



UNIVERSITY OF NAIROBI

COLLEGE OF ARCHITECTURE AND ENGINEERING

SCHOOL OF THE ARTS AND DESIGN

BDS 413: PROJECT PAPER

(Interior Design Specialization)

INCORPORATING ASPECTS OF EMOTIONAL DESIGN, WHILE
USING SUSTAINABLE MATERIALS TO CREATE ENGAGING
EVENT SPACES.

Case of Deliverance Church Mwihoko

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Project Concept paper submitted in partial fulfillment of the requirement for the Bachelor of Arts
in Design Degree submitted to the school of the Arts and Design, University of Nairobi.

14th April, 2020.

DECLARATION

I, Okello Vanesa Faith, declare that this is my original work and this project has not been presented in this or any other university for examination or any other purpose to the best of my knowledge



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DEDICATION

I dedicate this project to my parents, Mr. Patrick Ogwen0 and Ms. Beatrice Owino; you have been my pillars and inspiration to get this far. Thank you so much for your consistent support and prayers.

ACKNOWLEDGEMENT

To the many people who have contributed to the success of this project, I wish to express my absolute gratitude and recognition. Thank you all for the support that you have offered me during my entire course.

I thank God for my family, friends and my lecturers who throughout my project made it very successful. I thank my lecturer and supervisor, Mr. Collins Makunda, for his encouragement and dedication to make sure that my project was a complete success.

ABSTRACT

Scholars have focused on different aspects of design and emotion researches for more than a decade. Various studies, models and theories have been proposed and adopted in order to understand what emotional design should be and the role of emotion in design aspects. Some of them regarded emotion design as a tool that designers use to deliver their messages and emotions, while some believed that it is a kind of experience and response when an individual is using an object. Some also reveal the relationship among users, products and users' responses. This paper aims to explore and illustrate how emotional design can be used to create a modern environment in churches.

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CHAPTER ONE: INTRODUCTION OF THE STUDY

1.1 Introduction

This chapter will discuss the background of the study, problem statement, general objective, specific objectives, Significance of the study, Scope of the study and the chapter summary.

1.2 Background of the Study

Emotions are part and parcel of a human being's life. They help us to interpret the world as well as give us an understanding of our experiences in our day to day lives. Positive experiences invoke positive emotions and make us want to experience more, while negative experiences invoke negative emotions that protect us from ever repeating the same mistakes.

An exceptional designer, understands not only how their users are reacting but also **why**. In this study, emotional design strives to create products that bring out, appropriate emotions in order to create a positive experience for the user. A designer has to look for any connections that could possibly form between a user and the object and any emotions that could arise from such connections. (Norman, 2004)

According to Lilian Flores, an architect and interior designer, emotional design consists of enjoying the space while you're experiencing it and having that memory stay with you. A well designed environment pulls you to itself and makes you want to relive the whole experience. Ilse Crawford points out that places are capable of generating emotions and affecting our behavior and mood.

Emotional design strives to create products and spaces that elicit appropriate emotions, in order to create a positive experience for the user. To do so, designers consider the connections that can form between users and the objects they are using, as well as the emotions that may result from them. The emotions that a product elicits can have a strong impact on the perceptions of users. When we encounter a product, visceral emotional design appeals to our first reactions. It deals mainly with aesthetics and perceived quality from mere appearance and feeling, as well as with the senses engagement.

The Bambara are a Mali community that is known for its creative textiles. Its textile's aesthetic has not only been embraced in Africa but in the whole world as well. The researcher will focus on the patterns that can be derived from the various textiles as well as the shapes that can be derived from the textiles.

In the current world designers are looking for various solutions that will not only solve the world's existing problems but also better the environment in a bid to heal earth. The researcher will therefore incorporate recycled wood as a means of sustainability.

Churches not only bring people together but connect people to their maker. As such, the interior spaces of churches should evoke certain emotions, all of which should be positive, such as serenity, peace, love, freedom, joy and calm as well as excitement. In as much as churches are places of worship, they can be used as grounds and halls for the community activities and events and they should be able to generate income from renting out their grounds for such activities and events.

Deliverance church Mwihoko is located in Mwihoko along Mwihoko – Githurai road. The church sits on 2 acres of land which are so far, unutilized. In this research the researcher is going to explore ways of utilizing the interior space as well as the surrounding landscape to create extra income for the church.

1.3 Problem statement

The church and its landscape is large enough to host events and concerts. However, its underutilized, and due to its traditional look, couples who are from the church prefer not to hold, their weddings there, graduating students also prefer to book gardens, instead of using the church grounds. Some of the design problems include; outdated furniture, underutilized landscapes, poor drainage, leaking ceilings, poor lighting and chipped walls. Should all these be put into consideration, then we'd be able to package Deliverance Church Mwihoko as an event venue hence generating income.

1.4 Objectives of the study

1.4.1 General Objective

The main objective with regards to this research is to package Deliverance church Mwihoko as an event venue that will appeal to its congregation as well as the community around it, under the philosophy, Emotional design.

1.4.2 Specific Objective

- To investigate the relevance of emotional design in redesigning a church.
- To establish how emotional design has been used to package churches as possible event venues.
- To establish the current design state of Deliverance Church Mwihoko.
- To propose design solutions for the interiors and the landscape of Deliverance Church Mwihoko.

1.5 Research questions

- Is emotional design relevant in redesigning a church?
- How has emotional design been used to package churches as possible event venues?
- What is the current design state of Deliverance church Mwihoko?
- How can the researcher offer design solutions for the interiors and the landscape of Deliverance Church Mwihoko?

1.6 Significance of the study

1.6.1 The church management

The church has projects that need finances to complete. Redesigning the church, would lead to venue bookings such as wedding receptions, graduation parties, christening parties and youth connects. This would raise the income of the church significantly and make it easier to complete other church development projects.

1.6.2 The community around

Finding a suitable event venue in Mwihoko is really difficult especially a suitable outdoor one with a good landscape. Having a venue within the community will be convenient for the Mwihoko residents, as well as the areas surrounding Mwihoko.

1.6.3 The pupils of Zion Academy

Deliverance church Mwihoko has a school within the compound. Creating a good landscape will be therapeutic for the children within the school.

1.7 Limitations of the study

1.7.1 Time

The time allotted for this study is very limited. The researcher might not have time to do more for the study.

1.7.2 Inaccessibility of the site.

The site being a church always has congregants flocking it, even on weekdays, therefore carrying out the study, and collecting data may not be as easy.

1.8 Scope of the study

The scope of study entails the extent to which the research is carried out. It involves, the geographical, contextual and conceptual scopes.

1.8.1 Geographical

The case study is Deliverance Church Mwihoko, which is located off Thika road, in Mwihoko. The research will cover the church and the adjacent landscape.

1.8.2 Conceptual

The research is limited to the four areas of interior design; Interior Architecture, Exhibition and Display, Furniture Design and Landscaping Design. The interior spaces which includes, the main sanctuary, the lobby, the Sunday schools and the kitchen will be redesigned. The landscape which is the grounds will also be redesigned. New and modern furniture options will be explored as well as the different types of exhibition and display.

1.8.3 Contextual

The researcher will use recycled wood and Bambara patterns to create a modern event venue under the philosophy; Emotional Design. The Bambara patterns will be used in the furniture design, the wallpaper, aspects of it will be extracted onto the landscape as well.

1.9 Conclusion

The chapter began with a brief introduction to the study, where the philosophies were introduced, which led to the problem statement, the statement of objectives and research questions which will act as a guideline for the researcher during the whole research. The significance of the study was also explained as well as the limitations of the study which are the problems that the researcher might encounter during the research. Finally, the scope of the research study was outlined.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A literature review is defined as a summary of what existing scholars know about a particular topic. The literature review is always based on secondary sources i.e. scholarly opinion mostly what other people have already written on the subject of the research.

This chapter, will address Emotional design which is the main philosophy of the research. It will explain what Emotional Design is, the origination of Emotional Design and how it has been applied in Churches, as well some of the design champions and the churches which have successfully incorporated Emotional Design into their sanctuaries.

In this chapter, sustainability as a philosophy will also be discussed and under it wood recycling as means of sustainability will be investigated. This chapter will also include literature on the Mali's Bambara patterns and how they have been incorporated into different aspects of Interior Design.

2.2 Emotional Design

Emotional design strives to create products that elicit appropriate emotions, in order to create a positive experience for the user. To do so, designers consider the connections that can form between users and the objects they use, and the emotions that can arise from them. The emotions a product elicits can strongly influence users' perceptions of it. (Foundation, 2010)

Emotional design can also be defined as design work whose function is to produce emotion, which includes colors, light, and shadows with the delicacy of an impressionist painter, encouraging visitors to meditate and reflect.

Emotional design is designing with a loving intention. Every design is sensitive, but on personal value or concern, designers intend to evoke targeted emotions through making directed design decisions. This design tries to create products that generate appropriate emotions to create a good or positive experience for the user. (Norman A. D., 2004)

Feelings and emotions are real and they are incredibly relevant today for creating transformational design. The job of a designer is to understand how environments make people feel and use those findings to engage the user in creating a relationship with the property or the product.

Emotions have a crucial role in the human ability to understand the world and the products as well as their adaptation to new things and adventures. Studies show that emotions influence how people process information and make decisions. (Design, 2015)

All kinds of designs evoke some kind of emotion. A poorly designed space can make people irritable, bored, claustrophobic, angry and depressed. Good designs are those that tap into a user's emotions and do more than just fulfill their stated purpose. They provide the user with a whole great experience. Products and services that people like are those that can be re-used or re-purposed. The whole idea of emotional design is to invoke strong emotions in your users and create a product that will not quickly slip their mind after use. We all have entered a well-designed space and felt a wave of calmness, peace and serenity and have also entered a poorly designed space and felt irritable or angry. It is therefore important for every designer to be fully aware of emotional stimuli.

For architect Lilian Flores “emotional design consists of enjoying the space when you're experiencing it and having its memory stay with you. You want to go back or relive it again! You associate the design with emotions and the heart with the mind. You play with the five senses that we use to perceive the world: the sensory nature of the materials, smells, textures, sounds etc.” Therefore, more than a style, emotional design is a way of understanding interior designs that rejects spaces that, although impeccably designed and decorated, do not make us feel comfortable.

Humans form emotional connections with objects and products, on three levels; the visceral, behavioral and reflective levels. A designer should address the human cognitive ability at each level to elicit appropriate emotions so as to provide a positive experience.

Visceral emotional design appeals to our first reaction when we encounter a product. It mainly deals with the aesthetics and the perception of quality just from looking at it and our senses for example the touch. Behavioral emotional design refers to the usability of the product. This is based on our assessment of how well it performs the intended purpose and how easily we can learn how

to use it. by this time the opinion we form about a product is tangible. Reflective emotional design is concerned with our ability to project the product's impact on our lives after we have used it. it also involves the values we attach to a product after use. (Design, 2015)

Plutchik's Psycho-evolutionary Theory of Emotion and the wheel of emotion.

Robert Plutchik a psychologist as well as a doctorate degree holder, was a thought leader when it came to emotional studies. Before he passed on, he had written 8 books, edited 15 books in total, done well over 300 articles and 45 chapters in emotional research as a psychologist.

He devised the psycho-evolutionary theory of emotions which helps categorize emotions into primary emotions and the responses to them. He argued that the primary emotions are an evolutionary development. He came up with 8 basic emotions which included; anger, disgust, fear, sadness, anticipation, joy, surprise and trust. From the emotional theory he developed a wheel of emotion. It was designed to help the user understand the nuances of emotion and how emotions contrast with each other. For this he developed both 2 and 3 dimensional models for this. The wheel can be used by designers to examine the complexities of emotion and to act as a color palette for emotional design, with the idea that the blend of different emotions would lead to the creation of different levels of emotional response and intensities of that response. The biggest criticism of this model is its failure to take into account pride and shame. These are emotions that designers often play to. It is also felt that the model is too simplistic and there are greater emotional nuances not captured within it.



Figure 2.0.1: Plutchik's wheel of emotion. Source: www.positivepsychology.com

2.2.1 Emotional design in churches

In this digital era, architects and designers recognize the intimate relationship one has with his or her physical surroundings. Designers are now increasingly becoming poets, creating memorable spaces that energize, calm, uplift, and create happiness.

Lighting.

In churches, lighting can convey emotion, energy, mood, and other vital elements during church service. Light in the church has more meaning than illumination. It affects the spirit of the crowd or worshippers, creating a more immersive worship experience. Lighting is crucial as it can lead the congregation down a path of deeper or intense worship. Natural light is an asset that should be maximized as it shows signs of life and allows visual access to outer connection spaces. In as much as artificial lighting is necessary, it cannot replace natural light as we feel a sense of comfort and connection to creation when we can see outdoors.



Figure 2.0.2: Artificial lighting designs Source: www.lightstalking.com

Color.

Color is one of the most impacting attributes in illumination. Warm colors like yellow and red convey energy, intimacy, and warmth. Other cool colors like purple, blue, and green convey majesty, darkness, and growth. Further than that, pastel conveys gentleness and calmness, while saturated color conveys intensity and depth. The use of color in church cultivate a climate where people connect deeper with God. Colors create an exciting and timeless place of worship. The red color symbolizes the blood of Christ; this indicates strong emotions such as love and hate. This serves as a reminder of Jesus' sacrifice and suffering. The blue color of the sky represents heaven, hope, sincerity, and loyalty. Green, the color of grass and nature, indicate the growth and rebirth, life over death, and faith immortality and contemplation. Violet stained glass window color symbolizes passion, truth, love, and suffering. White color symbolizes innocence, goodness, and purity, which is associated with God. Yellow, which sometimes is used to express treachery, is more widely used to indicate the halo of saints. Purple symbolizes suffering and endurance, and it is also used to depict royalty. The gray color is a symbol of humility, mourning, and even immortality of the spirit. The brown color is a symbol of spiritual death and the renunciation of worldly things. The rainbow symbolizes union and God's covenant with humanity. However, a calming color palette is recommended in order to achieve a serene environment.



Figure 2.0.3: Recommended color palettes Source: www.colorpalettes.net

Materials.

The use of raw materials where there is a lot of attention paid to creation ambiance using unprocessed material materials like wood reclaimed from new factory buildings, which have purity and honesty to them and also warm lighting, which signals the brain to calm down. Simplicity being the basis of modernism, is what people emotionally respond to become calmer. Materials such as stones and slate tend to make our bodies feel better as they are entirely natural. Stained glass colors have different meanings in church. Regardless of the role of stained windows in churches for decorations, one cannot deny the luminescent beauty of stained glass.



Figure 2.0.4: stained glass Source: www.foter.com

Flooring.

Church flooring is an important aspect that must be considered as it plays roles in both practical uses and also contributes to the church's image on a large scale. From the popular modern options such as polished concrete to more traditional wood or floor tiling, each serves a distinct purpose. Flooring should look beautiful, and newcomers and congregation should notice the floor for its aesthetics. Durability is one of the most important factors to consider. High traffic areas require durable flooring that is also easy to clean. Flooring in children's areas should be able to accommodate messes related to children and also enable them to play games comfortably. The flooring should also be able to ensure that there are no echoing footsteps as people get into church. Hardwood flooring is therefore preferred as it is more sound reflective, and it provides the ability to hear more original music from the musical events and choir. The use of red carpet mainly in the Catholic religion is a way to symbolize that they would shed their blood for God. In the 19th century, the use of red was a way to show emotions.

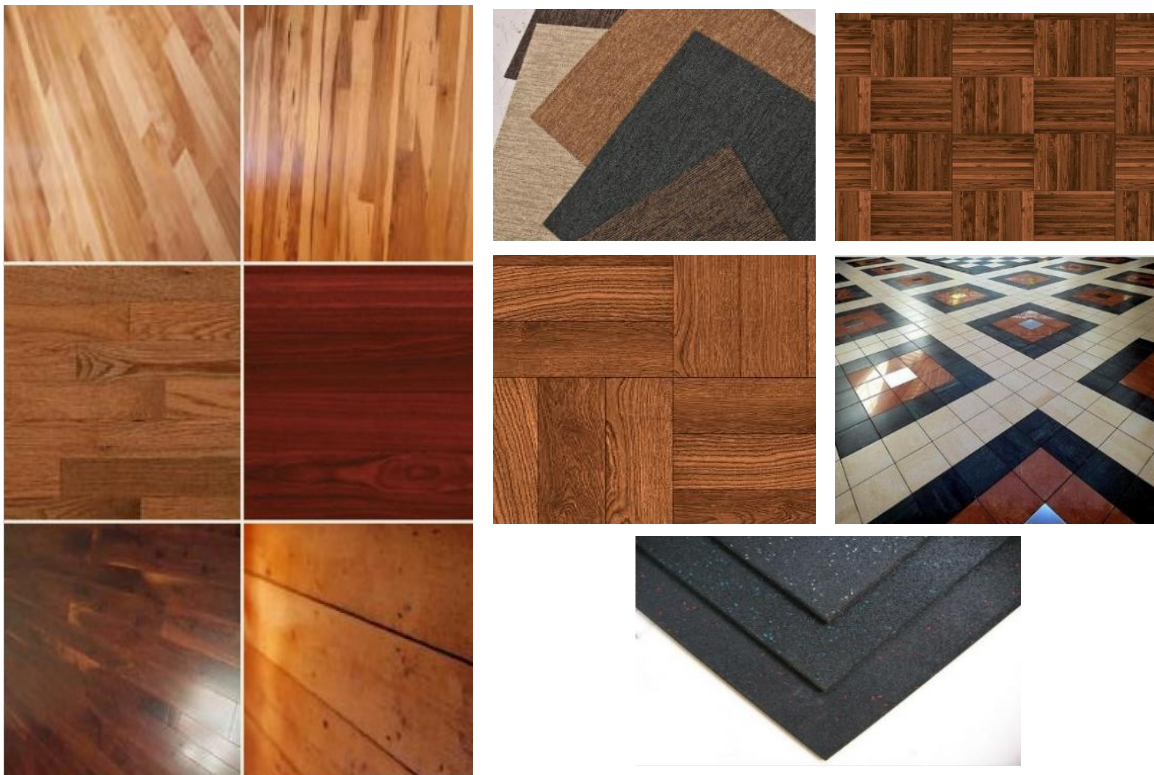


Figure 2.0.5: Recommended flooring designs. Source: www.inhabitat.com

Seats.

The church pew or benches are other elements related to emotional design. They are accessible by aisles for the use of the congregation. There are different categories of church benches, which include traditional, modern, and curved, to match and complement the architectural and design styles and spaces of the place of worship. Traditional pews are always designed to sit comfortably and harmoniously. New pews can be used in both traditional and modern buildings. On design viewpoint, they have simple lines, so they don't distract from the beauty of the building they occupy. Curved pew or seating is a beautiful design feature that complements the building's architecture, which also creates the effect of a congregation being arms inclining the heart of a sanctuary.



Figure 2.0.6: Benches and pews. Source: www.bornagainpews.com

The lobby.

The lobby of a church is one of the most critical space for creating space for the congregation. It is considered a primary area where people of the group connect with others. The lobby sets the tone for the congregation's interactions with each other, not just at church but during the whole week. They give people comfort and space to foster a relationship with each other; this is an essential aspect to them of growing together in Christ. The lobby should be designed to serve as communication central for the church and it should be a multipurpose space. A lobby should be well designed as it is what visitors see first even before getting into the church. Altars are the main focus in the church. They should therefore be the focal points of the interior design and must be aesthetically pleasant.

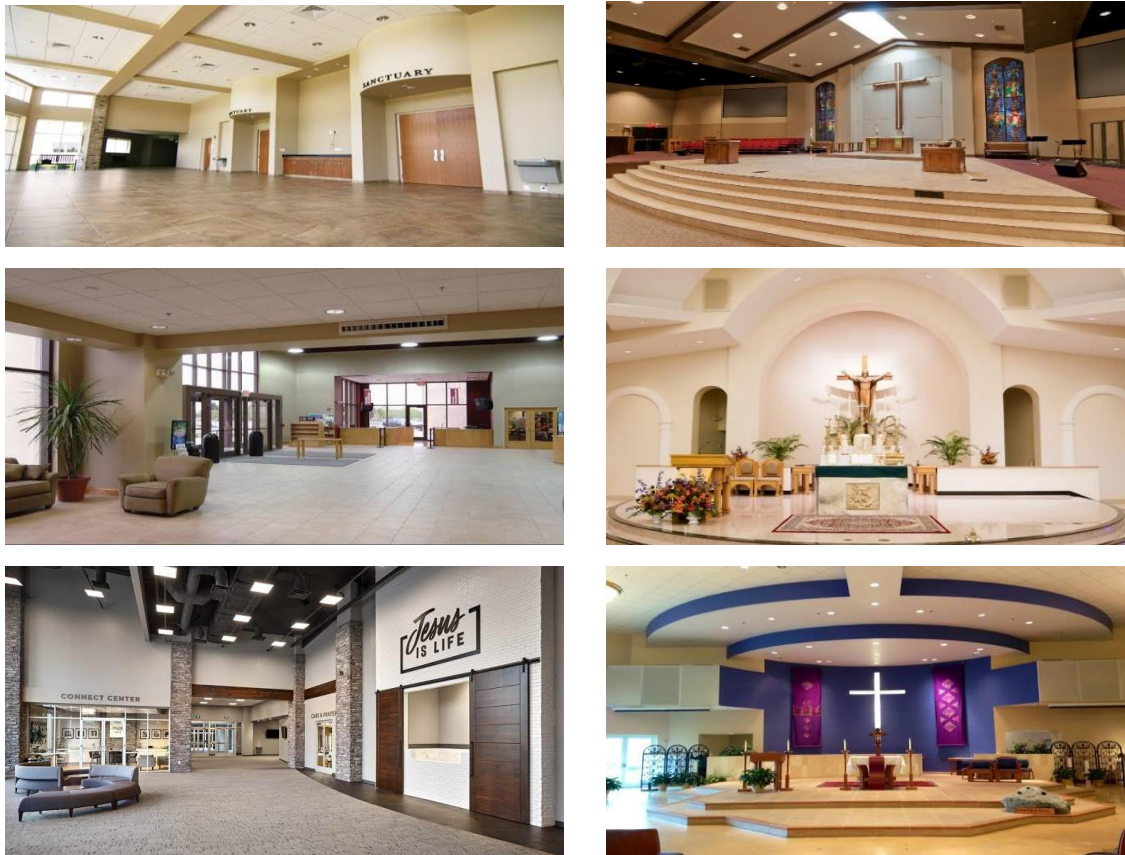


Figure 2.0.7: Lobbies and Altars. Source: www.alamy.com

Ceilings.

Church ceilings should be very high. One, it gives the illusion that the congregants are really small and gives them a sense of humility. High ceilings also improve the acoustics of a room as it brings balance to support speech and music in a contained space. High ceilings also improve the aeration of a room.

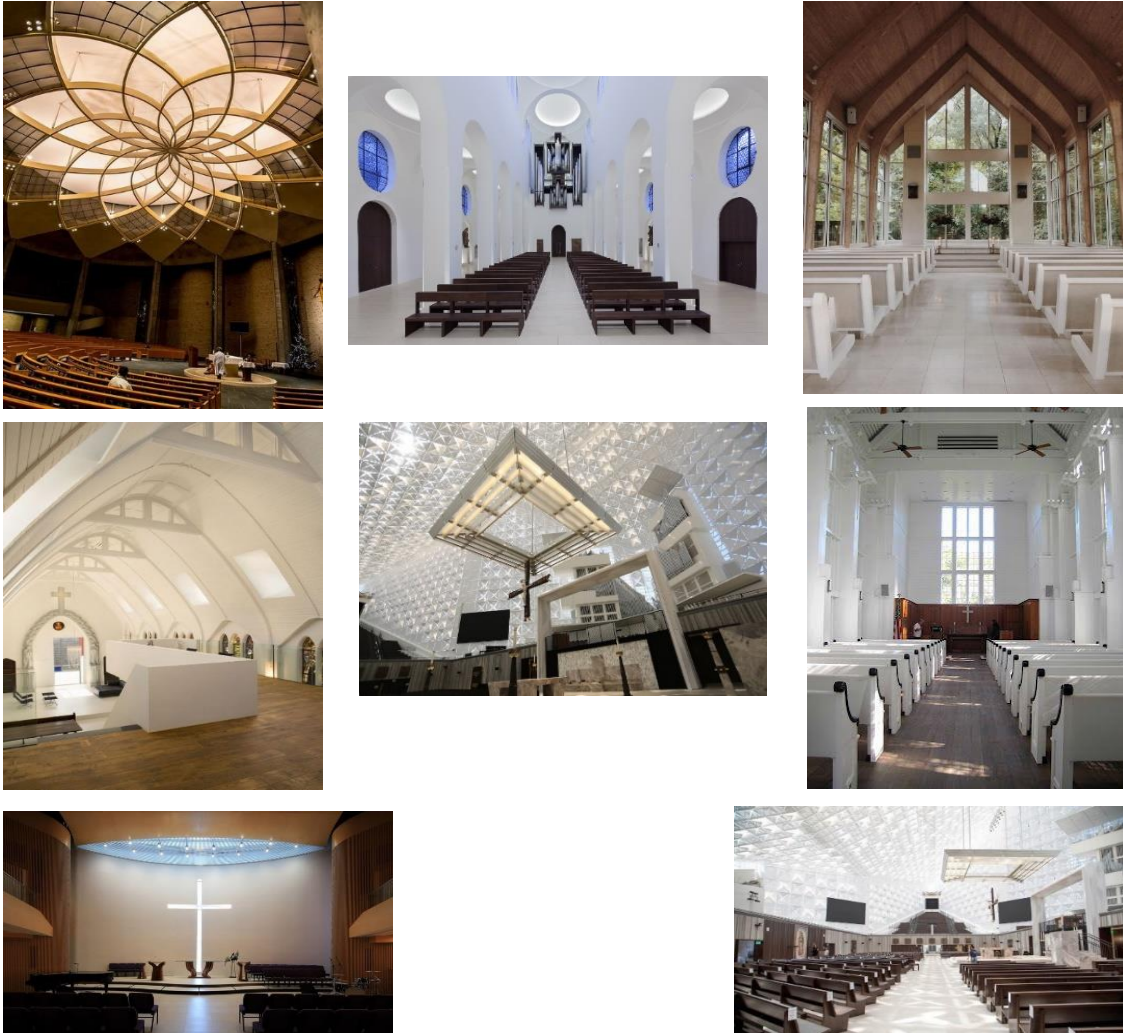


Figure 2.0.8: high ceilings Source: www.alamy.com

2.2.2 Emotional Design exemplar church

St. Paul's Lutheran Church.

St. Paul's Lutheran church, is located on 47 acres of land. The church interiors are contemporary with a modern look and with a lot of aspects of emotional design. Its features include; traditional pews forming majority of the 800 seats with some removable seating used in front to enable flexible use of the space.

The high ceiling has been used to create a false peaked roof. The high ceiling also creates an illusion of how small we are, therefore evoking the feeling that there is a bigger God. The walls are scalloped with recycled stained glass to break off their long expanse, the stain glass also adds to the general ambience of the church. The walls are also back lit with LED lighting for energy efficiency.

Some of the emotions that have been achieved in this space include, excitement, peace, calmness and serenity. The calm and peace have been achieved through proper space planning and correct symmetrical balance within the church. Ample natural light and proper air circulation has also helped achieve calm and peace.

The serenity of the space has been achieved by proper lighting, calming color palette. The color palette used has worked well with the rest of the aspects to create a balanced environment. Creation of a functional space, and emphasizing spaciousness as well as achieving different textures. Creating an organized and functional space has also led to achieving this.



Figure 2.0.9: Indoor photographs courtesy of Aspen group

2.2.3 Emotional Design Champion.

Ilse Crawford.

Ilse Crawford is a renowned British Interior designer, the founder of eponymous design studio Studioilse, as well as the former founding editor of Elle Decoration. She's an exceptional designer who focuses on a design's ability to enhance and magnify the human experience with the products that are attentive to space and the lives that coexist with them.

Born in 1962, Ilse Crawford, the oldest of 5 children, was the daughter of a Canadian newspaper editor and a Danish artist and pianist. While her upbringing was simple, it was vibrant, community-oriented and surrounded by her parent's friends a group of intellectuals, artists, and writers. The Crawford family's rich everyday life undeniably formed much of the inspiration for her later humanistic design work, which blended functionality and style. Studying the history of architecture at university, she began to form her design aesthetic around what she was taught about buildings, applying key architectural principles to her future designs and collaborations. When she launched Elle Decoration in 1989, it was this historically attuned yet utterly contemporary approach to living that caused a sensation amongst the industry. Pared back and modern, yet entirely livable, Crawford's interpretation of how interiors should enhance the lives of the people who reside in them was revolutionary at the time.

It was after a stint at fashion design brand Donna Karan, and during her post as the head of department at the Eindhoven Design Academy in Holland, that she eventually opened Studioilse in 2001. A client based that included all facets of the design spectrum – restaurants, hotels and heritage brands such as Swarovski, and Waterford Crystal – gravitated to the studio's aesthetic, which soon became a mainstay and founding pillar of modernity in the international design world.

Ilse Crawford has been a natural collaborator from the get go. From lighting to rug, fabric and textile design, Crawford partners with some of the world's most recognizable companies from IKEA and American Vogue to Soho House and the Grand Hotel in Stockholm, Sweden. Irrespective of the project and client, Crawford continues to push the boundaries of design without sacrificing function. Known for a strong aesthetic that pulls inspiration from comfortability and the everyday life, Ilse Crawford excels at the presentation of living spaces that improve on the familiar realities, which has made her a design industry icon throughout her career.



Figure 2.0.10: Ilse Crawford's work Source: www.studioilse.com

2.3 Sustainability

The term sustainable design has been used in multiple discipline, including but not limited to product design, architecture, interior design and graphic design. It refers to the design process that integrates an environmentally friendly approach and considers natural resources as part of the design. Sharlyn Underwood, American Society of Interior Designers, defines sustainable design as the practice of designing buildings so that they exist in harmony with natural systems. Considering the critical problems that face our planet due to the irresponsible consumption of natural resources, designers play an important role in providing solutions to this problem and replacing obsolete products with innovative and sustainable ones that can ensure lower consumption of resources and less waste. (elmansy, 2014)

Sustainable design acts as a philosophy that is applied by different companies, government entities and none governmental organizations to achieve a better future from the human race through the wise and low-volume consumption of the Earth's resources, even though companies and governments that have advanced design strategies have more potential to apply sustainable design than others.

2.3.1 Principles of sustainable design

Form

The form represents the visual shape of the product and is usually perceived to be the main element of the design. Before designing a product's layout, however, the designer should ask questions like how the shape will affect energy consumption; and how will the size affect the packaging, transportation costs, and fuel emissions? IKEA's flat packing strategy, for example, helped it reduce transport costs, fuel usage, and emissions.

Function and Usability

The function and usability of the product contributes to its sustainability in an indirect way, as it helps consumers use the product more easily in less time and with less energy consumption. People do not want to keep hard-to-use products, so usable products can ensure less waste and throwaways.

Cost-Effective Solutions

For many of today's sustainable products, cost is one of the key barriers that prevents many customers from making the switch from their dependence on non-sustainable products. Therefore, the designer and decision-makers are responsible for reducing the cost of current sustainable products.

Renewable Energy

Designers should stop depending on carbon energy and think in terms of building products that depend on renewable energy, such as solar panels and wind farms.

Materials and Recycling

Similar to energy, materials play an essential role in sustainable design, as every designer should search for materials that can be easily recycled or for which the planet can recreate in a short amount of time. For example, IKEA depends on mixed woods and innovative materials to replace traditional varieties of wood that can take a long time to grow in forests. The mixed and recycled materials can also help reduce product cost.

Durable Design Solutions

In order to reach zero waste, products have to either be durable enough to last for a long time or be fully recycled and transformed completely into new products. Depending on both methods can help recycle products more than one time and decrease the dependence on Earth's resources. Constant Improvement and Sharing of Knowledge Evaluation and improvement are important parts of any design process, but they take on even more importance in order to evaluate sustainable initiatives and improve them enough that they attain the same or better quality than existing products.

The principles above are general considerations that designers can depend on in order to build a sustainable design or service. Overall, the above design principles take into consideration the environment, people, economy, and culture. Every product or service design should consider these four factors. For example, the materials embedded in products should reflect concern for consumer safety and fit the cultural context in which they will be used. (elmansy, 2014)

R'S of Sustainability



Figure 2.0.11: R's of Sustainability Source: www.aeromatico.com

2.4 Wood recycling in Design

Recycling is the process of converting waste materials into new materials and objects, a key component of modern waste reduction and often objective for eco-aware contemporary designers as well as breaking down old materials to create new ones. Recycling is also referred to as the process through which old materials and waste are prepared so they can be used to create a new material. It also includes upcycling which is the process of creating something new and better ones from old materials.

Recycling of locally available material, most of which do not require industrial processing or importation, is a key ingredient in energy conservation which is an important way of fighting against global climate change towards achieving a sustainable future. Recycling is important as it saves energy, protects natural resources, reduces the cost of production and conserves the environment. (Lubonja, 2019)

Wood waste falls into many categories and must be treated differently depending on its size and previous use. Wood such as clean timber, dimensional lumber, stumps and limbs are readily recyclable. Wood that has been treated, painted, stained or contaminated is not appropriate for recycling and should be properly disposed.

Wood can be used as building materials, recycled into much for landscaping or pulp for paper production and used beneficially as a fuel. Reusing and recycling wood reduces the need to cut down trees, hence conserving the environment.

2.5 Bambara Textile Patterns

The Bambara community also known as Bamana community, are a Mande ethnic group in Mali. They originated as a royal section of the Madinka people and are the founders of the Mali empire in the 13th century. The Bamana people adopted a multitude of artistic traditions and the artworks developed were created for both religious purposes as well as for cultural definition. Some of the artworks included; sculpting, pottery, weaving, iron making and mask making.

Amongst the textiles they produce is the Bogolanfini cloth. The name means mud cloth which is an ancient Malian cloth that was there from as early as the 12th century, and most of the patterns on the cloth record events from as early as the 13th century. The textile was once so despised that it was referred to as a peasant cloth. It however gained so much popularity that it became a national Malian pride.

Process.

The process of making this cloth takes two- three weeks. The textile was traditionally woven by the men while women dyed the fabric. Narrow strips of 12 - 15 centimeters of cotton cloth were woven on a loom which was hand sewn producing a fabric wide enough for clothing.

First, the white cloths are steeped in plant water, where they become yellow. The outline of a pattern is then drawn on. The areas between are coated with a heavy, iron rich mud. The mud is then washed off and the cloth is bleached with plant extract and soda, thus emerges the contrasting black and white pattern.



Figure 2.0.12: Process of making the Bogolanfini Source: www.designsponge.com

Patterns

The cloth is known mostly for its geometric patterns. The motifs on the fabric represent organic forms such as plants, flowers, animals, stones and even shells. The patterns on the fabrics were passed down from one generation to the next and each motif was unique. All the patterns had a special meaning, for example the two parallel lines were used to communicate the notion that you cannot follow two paths in life. The cross symbol symbolized, Carrefour crossroads which meant, trade equals prosperity.

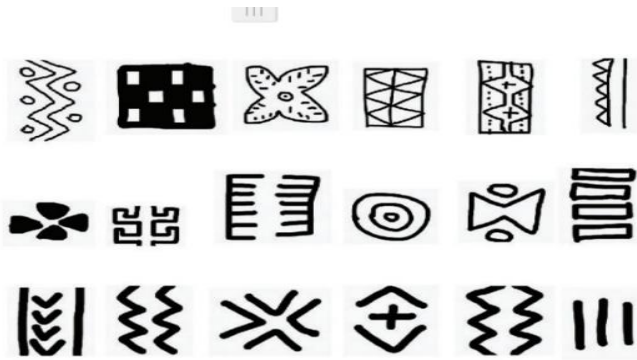


Figure 2.0.13: Patterns of the Bogolanfini cloth Source: www.tdsblog.com

Color.

The cloth is characterized by its ivory black and white backgrounds with colors such as purple, reds and orange being used on modern fabrics. Grey is very rare but it was used for camouflage by the hunter.



Figure 2.0.14: Colors of the Bogolanfini cloth Source: www.designsponge.com

2.6 Design Process

A designer is primarily involved with solving problems by developing and explaining ideas. A design process is an approach of by breaking down a large plan into small manageable bits to solve problems involved. The design process commonly used is as follows:

Phase 1: Inspiration

In this stage the problem is identified and inspiration takes place. For this study one of the problems is lack of adequately used eco design products in the site, both furniture and display design. And from the previous statements, the researcher will use The Bambara textile patterns as an inspiration.

Phase 2: Identifications

The researcher will then begin to collect information, collecting sketches, take photographs and gathering data to start off the designs. This is the stage where inspiration becomes an understandable unit with definite parameters. For the site, the researcher will look into the four areas of study. For example, for Furniture, the researcher can identify the furniture pieces that will be designed like the desks of the children or the benches for the exterior.

Phase 3: Conceptualization

For this stage the researcher will begin to analyze ideas and begin to sketch, brainstorm and understand how all the data and information collected may impact the designs. In summary, the ideas constraints and needs become clear.

Phase 4: Refinement

Developing solutions comes in this stage where the researcher already selected the preliminary ideas, establishing boundaries and structures and forming multiple small scale design solutions.

Phase 5: Modeling

In this stage the Researcher will use the experiences gained and discoveries made to create some small scale models/structures to investigate whether the designs are practical and its effect to the

environment around. The researcher can also use 3D software's that may be available to make models and help in refining it more.

Phase 6: Communication

This involves presenting the ideas to as many people as possible: friends, lecturers, professionals, and any other person that may give perceptive comments. When enough feedback has been collected then the designer can proceed to the next step.

Phase 7: Production

For this final stage the design may be improved after reflecting on all of the feedback and decide if or to what extent the design should be incorporated and models can finally be made.

2.7 Conclusion

The chapter discussed emotional design, its elements and some of the exemplars. It also expounded on recycling wood under sustainability, as well as the history of the Bambara patterns. The final section dealt with the design process where the researcher outlined the design steps taken.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The research methodology outlines the processes that will be used to ensure that the general and specific objectives theorized in chapter one will be met. This chapter will describe the research design, data collection methods, research procedures, data analysis methods, mode of analysis and the chapter summary.

3.2 Research design

A research design according to Robert K. Yin (Yin, 2003) Is the logical sequence that connects the empirical data to a study's initial research questions and its conclusions? It is the action plan that the researcher uses to undertake the research study, from data collection and analysis to data presentation and finally, drawing conclusions from the information initially collected. This study took a descriptive research design approach. These are measures undertaken in the study and may involve stimulation methods, experimental methods as well as theoretical research methods. The methods used in this study aimed to acquire the best results. A detailed questionnaire was designed and distributed to selected respondents from the youth department, church leaders and some congregants All the questions were formulated for good understanding to make it easy to respond. After the pilot test, which was done with 10 respondents, the questionnaires were distributed to the users. The data was then analyzed by mainly descriptive statistics and analysis methods. The data analysis is based on the empirical findings and relates to the logical framework.

3.3 Population and sampling

3.3.1 Target population

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population usually has varying characteristics and it is also known as the theoretical population. With regards to the site, the target population is a total of one hundred and fifty people.

3.3.2 Sampling

Qualitative sampling is the process of selecting a small number of individuals for a study in such a way that the individuals chosen will be good key informants (i.e. collaborators, co-researchers) who will contribute to the researchers understanding of a given phenomenon. The characteristics of a good informant include the ability to be reflective and thoughtful, to communicate (orally, in writing or both) effectively with the researcher and to be comfortable with the researcher's presence at the research site. (Research, 2015)

A sampling frame is defined as a set of participants from which the sample is selected. The frames provide a means for choosing the particular members of the target population that are to be interviewed in the study. A perfect sample frame is one that is complete, accurate and up-to-date. The quality of a frame may be assessed in terms of how well its idealized properties relate to the target population (Turner,2003).

The research study was narrowed down to 30 youths, 7 church elders,20 congregants and 10 people from the surrounding neighborhood. They formed an essential part of the population and stood equal chances of being picked into the sample frame.

Table 3.1: Sampling Frame

No.	Target Group	No. of respondents	Percentage
1.	Youths	30	43%
2.	Neighbors	10	14%
3.	Church elders	10	14%
4.	Congregants	20	29%
	Total	70	100%

3.3.3 Sampling Technique

According to (Taherdoost, 2018), stratified sampling is where the population is divided into subgroups called strata and a random sample is taken from each subgroup. A subgroup is a natural set of items. The strata might be based on the institution size, gender or occupation, etc. occupation (to name but a few). Stratified sampling is often used where there is a great deal of variation within a population. Its purpose is to ensure that every stratum is adequately represented.

In the study, the Stratified Sampling techniques will be used. This method is used when the parent population or sampling frame is made up of sub-sets of known size. These sub-sets make up different proportions of the total, and therefore sampling should be stratified to ensure that results are proportional and representative of the whole.

3.4 Data collection methods

3.4.1 Questionnaires

A pilot test was performed at the beginning of the study to check the reliability of the research instruments. By testing the questionnaire, we can ensure the respondents understand each statement and are comfortable to answer the questions as required. In this study, the questionnaire test was conducted on 10 respondents. In this study, the questionnaire having 7 items. These items were constructed by the current literature. *The questionnaires were issued to all the listed people.* The questionnaire consists of closed and open-ended questions, which were used to collect data for the study. A sample questionnaire is provided in the Appendix.

3.4.2 Literature review

The data source for the first two objectives is literature of the existing work, it required the researcher to dig into the articles that have been previously done on the philosophies and the research subject as well as some of the design exemplars and champions who have excelled in the chosen fields. The researcher therefore read and looked up previous work. This is literature review.

3.4.3 Photographs

Photographs of the site were taken to correctly depict the state of the site. The photographs are clear and without any filters to ensure they correctly depict the site. The photos were taken from a phone camera. The photographs were of both the interiors and the landscape.

3.4.4 Note taking and measurements

Note taking is a hegemonic study activity. Note taking is important during interviews and comes in handy when doing observations. It helps a researcher to ensure they don't miss a single thing that is either being said or being done. It comes in handy when analyzing data. Taking measurements ensures that we get the correct size of the site. The measurements were taken using a tape measure and the room for error is +/- 50m.

3.4.5 Prototyping

The goal of prototyping is to evaluate an idea. The prototyping model is a method through which the prototype is built, tested and then reworked on as necessary until an acceptable outcome is achieved from which the complete product will be built. Once the design solutions are put down, they will be implemented into prototypes which will allow room for more improvements. The prototypes will include, furniture, landscape, exhibition and interior architecture prototypes.

3.5 Data Analysis Tools

The collected data will be interpreted and simplified to make them eligible for the research purpose.

3.5.1 Content analysis

Content analysis is distinguished from other kinds of social science research in that it does not require the collection of data from people. (university, 2019) Like documentary research, content analysis is the study of recorded information, or information which has been recorded in texts, media, or physical items. Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data (i.e. text). Using content analysis, researchers can quantify and analyze the presence, meanings and relationships of such certain words, themes, or concepts. Researchers can then make inferences about the messages. The researcher will use this to analyze the literature collected as well as the questionnaires collected.

3.5.2 Visual analysis

There are many ways to begin an analysis of a work of art, a photograph or an advertisement, but most critics agree that interpretation begins with description. Basic descriptive work requires articulation of form, subject matter, genre, medium, color, light, line, and size – the building blocks of images. Some art historical knowledge is helpful for identifying form and genre and making art

historical comparisons. When working with photographs, for example, relevant descriptive variables include production qualities, the photographer's vantage point, focus and depth of field; each constitutes aesthetic, ideological and strategic choices (Barrett, 2005). The relationship between description and interpretation is intricate but, ideally, interpretations emerge from descriptive details within the texts, the writer(s), the audience, and even the culture and time of surrounding the text.

3.5.3 Site Analysis

This is the process of gathering and analyzing information about a problem before trying to solve it with design. It is done in order for a designer to correctly establish the existing design conditions on site before providing solutions. It involves the documentation of the existing furniture, interior architecture and the existing landscape. The researcher conducted a site visit and took measurements to ensure accuracy, took photos to capture some things that might have been overlooked during the site visit and wrote down some notes to ensure nothing was overlooked. The notes, measurements and photographs taken are then analyzed to figure out the problems.

3.6 Data presentation

This refers to the organization of data into tables, graphs or charts, so that logical and statistical conclusions can be derived from the collected measurements. Data may be presented using a variety of techniques and given the abundance of data available, it is not surprising that they have been presented in some useful and not-so-useful ways. Pick up any newspaper or magazine, online images and you will find various forms of data presentation.

3.6.1 Photographs

The primary data collected by the use of photographs will be presented photographically and complimented by descriptions underneath each and every photo to give a clear, comprehensive and detailed pictorial nature and state of the site and their relevance to the research. The researcher took clear photographs of the site and compared to find out which ones were the best.

CHAPTER FOUR: SITE ANALYSIS AND INTEPRETATION OF FINDINGS.

4.1 Introduction.

This chapter presents findings and the analysis of Deliverance Church Mwihoko. It will include the site analysis, the qualitative analysis as well as the quantitative analysis and finally the findings as per the research questions.

4.2 Qualitative Analysis

Qualitative analysis uses subjective judgement based on non –quantifiable information, such as management expertise, industry cycles, strength of research and development and labor relations.

4.2.1 Furniture.

The church has 143 chairs in total. Of the total, 97 are plastic and are green, white, orange and grey. Of the total, 42 are chrome chairs with a black backrest with golden polka dots. Of the 143, there are 4 executive chairs made of mahogany while the cushion and backrest are red fabric.

There are 2 wooden tables in the church both made from light oak. The pulpit is made of glass and on it the initials of the church are inscribed. There's a suggestion box made from mahogany as well as 3speaker metallic speaker stands. The microphone stands are also wooden.

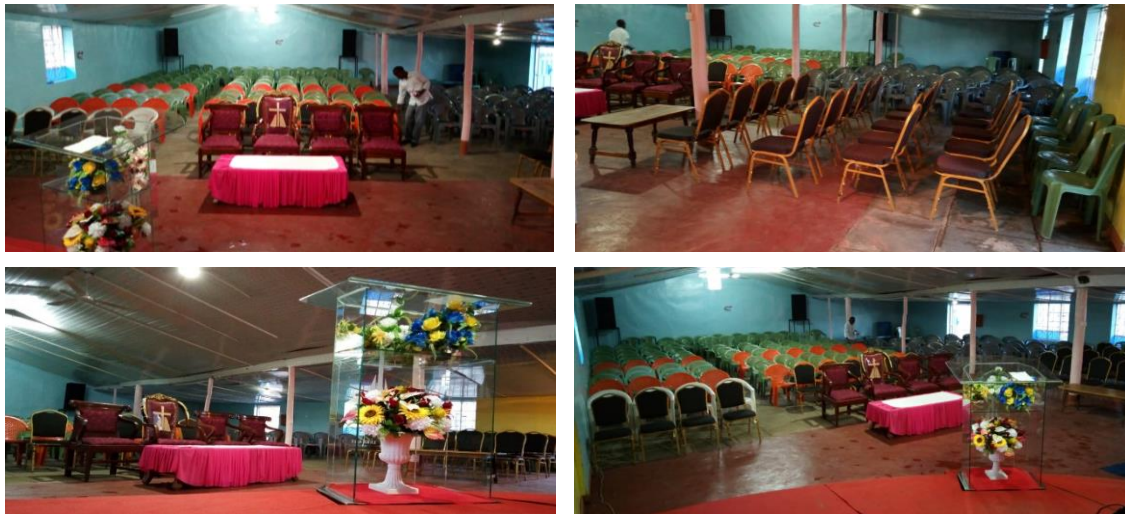


Figure 4.0.1: Furniture design photographs from D.C Mwihoko Source: Author

4.2.2 Interior architecture

The walls are wooden with different colors of paint, including, yellow and blue, with the altar being covered by a red and yellow fabric. The ceiling is an MDF ceiling with patterns and is white in color. The flooring is large concrete tiles with the front part of the church being cemented and the altar being covered in a red carpet. There are 2 bulbs, 2 florescent tubes and 3 spotlights.

There's a total of 2 fans in the room, one at the front of the church, the other one at the back. There's a total of 6 windows in the church and 2 metallic doors, one a single door and the other, a double door. There are 4 power outlets all located at the front of the church.



Figure 4.0.2: Interior architecture photographs Source: Author

4.2.3 Landscape

The landscape of the Church holds 3 buildings, one permanent structure and two semi-permanent structures. It also holds a swing set a slide. The ground is majorly covered in grass although some parts are bare making it very muddy during the rainy weather. The landscape has only one water point.



Figure 4.0.3:Landscaping photographs Source: Author

4.3 Quantitative Analysis

Quantitative analysis is based on describing and interpreting objects statistically and with numbers. It aims to interpret the data collected for the phenomenon through numeric variables and statistics. It involves computational and statistical methods of analysis.

4.3.1 Analysis of Response

The analysis is based on 120 responses of the youths, church elders, Mwihoko inhabitants and older congregants and children. The interviewees were randomly selected and all the responses the researcher got were from willing participants. The survey was therefore considered successful, with a 100% response rate.

4.3.2 Category of respondents

The respondents were of various ages and all genders to ensure there was balance. The ages that made up the sample were as follows; (0-10) -10, (11-20)- 35, (21-30)-28, (31-40)-15, (41-50)-20, (51-60)-10, (61-70)-2

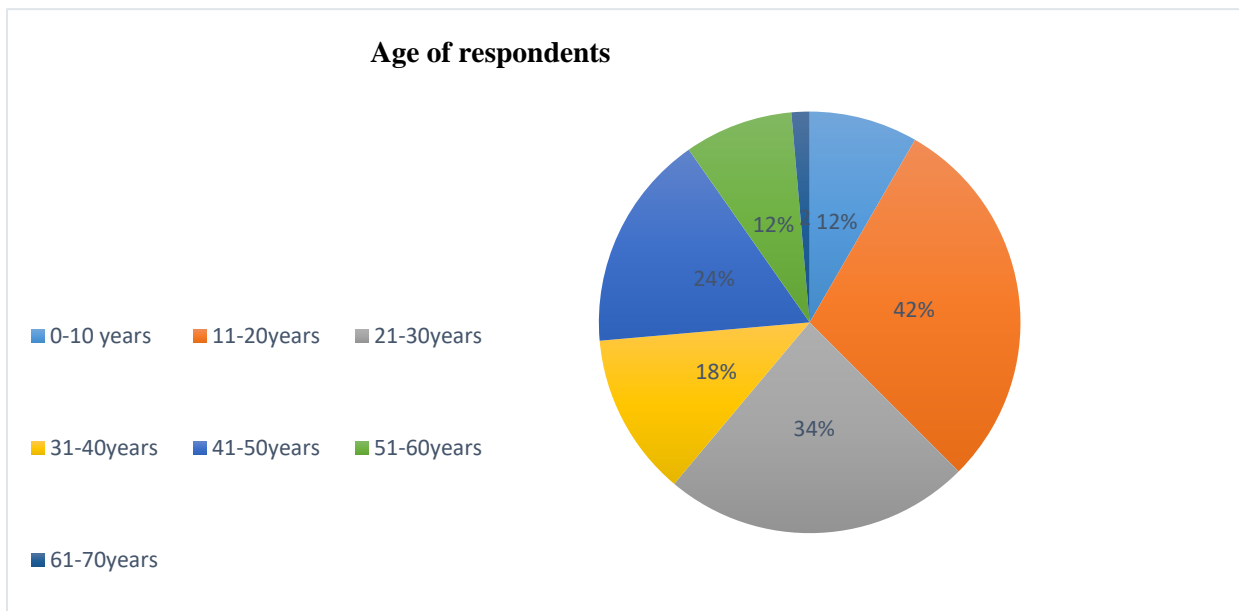


Figure 4.0.4 : Age of respondents Source: Author

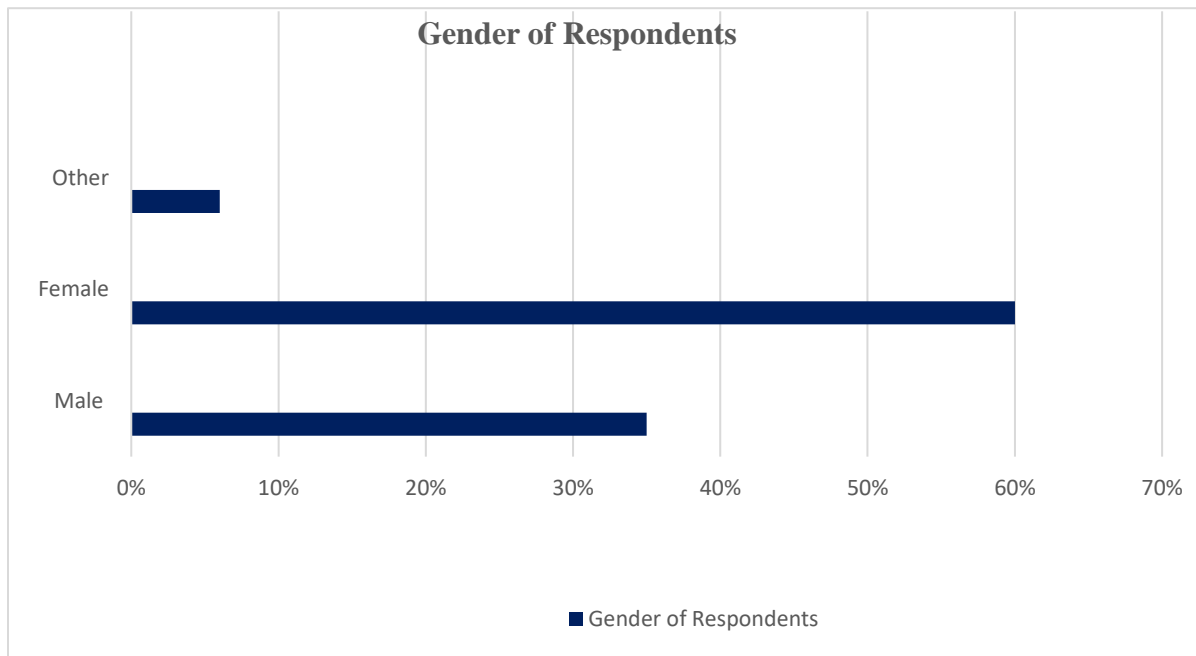


Figure 4.0.5 Gender of respondents Source: Author

Theme applied

The researcher wanted to find out if there was any specific theme applied to the church interior and landscape design. The results are also shown in the pie chart below.

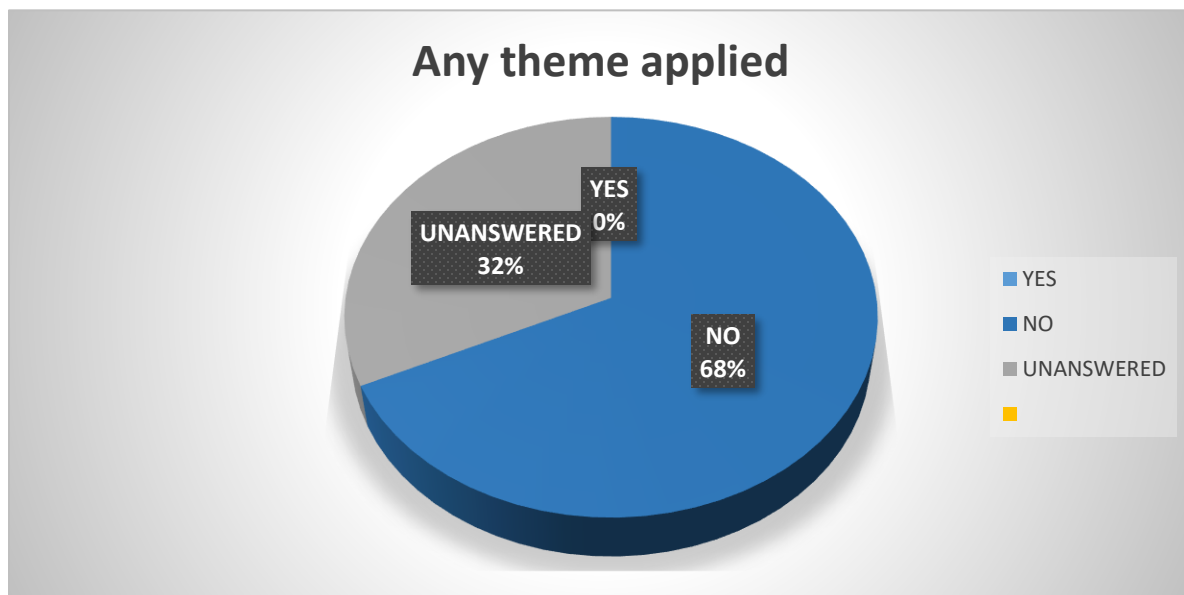


Figure 4.0.6: Analysis for the respondents' answers to the themes applied Source : Author

Recommendation for change

The researcher wanted to find out if the respondents thought the church and the surrounding landscape should be redesigned. The results are also shown in the bar graph below.

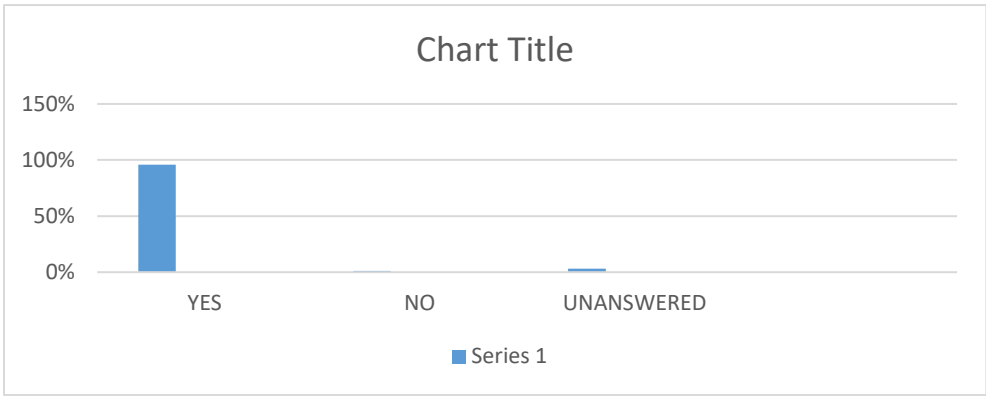


Figure 4.0.7:Analysis for the question on recommendation for change Source: Author

Familiarity to Emotional design

The researcher wanted to find out how many respondents had knowledge of the philosophy; Emotional design. The results are also shown in the pie chart below.

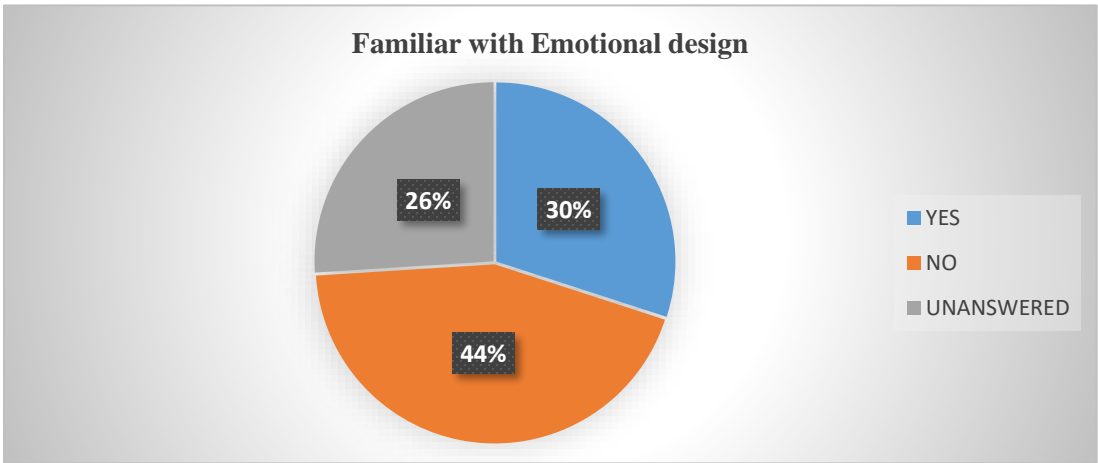


Figure 4.0.8Analysis of the respondents familiar to the philosophy emotional design Source: Author

Preference of material

The researcher wanted to find out if the respondents preferred new wood for the designs or whether recycled wood, would suffice. The results are also shown in the pie chart below.

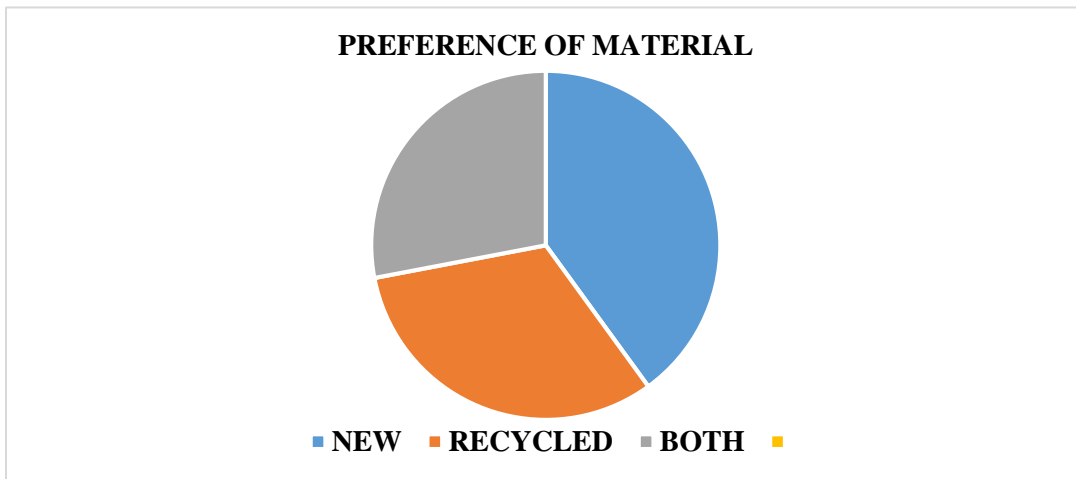


Figure 4.0.9: Analysis for the respondents' reference for new wood or recycled wood Source: Author

Familiarity to textile

The researcher wanted to find out if the respondents were familiar with the Bambara textile patterns. The results are also shown in the pie chart below.

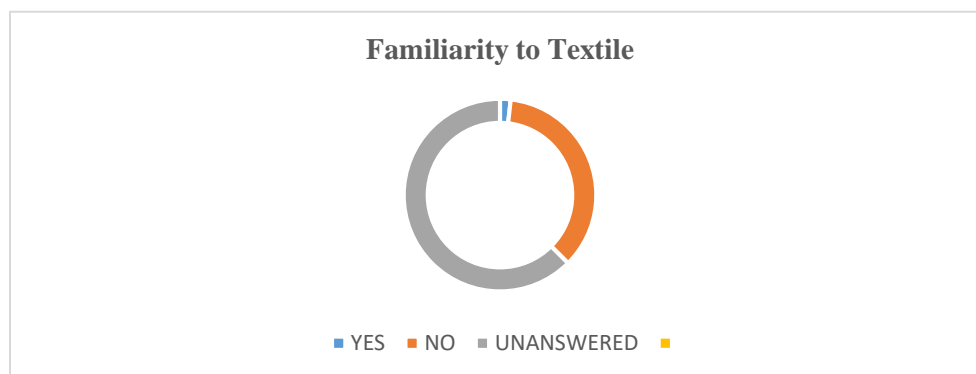


Figure 4.0.10: Analysis for the respondents' familiarity to Bambara textile patterns Source: Author

4.4 Presentation of findings

The researcher had set some objectives at the beginning of the research and managed to interview the target population. The relevance of this section is to find out whether the researcher has managed to achieve the objectives set.

The first objective was to investigate the relevance of emotional design in redesigning a church. The researcher found out that emotional design applies in so many areas in the church interiors from the colors, to the flooring design, to the ceiling type as the church basically functions on emotions such as peace, calm and serenity and a designer has to keep all the factors in mind.

The second objective was to establish how emotional design has been used to package churches as possible event venues. The researcher discovered that for the outdoor events, churches have designed their landscapes to be calm, serene with different types of vegetation and ample sitting space. For the interiors, areas like seating, the pulpit design and the ceiling design attract people to a space therefore designers should be very careful when designing them.

The third objective was to establish the current design state of Deliverance Church Mwihoko. The researcher conducted a site visit, took measurements and photographs. The researcher learnt that there is much room for improvement.

4.5 Conclusion

According to the research churches could generate income from events, if only they invested in their interiors. The research revealed that there is a lot of ignorance when it comes to the benefits of good interior and landscape design. The research also revealed that African concepts can be incorporated in church interior design.

CHAPTER FIVE: SUMMARY FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter presents conclusions, recommendations and suggestions for the research based on the results of the study from the previous chapters. The study focused on redesigning churches to create possible income generating activities, while incorporating emotional design and patterns from the Bambara textiles.

5.2 Summary of data analysis

The aim of the study was to investigate how Emotional design and Bambara textile patterns can be applied to the interior and exterior space of Deliverance Church Mwioko, in-order to create a suitable event venue.

According to the data collected from primary sources and secondary sources (archives, journals, photographs etc.), the information revealed that emotional design has been incorporated in various churches which have offered welcoming environments for events.

According to the research, there is little knowledge on emotional design and its impact on churches as well as Bambara patterns and sustainable design practices. The furniture in the church is basic and lacking in aesthetics, the colors of the chairs have no specific theme or thought to them. They are also very uncomfortable and from the interviews conducted, the congregants prefer comfortable seating as they spend over 6 hours in church seated.

Some of the interviewees, majorly the youth stated that they would not host any events in the church in its current state, because of how outdated it is. However, they suggested things that would make the place more inviting, some of which included, modern ceilings, modernizing the look of the walls, and having a more inviting outdoor.

For the landscape the research suggested that the greener the landscape the more serene and inviting it becomes. Since the landscape is bare, the researcher's suggestions will also include methods of soil preservation.

5.3 Recommendations

The researcher recommends the following in each of the four electives of interior design. These are Interior design, furniture design, exhibition and display, and landscaping. This is in order to design an aesthetic interior, comfortable and adaptive furniture and display design, and sustainable and inviting landscaping. The researcher has also provided some concept sketches for each field of interior design.

5.3.1 Interior architecture

The interior space recommended for redesign is the main sanctuary and its lobby. Which is supposed to be a worship center and a welcoming site. The site should therefore be designed to accommodate people of all ages and cultures. The space should be designed in a way that evokes the intended emotions and where the Bambara Textile Patterns can be spotted as the inspiration.

Walls Rustic regular surface texture paints can be used. The walls can be painted cool, calm colors such as beige, white or grey with patterns from the Bambara textile patterns. The wall color will be in line with the color palette chosen.

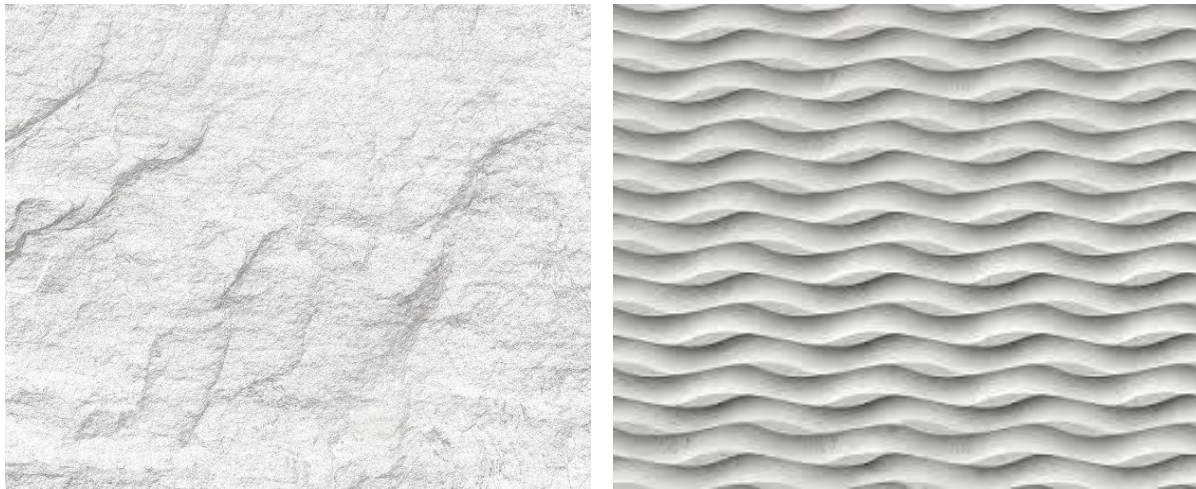


Figure 5.0.1: Wall textures Source: www.pinterest.com

Flooring

Parquet is highly recommended for the church. It is easy to clean, sound absorbent and very durable.

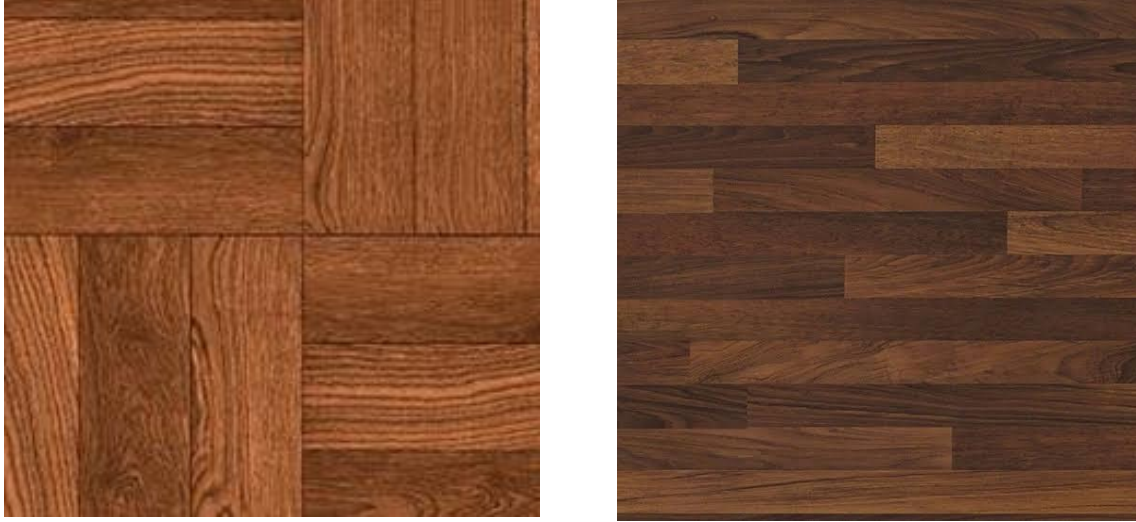


Figure 5.0.2: Proposed flooring Source: www.quora.com

Ceiling

The ceiling should be made from recycled materials. Wood pallets are therefore recommended. Another option is a gypsum ceiling in order for the various designs to be achieved. The ceilings should be high to allow for proper ventilation and to give good acoustics.

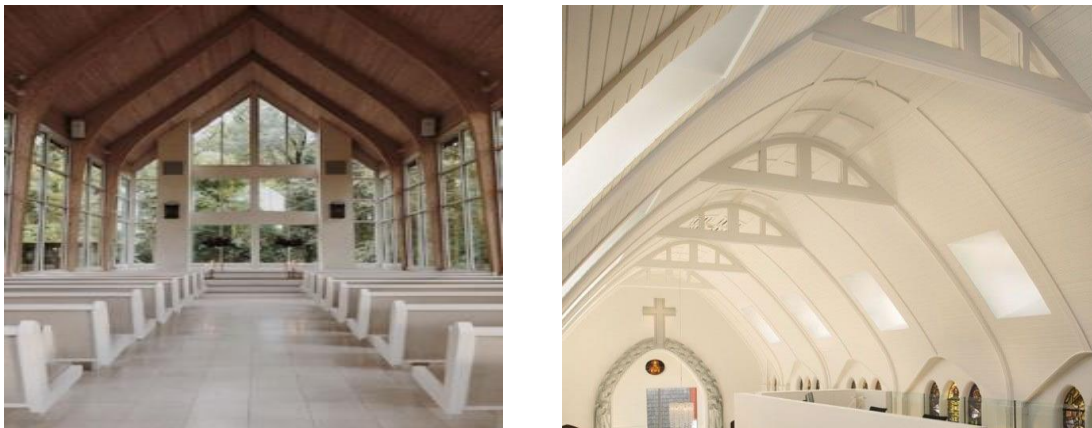


Figure 5.0.3: High ceilings Source: www.pinterest.com

Windows

The windows should be high and wide, in-order to allow more natural light into the sanctuary. In respect of the holy trinity, the windows should be three on either wall. The glass should be translucent but clear glass.

5.3.2 Furniture

The interior space furniture recommended for redesign is the main sanctuary and its lobby. The furniture recommended should be modern, comfortable and with clear inspirations from the Bambara clothing textiles.

Benches

Benches are recommended because they are accessible by aisles for the use of the congregation. They will also be comfortable as the suggested benches will have cushions and paddings. The fabrics will have patterns inspired by the Bambara clothing textiles. The frame will be made from recycled wood pallets.



Figure 5.0.4: Proposed bench designs Source: Author

Clergy seats

The clergy seats will be made from wood pallets and padded with fabric that with prints inspired by the Bambara textile clothing.



Figure5.0.5: Proposed clergy chairs designs Source: Author

Pulpit

The proposed pulpit is small and modern. It will be made from recycled wood and chrome.



Figure 5.0.6: Proposed bench designs Source: www.Pinterest.com

5.3.3 Exhibition and display

The interior space recommended for redesign is the pulpit and its lobby. The lobby is supposed to be a welcoming site. It should therefore be designed to accommodate people of all ages and cultures. The space should be designed in a way that evokes the intended emotions and where the Bambara Textile Patterns can be spotted as the inspiration.

The lobby reception area

Seeing as this is the first place the congregants or visitors see when they come into the church, it should be very welcoming. The reception desk in the lobby will be curved as it is more welcoming. It will be made from recycled wood with the Bambara prints as the main inspiration.



Figure 5.0.7: Proposed lobby designs Source: Author



Figure 5.0.8: Proposed lobby designs Source: Author

The pulpit

Seeing as altars are the main focus in the church. They should therefore be the focal points of the interior design and must be aesthetically pleasant.

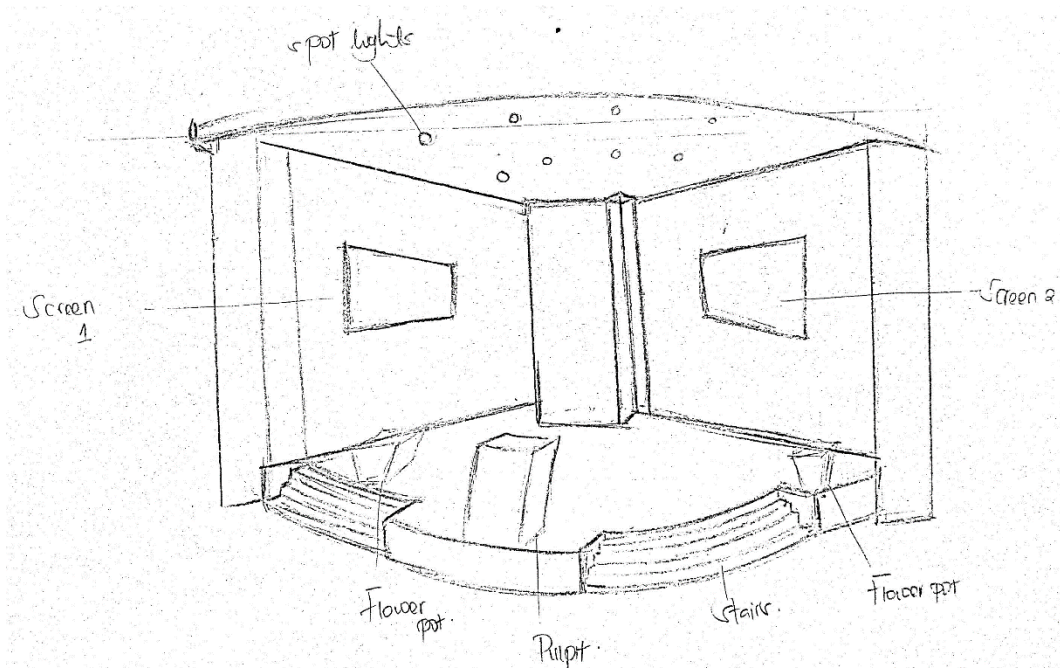


Figure 5.0.9: Concept sketches of the pulpit Source: Author

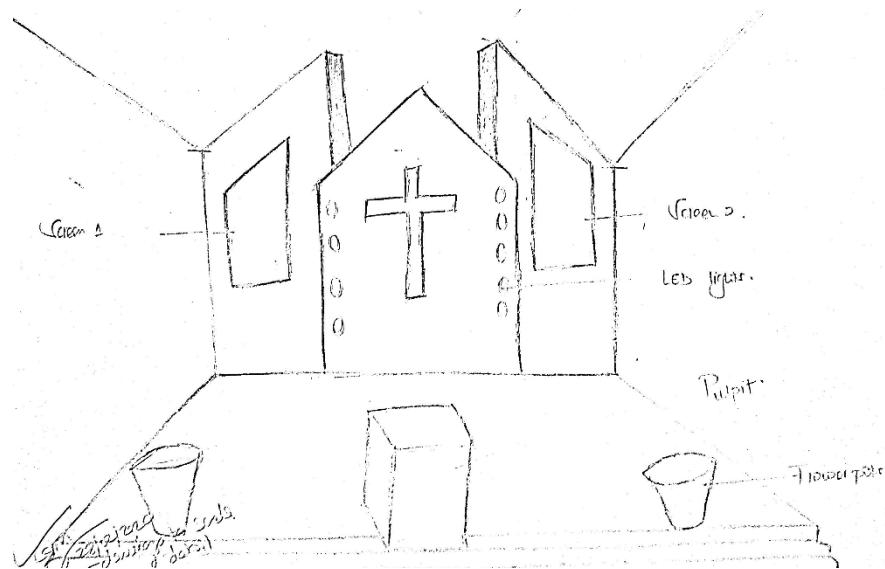


Figure 5.0.10: Concept sketches of the pulpit Source: Author

5.3.4 landscape

The landscape of the site should be designed in that it complements the interior environment and provides space where the children can have freedom of movement, safely and with comfort. Hence the following are recommended: Designing group sittings within the landscape: This can encourage the students to interact with nature; in turn they learn the beauty of the environment. Designing a playground using recycled materials: the material can either be recycled, upcycled or salvage. Pathways: using natural stepping stones to prevent people from stepping on the grass. Planting native plants: planting appropriate species of trees help celebrate the environment, stabilizes and enriches the soil

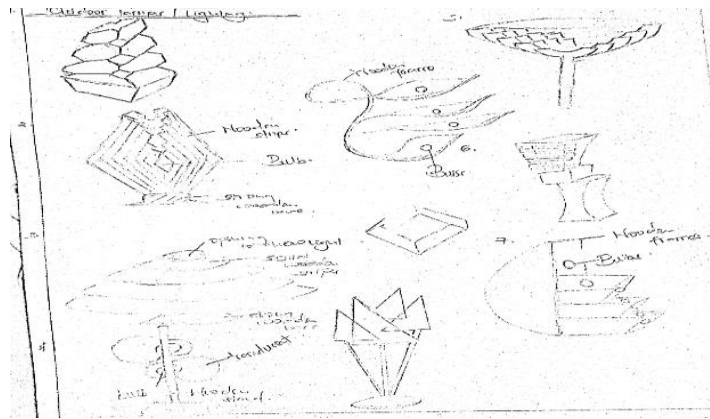


Figure 5.0.11: Concept sketches of the outdoor lamps Source: Author

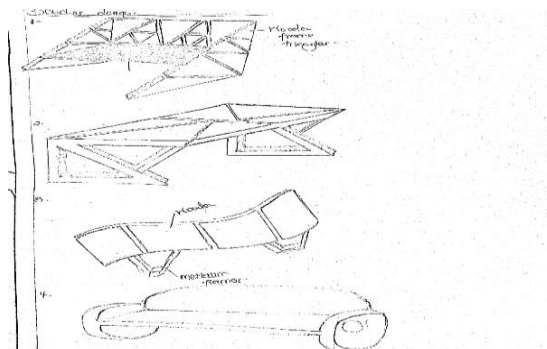


Figure 5.0.12: Concept sketches of the outdoor benches Source: Author

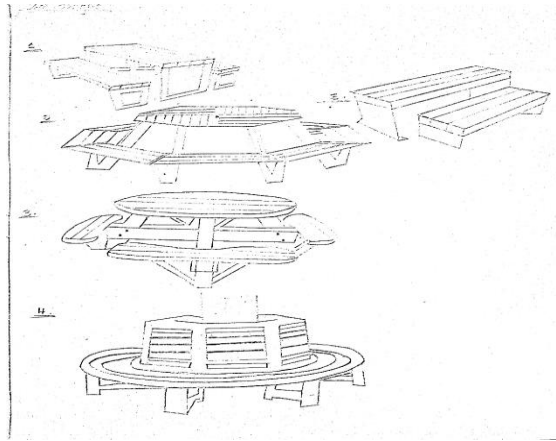


Figure 5.0.13: Concept sketches of the outdoor benches Source: Author

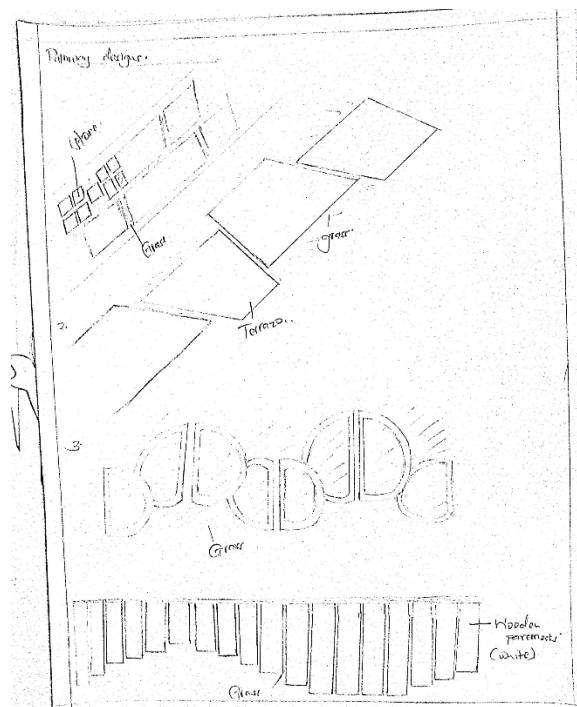


Figure 5.0.14: Concept sketches of the pathways Source: Author

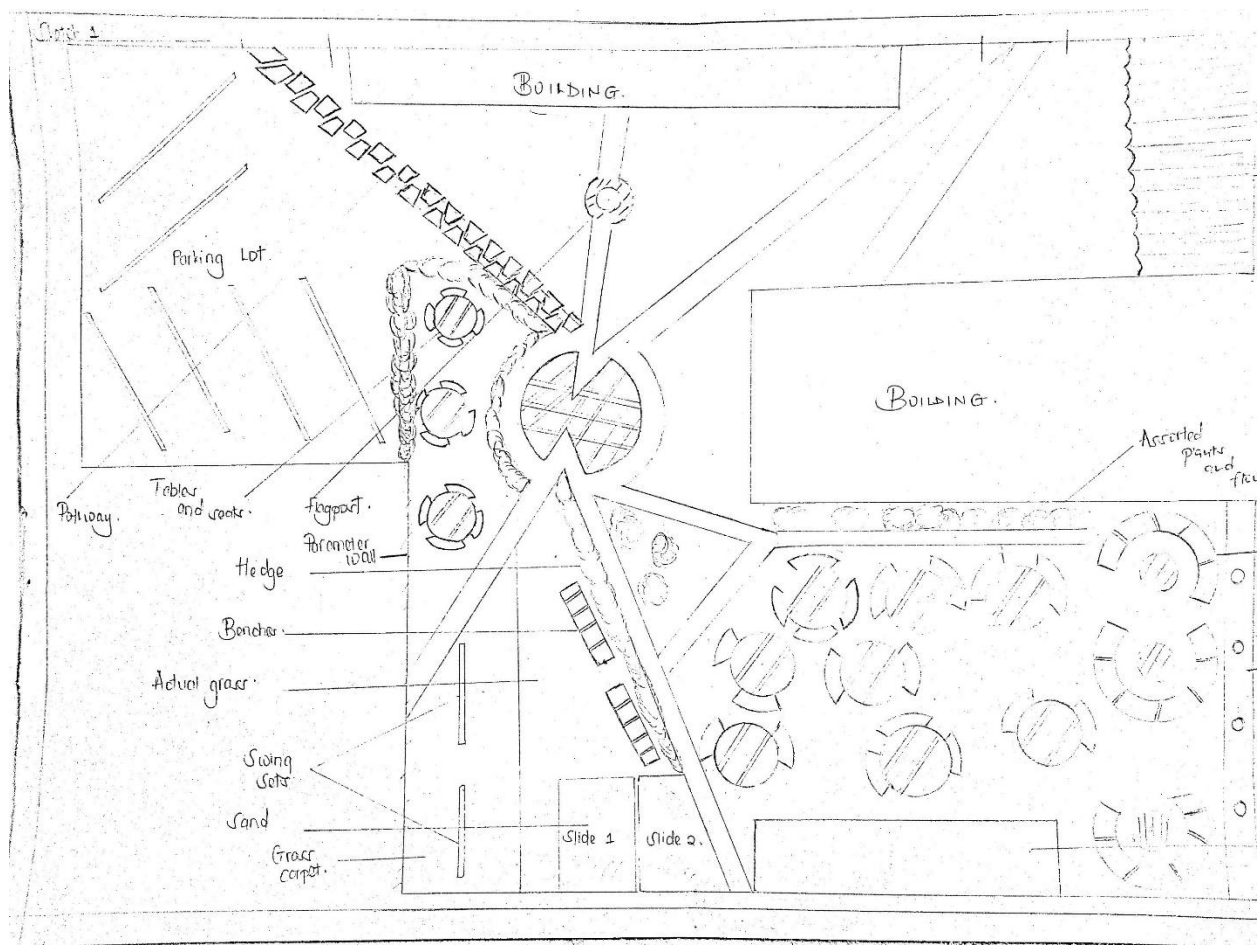


Figure 5.15: Concept sketches of the plan Source: Author

5.4 Conclusions

In applying all of the above recommendations, Deliverance Church Mwioko will be transformed into a modern church that will be also act as an event venue due to its aesthetics. From the events it will be able to generate income to further develop. Having it in the community will also solve the community's problem of lacking an event venue within.

5.5 Suggestions for further studies

The researcher covered all the four areas of study in interior design. However, there's a lot more to research about. The researcher suggests that more study be done on sustainability in relation to interior design and the impact that would have on social centers for example churches.

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Appendices

Questionnaires

The researcher is a final year B.A design student at the school of arts and design, University of Nairobi. Kindly assist in filling in the questionnaire guide. The report will strictly be for scholarly purposes only.

Answer the following questions by putting a tick (✓) where necessary and explain where necessary.

1. Gender:

Female ☐ Male ☐

1.Do you know what emotional design is?

Yes ☐ No ☐

2. Would you hold an event in the church and pay for the grounds?

Yes ☐ No ☐

If Yes, why?

If No, why?

3.Have you ever heard about Bogolan cloth/mud cloth?

Yes ☐ No ☐

4.Would you recommend a design make-over?

Yes ☐ No ☐

5. Do you prefer: new wood for the furniture ☐ recycled wood for the furniture ☐ or a mixture of both?

6. Is there any specific theme in this church according to you?

Yes ☐ No ☐

Observation Guide

1. What activities are carried out within the church?
2. Does the interior space have a theme? If so, what theme is it?
4. What are the relations of each space to each other?
5. What kind of materials are the products within the church made of?
6. Are the furniture pieces ergonomically fit and aesthetically pleasing?
7. Are there any exhibition display products, either exterior or interior of the site?
8. Does the landscape have a theme?
9. Are there any hardscape features & soft scape features?
10. Is the landscape well maintained?