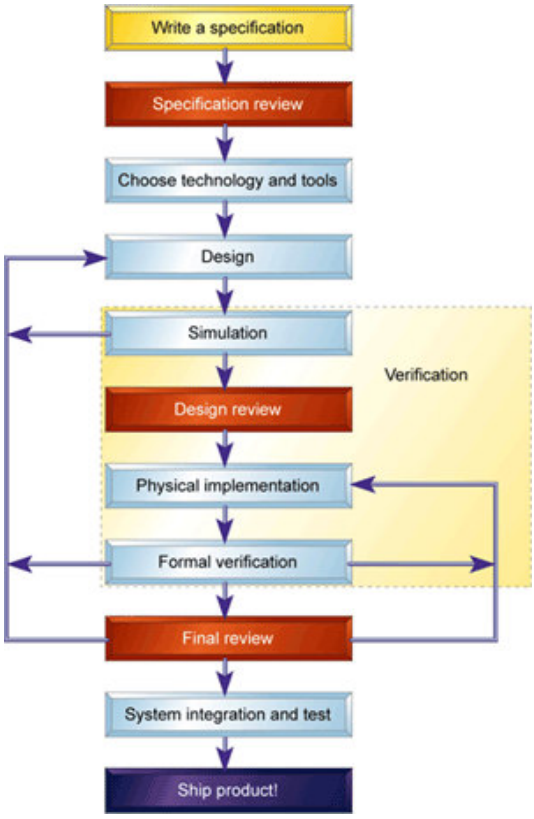

Figure. 1. Steps of Universal Design Method

These UDM steps outlined were systematically followed in the execution of the works. After the specification by way of dimensions of the four textile murals were determined in the following order: Project one and two measures 30 x 48 inches where as Project three and four 48 x 96 inches. In addition to selection of suitable materials, the next step was to choose appropriate technology and tools. Design sketches were made on paper and developed using the Adobe Photoshop CC. It was also applied in design layout, selection of colour schemes and finishing. Parts of the finished designs were digitally printed and the rest involved combination of appliquè and embroidery techniques. Designs were made up of patterns, textiles fabrics, figures and objects. The work comprise four design projects; the first concept depicts Kwame Nkrumah University of Science and Technology emblem, the second was to project the various skill acquisition programme of the Textiles department at Faculty of Art, KNUST, the concept behind the third project was an abstract African woman clothed in colourful indigenous African fabrics whiles the four project adopted the *Sankofa yen nki* Adinkra symbol literally meaning "go back for something is not a taboo" an Akan proverbial symbol.

Design Development Of Project One

The recommended steps in the universal design methodology were carefully followed in the execution of these project works. A number of options were considered before the final choice of specification for projects one and two based upon the place where they were to be placed. The reception hall of the Faculty of Art, College of Art and Built Environment, Kwame Nkrumah University of Science and Technology that is indoor. This served as a guide the selection of appropriate materials, tools and technology for execution of the works. Flex material was chosen as substrate in addition to cut-offs from printed, Batik tie-dyed and woven fabrics with digital printing as the technology. Appliquè, embroidery and bonding were the techniques used to fix the pieces together. The same procedure was used in executing projects three and four and details of methodology are outlined below. But the difference was that they were placed out door at the colleges of science and engineering with the intended purpose of educating the rest of the university community about activities of the textiles section in order to market the programme of study. Again it was to test proof the durability of the finishing coating that was used to enable the works to be able to withstand adverse weather conditions.

The KNUST emblem was centered on portrait page with a dimension of 48 inches x 96 inches. The emblem was outlined with thick lines to make it bold by the use of the pen tool. Lines were drawn around the emblem and filled with black. The lines were merged together to form outlined KNUST emblem Plate 1.

Plate 7. Outlined KNUST logo

The logo is coloured black and yellow to differentiate it from the background. Using the magic wand tool, part of the logo was selected and filled with colour. The brush tool was used to fill the colours Plate 8.

Plate 8. Coloured KNUST logo

A background pattern is created for the design. It is made up circles of different sizes and thickness. Pen tool was used to draw the circles and filled with black colour using the fill option. The circles were repeated to form an all over pattern Plate 9.

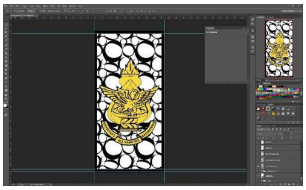

Plate 9. Background pattern

The background pattern is rendered with tie-dye and printed fabrics. Rendering of fabrics was done by the clipping mask option. Select and right click the fabric layer and choose “create clipping mask”, this fix the fabrics to the background pattern. The fabrics are randomly placed, but colour harmony was taken into consideration Plate 10.

Plate 10. Background design with fabrics

The design was finished at this stage. Edges of shapes and background pattern were cropped to fit the working page. The design was complete with the KNUST emblem being the focal point of the design.

Plate 11. Final design of project one

Plate 12. Framed design of project one

Design Development Of Project Two

An abstract image of African woman was used to create design. The image was outlined with thick black lines using the pen tool.

Plate 13. Outlined design

Parts of the figure were coloured black using the brush with transparency of 100%.

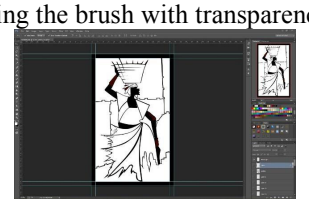

Plate 14. Parts of the figure coloured black

The design was rendered with textiles fabrics by fixing fabrics to the selected patterns using the clipping mask option when you right click on the fabric layer.

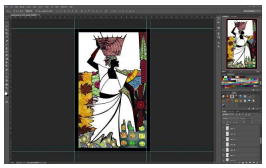

Plate 15. Design rendered with fabrics

Plate 16 is the final design of project three. Stitch effect used to make elements of design standout. Brush tool was used to create the stitches around the pattern.

Plate 16. Final Design of project two

Design Development Of Project Three

Preliminary sketches were made and developed with Adobe Photoshop CC to create a simple floral pattern. The pen tool was used to draw the pattern and filled with black colour Plate 17.

Plate 17. Simple floral pattern

The simple floral pattern is repeated to create a large pattern. Pattern was copied and pasted to produce an all over floral pattern Plate 18.

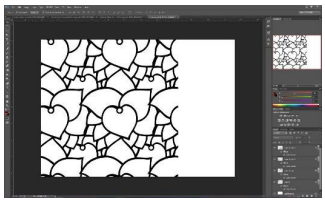

Plate 18. Repeats of simple floral patterns

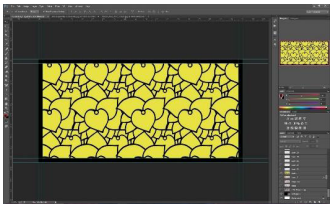

Plate 19. Final floral pattern

A scissor pattern was created to depict fashion. It is made up of scissors and cutting lines. The pen tool was used in drawing the scissors and cutting lines Plate 20.

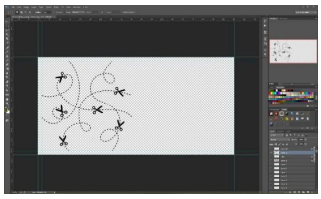

Plate 20. Repeat of scissor pattern

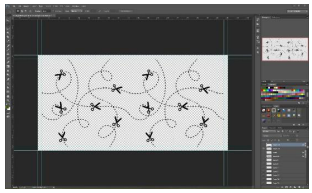

Plate 21. Final scissor pattern

The floral pattern and scissor pattern layers were combined together by copying the pattern of scissors and pasting it on the floral layer. The scissor layer must be above the floral pattern on the layer panel.

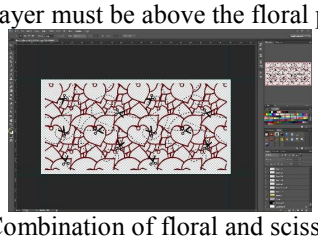

Plate 22. Combination of floral and scissor patterns

The final pattern is rendered with pieces of textiles fabrics. A wide variety of printed textiles designs such as fancy prints, wax prints, java, tie-dye fabrics and *Kente* fabric were used for this project design. Magic wand was used for selection of the patterns and fabrics are fixed to the selected shape by the clipping mask option.

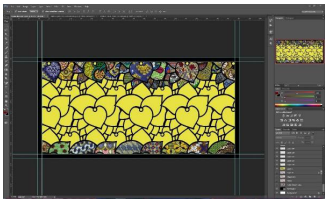

Plate 23: Rendering of floral pattern with fabrics

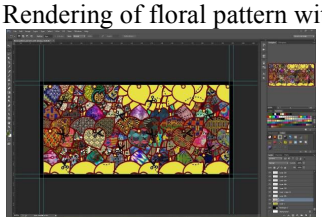

Plate 24. Final pattern with fabrics

Design for project the second project is complete. A stitch effect was used to make the elements of the design stand out. Brush tool was used in making of the stitches around the patterns.

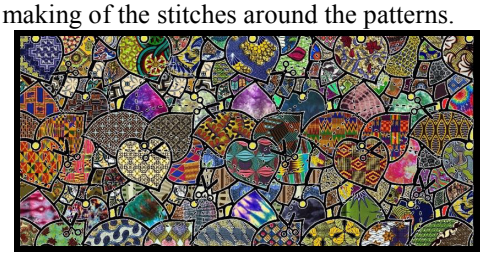

Plate 25. Final design of project three

Design Development Of Project Four

The design was created using the *Sankofa* Adinkra symbol. The *Sankofa* symbol was drawn using the pen tool, stroked with lines, copied and flipped horizontally on the page.

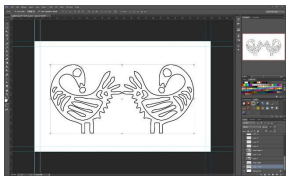

Plate 26. Outlined *Sankofa* Adinkra symbol

Plate 27. Modified motif

Background pattern was created with tree branches as source of inspiration. Branches of trees were drawn using pen tool and filled with black.

. Plate 28. Motif with background design

Final design is rendered with fabrics. Magic wand was used for selection of the patterns, and fabrics were fixed to the selected shape by the clipping mask option.

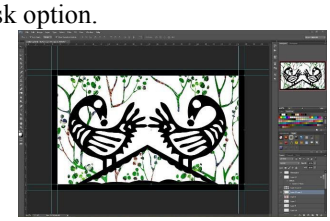

Plate 29. Background design rendered with fabric

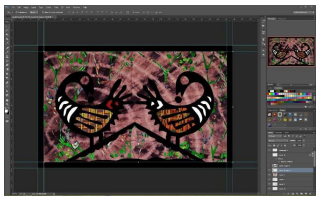

Plate 30. Rendering of design with fabrics

The design is finished with stitches and has a dimension of 30 inches x 48 inches.

Plate 31. Finished Design of project four

2.2 Finishing Process

The final designs were fitted to the desired sizes and printed digitally on a flex sheet. The print out is dried to prevent bleeding of printed colours. Pieces of fabrics were cut and attached to flex sheet using appliquè technique. This was done carefully to ensure cut out pieces matched the final design printed i.e. tie dye fabrics were fixed on tie dye printed parts on flex sheet, same for other fabric designs. Pieces of fabrics were made firm with stiffener by ironing. The stiffener is cut to desired shape and size. The pieces of fabric were pinned on the design areas where they were supposed to be fixed. Appliquè technique is used to attach pieces of fabric to flex sheet. The pieces of fabric were sewn onto the flex sheet with sewing machine. The process was tedious and requires a lot of patience and diligence to achieve excellent results by way of good finishing. The textile murals were laminated with rubber in order to ensure durability and to be able withstand adverse weather conditions so that they could serve both outdoor and indoor purposes. The murals were framed with in-lay lighting system to enhance their aesthetic appeal and also ensure that they stand out even in the dark. They are suitable for public places such as hotel courtyard, conference room, arrival hall at airport and many such places of public interest. One outstanding merit of digital textile mural is that they can easily reproduced in a relatively shorter time with much precision as compared with the conventional methods discussed in the literature reviewed.

3. Discussion Of Results And Findings

Different kinds of textile comprising woven, printed and tie-dyed fabrics were used as elements of design for the projects work. The fabrics depict various specializations within the textiles programme. The use of pieces of woven *Kente* cloth represents weaving, printed textile comprise wax prints, imitation wax, java, fancy prints, upholstery designs etc. used in creating textile mural. Fashion design aspect of the programme was represented by incorporation of scissors pattern, tape measure, figure of woman and floral pattern where as pieces of tie-dye fabrics represented resist dyed techniques like batik, tritik, marbling, folding, splash etcetera. Innovation in this work aside application of Adobe Photoshop CC and CorelDraw in the design process include introduction of flex sheet as a substrate on which the other textile fabrics are fixed by appliquè and embroidery techniques. Murals are usually large in sizes with intricate details that require a lot of care to give it a good finish.

3.1 Verification Project Integration And Testing

The purpose of verification and integration of the project was to ascertain that the set objectives have been achieved. The first objective was to design and produce a textile mural that could be reproduced with precision within the shortest possible time. This was very successful with the choice of digital printing technology on flex material. It took a week from start to finish; that is design conception and development, software manipulation, print out to final framing and finishing. Comparatively with conventional textile mural design and production, it takes several months to execute a single project and the possibility of reproducing the same work with precision could not be guaranteed. Again another objective was to produce a textile mural that could serve both indoor and outdoor purposes. To achieve that led to the choice of thin transparent rubber sheet to line the surface of the finished work before final framing was done. That protects and preserves the work from rainwater, harsh weather and fugal attack. As part of the test projects three and four were mounted in the open at Queens royal garden, KNUST and had stood the test of time from the beginning of 2015 till date. Another objective was to educate the non-textile artist of the university community about the activities and skill acquisition courses within the textile programme. Below are the results of a survey conducted to that effect.

The population for the study was stratified into two groups; namely 30 textile artists and 20 others that comprise workers and visitors. Data collected were analyzed with the use of Pie chart as in Plates 24 to 28.

In order to ascertain the average duration for production of conventional textile mural, the textile artists were asked to estimate how long it could take for them to design and produce a medium size textile mural. This question was directed towards textile artist and the options were as follows:

a. *within a month* b. *within three months* c. *within six months*

The responses have been presented in Fig. 2.

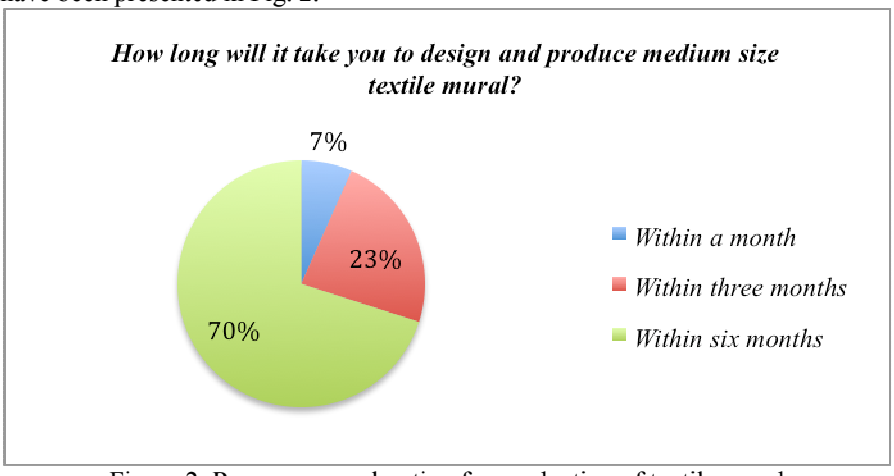

Figure 2. Responses on duration for production of textile mural

Twenty-one (21) out of thirty (30) opted for *within six (6) months* duration and that formed 70% of that population. Seven (7) of them that is 23% said they could produce it *within three (3) months* whiles two (2) out of the thirty (30) said they could execute it *within (1) month*. In effect more than two-third of respondents agreed in principle that it could take approximately six (6) months to design and produce medium size textile mural. The work of Constance Howard captioned *The Country wife* is not only iconic of its time in terms of style and social content, but also a major example of the work of the twentieth century is preserved at WI Collection at The National Needlework Archive, Oxfordshire. It has a dimension of 4.5m x 5m and it took three to five years to complete under the supervision of consultant textile conservation specialists. She is a giant in the field of textiles mural, innovative in her own work and inspirational to many generations of textile artists (Howard, 2008).

Howard and Opoku-Asare (2012) asserts that a major feature of murals is their large sizes. And that characteristically, a mural is organically connected to the architectural scheme of the building it decorates. That

according to them could take more than six (6) months to execute. In relation to the limited use of textile mural for interior decoration, this is what he had to say 'Murals based on fabric and textile techniques seem to have limited application probably because of their susceptibility to deterioration with age. Since creativity through experimentation underlies innovation, textile murals can serve as a hatchery for new ideas in studio art production (Howard, 2006). This was exactly what this works sort to achieve and the result is outstanding. Now with digital textile mural printed on flex material and the framed work lined with transparent polyethylene to resist water and harsh weather condition they serve out-door purposes as well.

Again the views of Textile artists were sort on how feasible it was for one to be able to reproduce conventional textile mural with precision? The options include:

a. Yes b. No c. To some extent

Fig. 3 shows the responses.

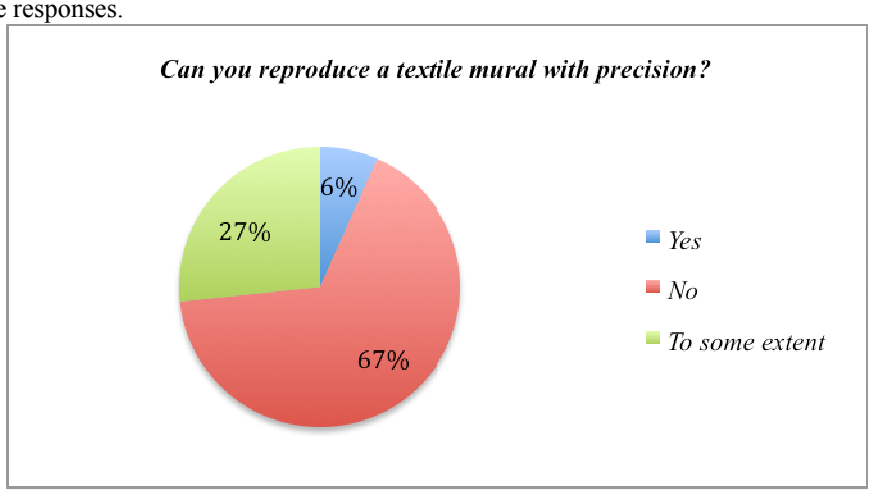

Figure 3. Responses on ability to reproduce textile mural with precision

At this stage the target group was textile artist so out of 30 of them 20 chose *No*, 8 of them opted for *To some extent* and two chose *Yes*. In terms of percentage the analysis revealed that 67% of the population chose *No*, 27% said *To some extent* and 6% Opted for *Yes*. The interpretation is that majority of them were of the view that it was impossible to reproduce conventional textile mural with precision even though a few of them said it was possible. One breakthrough of this work was the ability to reproduce digital textile mural with precision within the shortest possible time of a week.

Another aspect of the study was to find out from the entire population comprising textile artists and others whether the textile mural communicates a message or not. Feedback from the question *what does this mural depict?* with the following options for them to choose from

a. Textile and fashion activities b. fabric pieces c. textile art

was analyzed in Fig. 4.

Textile artists and others

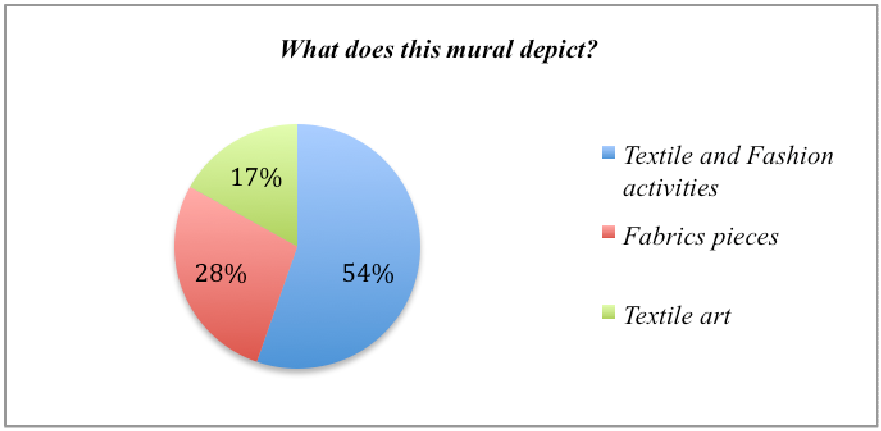

Figure 4. Responses on content of the textile mural

Here 27 out of 50 people forming 54% chose *Textile and fashion activities,* 14 out of 50 people comprising 28% chose *fabric pieces* whiles 9 out of 50 of them also 17% chose *Textile art.* This feedback was with particular refrence to Plate 14. It affirms that fact that like other murals, textile mural also serve as a means of communication to the general public. Fabric murals serve the following purposes: Educate viewers, beautify and

decorate the environment where it has been mounted, communicate direct and tangible message to large audience as well as have dramatic impact weather consciously or subconsciously on the attitudes of viewers (Beniana & Koku, 2015).

The concluding part of the study sampled views on assessment of the digital textile mural. The question and options respectively were, *how would you assess the digital textile murals? a. good b. very good c. excellent*

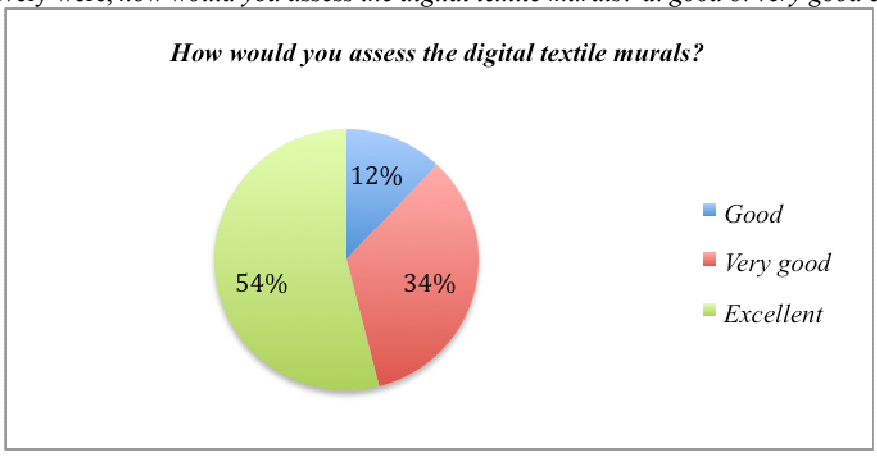

Figure 5. Responses on assessment of the digital textile mural

Out of 50 respondents, 27 of them rated the digital textile murals *excellent* that accounts for 54%, 17 of them that is 34% also ticked *very good* whiles the remaining 6 of them forming 12% of the population opted for *good.* It is evident from the data analysis that more than half of the population convinced that the digital textile mural is an excellent innovative work that has enhanced the conventional design and production process of executing textile mural. The new methodology is economical, saves much precious time, efficient in terms of precision as well as easy to be reproduced.

The main finding was that flex sheet used for murals has backlight properties. What that means is that, when light source is placed behind a textile mural produced on flex sheet, it creates unique effects of light and dark areas thereby enhancing the aesthetic appeal of the work. This gives a three dimensional illusion to the designs. Again the polyethylene rubber coating finish enhanced the effect of lustre and allows for easy cleaning of the surface without any adverse effect to the main work. Furthermore it serves as a protective shield from rainwater and harsh weather condition that may otherwise might have adverse effect on the work. This makes it possible to serve outdoor purpose as well, which hitherto was not possible because of fungi attack and accumulation of dust. Further modification and improvement in terms of design could be made and in addition the size of a textile mural could also be adjusted to meet specifications.

4. Conclusion

The impact of digital textile mural was beyond expectations. Computer application in design played an integral part in the designing and production process. This allows for easy, flexible and faster execution of a project. This project work has laid down very good foundation for many more exploratory works in this discipline. Basic knowledge in the use of Adobe Photoshop CC, CorelDraw and creativity is all that it takes to create such works. There are many textile materials and techniques that can be used to produce textile murals. We recommend and encourage textiles student artists and research fellows to explore and develop this new concept towards national development. But most importantly further experiment with varied materials and software applications within the discipline of art-based research has the potential to bring on board a new paradigm shift in methodology of the production of textile mural.

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