

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

REMODELING A CLOTHING STORE IN LOS ANGELES USING THE PATTERN
LANGUAGE METHODOLOGY

A graduate project submitted in partial fulfillment of the requirement for the degree of

Master of Science in

Family and Consumer Sciences

By

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ABSTRACT

REMODELING A CLOTHING STORE IN LOS ANGELES USING THE PATTERN LANGUAGE METHODOLOGY

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This project studied a clothing store in Downtown Los Angeles. The store location is among other major retail units comprising approximately 4600 Sq. ft. Due to recent market losses the owner wanted to remodel the store. The problems relating to the store's reduced profits were identified through an interview with the shop owner, who is also the client and two other employees working in the store. These problems were related to issues such as space planning and circulation, lighting, security and stores image. Pattern Language methodology helped in identifying problems and proposing design solutions to solve these problems. The project methodology and results were assessed by the owner and two employees, along with two interior designers who are knowledgeable and experienced on the pattern language methodology. The outcome of the study led to suggested solutions and conclusions within a conceptual design proposal. Consequently, a sequence of Green and Humane Patterns were developed and applied, which addresses those needs identified in the store's remodelling plan. The feedback received from the reviewers pointed out that the developed patterns were a valid prescription, in attempting to solve the problems facing the store.

CHAPTER ONE

INTRODUCTION

Retail shops in Los Angeles have kept checks on the trends in the design industry for a long time. The purpose of the checks is to ascertain designs that will lead to enriched business incomes while at the same time enhancing sustainability. According to (Richard & Rafael, 1993) sustainable design approach is very essential in a world that is dynamic, competitive and innovative. Interior designers have found it challenging to develop a retail environment that is both profitable and sustainable (Heather, 2008), among other obstacles, high real estate costs and changing demographic patterns that result in lower sales per customer.

In the United States, retail development represents the biggest portion of industrial growth. According to Piotrowski and Rogers (2007) retailers refurbish their stores at least once in every five to seven years. Hence, it is essential that the retail industry embraces a more sustainable approach to retail store design and production projects. High competition and rapid growth are creating a need for more innovative designs that incorporate sustainability.

In retail, the bottom line is to attain the biggest market share within a particular segment. However, retailers may be slow to assent sustainable practices that do not promise cost effective returns. Interior designers have a responsibility to identify problematic issues and to fully educate retailers on long term benefits of environmentally sensitive design, and on the importance sustainability offers not only to space utilization but the daily operations of the business. Using sustainable design practices in retail reduces operating costs over business life, increases customer spending and perception and improves employees' productivity. Increased business productivity together with positive environmental impact of sustainable design have started attracting potential investors in the retail industry. Previously, time restraints and

additional construction costs have been a roadblock to creating sustainable retail establishments (Stacy, 2006). This trend is quickly changing, and implementation of several projects fall on time and under budget while integrating sustainable practices. This project aims to bridge this design gap based on a Pattern Language approach, specifically in a retail store setting. This approach is grounded in the work of architect Christopher Alexander, who formulated an iterative theory in the 1970s termed Pattern Language. This approach is still widely used today in the field of design. Pattern Language assists individuals in developing appropriate, responsive potential solutions for design problems which tend to recur in the built environment (Alexander, 1977). The main aim of this project is to adopt the design process, and create a design program that will incorporate sustainable humane patterns with green patterns that respond to the retail store's needs.

Problem Statement

A report by the U.S. Department of Energy indicated that the retail store buildings occupy a bigger space than all the other commercial buildings (Wilkinson and Yun, 2006). The retail store sector is among the contributors of the current environmental challenges. The current sustainability issues regarding design and humane patterns are a result of overwhelming reliance on technology (Smith, 2011). That means there is a need to use a more holistic approach to sustainability, one which incorporates sustainable green patterns and humane patterns.

This study looks into a clothing store at downtown Los Angeles. The store is located along other major retail units and is approximately 4600 Sq. ft. Due to experienced business losses, the owner intends to spend approximately 50,000 (USD) to remodel the store. The problems were identified through an interview with the store owner, who is also the client, and in consultation with two other store employees.

The layout of the retail shop does not provide employees with full visibility and security alert. Large retailers in the clothing sector mostly rely on scanners, cameras, floor walkers and other surveillance strategies. The precautions employed by retailers range from security guards to different systems of technology. Some of these precautions can be expensive, but they are considered effective due to the role they play in providing better security in stores. This particular store depends on on the workers to safeguard its products. In order to boost security more sustainable and innovative strategy will be improvised to protect customers, employees and its product from criminal activities.

Store design was also a central concern as it plays a number of roles. A good design will allow the retailer to make the most of sales for each part of the allocated space within the store. In general, store layouts indicate the size and placement of customer traffic patterns, fixture locations, any permanent structures, and each department. Every store's design and floor plan depend on the building area as well as the goods sold, security, and the cost of the design and the plan.

The fundamental responsibility to be undertaken is to reorganize the merchandise section of the retail store into logical selling groups and allocate space and create layouts that support selling. There is a need to observe that fixtures are at sensible distances from each other in order to safeguard enjoyable shopping where there is a free flow of air and good flow of people. This kind of spacing will complement the existing walkways in the store at the same time increasing the natural surveillance.

Retail lighting is one of the challenges that the store faces. Lighting plays several roles in any given businesses. The existing lighting does not support comfortable and productive

environment. It is functional but has poor glare control, and, therefore, does not emphasize key areas throughout the retail store. The lighting is not layered neither is it of a variety of fixtures and intensities. Retail lighting plays a vital role in interior designing (Gary, 2002). Different lighting schemes such as up-lights, down-lights, and strip lights can contribute in the creation of a better retail store ambiance thus enhancing a store's image and attracting potential buyers. Increased traffic in the store will increase the sales. Thus, one of the themes that this project will focus on is lighting.

Larceny from outside and inside the store is a vital concern to the owner. This has led to a lot of losses to the businesses. Safety and security concerns were, therefore, taken into account while remodeling the retail store. Although the retail security is to make retailers and customers feel safe, retailers are supposed to, make sure the security systems in use do not intrude into the client's sense of freedom and enjoyment during shopping (Piotrowski, 2011). The store uses limited labor force to prevent larceny from outside and inside.

Considering these facts, it was proposed that the retail store be remodeled, taking into account considerations in the areas of lighting, safety, store image, circulation, sustainability and humane principles in the design process.

Research Purpose

The study had a number of fundamental purposes. The primary aim of the project was to raise the retail store environmental quality by considering both humane and sustainable needs. The principle theoretical aim of the project was to develop and adopt a retail store 'Pattern Language'. This design process included both sustainable and humane patterns that would be applied by individuals, designers, builders, and architects who may deal with retail store design.

Research Questions

1. What is the existing design of the clothing store at downtown Los Angeles?
2. How has this model impacted the store's image and productivity?
3. Which Pattern Language can be developed to rejuvenate the stores image, productivity and security?

Research Objectives

1. To evaluate existing design of the retail store
2. To determine problem areas for improvement
3. To create a Pattern Language that incorporating sustainable green and humane patterns
4. To enhance the clothing store environment so as to increase its profitability
5. To evaluate the project pattern language and the design process that was proposed

Research Assumptions

In this study, there was a broad assumption that the challenges facing the store in its operations would continue to occur and impact negatively on the expected productivity, image and security of the merchandise, unless rapid measures are brought about to influence these challenges. In the face of non-intervention, the above identified problems of the clothing store would deteriorate to unacceptable limits. It was also assumed that the designers had the suitable qualifications in working with Pattern Languages (as established by Alexander's theories) and they were conversant about the principles of sustainable design.

Scope of the Research

The study undertook research into an existing design of a clothing store. The primary objective was to identify the impact of the design and the consequence of redeveloping the design, through humane and sustainable principles using an efficient Pattern Language. The study

focused primarily on how the clothing store was affected by layout design, circulation, store image and security. It also sought to understand the causes and significance of those factors.

Definitions

- a) Ambient factors: Factors that affect the atmosphere of the surroundings, such as color, sound, lighting, and scent (Robson, 1999)
- b) Ecological design: Refers to an integrative and holistic design principle that minimizes the destruction of the environment by taking into consideration all living creatures (Van der Ryan & Cowen, 1996)
- c) Green design: The objective of green design is "to eliminate negative environmental impact completely through skillful, sensitive design" (McLellan, 2004)
- d) Human/green design: The integration of humane design with green design and aims to create environments which sustain and regenerate nature while preserving and enhancing human health, spirituality, and well-being. (Pontikis, 2010)
- e) Pattern Languages: Originally introduced by architect Christopher Alexander, it is a format for describing a solution to a design problem. "Each pattern identifies a problem, which occurs over and over again in our environment" (Alexander, Ishikawa, Silverstein, Jacobson, Fiksdahl-King, & Angel, 1977)
- f) Sustainable design is the careful meshing of human purposes with the larger patterns and flows of the natural world, and careful study of those patterns and flows to inform human purposes." (Orr, 1992)
- g) Environmental Sustainability. "Sustainability means using, developing and protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs." (Andy Duncan)

h) Generation Y customers: Generation Y is defined as those born between the years 1977 and 1994. This generation has been described by demographers as being socialized into shopping as a form of leisure. The generation demonstrates a general liking for purchasing and have ample discretionary time for shopping and spend freely and quickly (CABI, 2009).

Limitations

The project remained feasible right from the initial stages. However, certain limitations were experienced during the design process and at the implementation level:

- The design might not be applied to other business setups apart from clothing retail shops and boutiques.
- This project focused on functionality, the structure of the patterns, sustainability and image. The study did not lay emphasis on the sequence and relationship of the pattern. This remains an area of further investigation.
- The available budget was reasonably adequate for resolving the problematic design issues. However, much higher budget would be needed for a major revamping of the store.

CHAPTER TWO

LITERATURE REVIEW

This section presents an overview of the work done previously that provides the required knowledge for this research purposes. It focused on various interior design topics and the impacts of interior design in enhancing the efficient use of space, functional design, and user well-being strategy. This section has begun with a coverage of interior design topics which have assisted in setting the context of this study. The literature review for this study concentrated on areas related to the topic. These areas include: research on 1. Retail Design, 2. Pattern Language, 3. Humane Design, 4. Store Layout, 5. In-Store Security, 6. Retail Lighting, and 7. Sustainable Design.

Designing Commercial Interiors

Designing retail interiors is concerned in creating the interior of facilities used for business purposes. This area of design starts with understanding the goal and objectives of a business. It is really necessary to understand the business specialty before beginning a design project. According to Piotrowski and Rogers (2007), when a designer understands the functions of a business, he/she will be able to provide solutions that are more functional for the client leading to more creative design concepts. Therefore, the advantage of understanding the business specialty is that the interior design will be more functional.

There are various issues that affect the interior design of commercial space, such as the type of facility, location, customers, and type of business conducted in a market (Szenasy, 2012). Each type of facility has different requirements such as codes that must be adhered to, materials that can be used, furniture specifications, space planning, as well as the goals and purposes of the business. The amount of money to be spent on interior design may vary depending on the

location of the business (Alexander, 1977). Interior design is affected by the customers expected in a given business. For instance, a retail store that expects Generation Y customers will have different color choices and a detailing from retail stores expecting older customers. The type of work conducted in a business also affect how the interior should look like, for instance, a coffee shop interior is different from a jewelry store interior. Different clients have different preference for interior design and sometimes, the designer might be unable to meet all the unique demands of the clients (Piotrowski and Rogers, 2007).

Retail Lighting

Retail lighting can make a dramatic impact on the space. Retail interiors require lighting functionality, alignment with the type of merchandise and emphasis of key points throughout the retail store. The lighting must be layered and composed of a variety of fixtures and intensities. A designer should initially assess the natural light and the impact it has on the space. Natural light creates clarity and interest to the space; clients also prefer to evaluate the quality of merchandise in it (natural light) (Barr & Broudy, 1990). If natural light does not exist in a particular space, it can be introduced to the retail setting by the use of a skylight. The second thing a designer should consider is the exterior illumination of the roof and interior ceiling lights. This lighting is supposed to wash the structural features and at the same time create vectors that guide the customer to key merchandise selling sections (Barr & Broudy, 1990).

The next thing to consider is the lighting layer that emphasizes the selling sections or regions. These lights are supposed to be direct but not too harsh and shiny. Poor lighting may cause uncomfortable experience and eye strain to the customer. To reduce the chance of eye strain, the ratio of luminance is supposed to be low in merchandise selling sections. The next layer of lighting to consider should complement and bring focus onto the merchandise. This type

of lighting is supposed to be flattering for the customer and merchandise. The final layer of lighting should consider installing functional lights, including clear exit signs (Lopez, 2003; Israel, 1994).

Retail lighting plays an important role in interior designing. Different lighting schemes such as up-lights, down-lights, and strip lights create a retail store into a beautiful showcase thus enhancing a store's image. These will also lead potential buyers inside, make buyers focus their attention on products and certainly increases the sales. Retail lighting should have good color, balance, and contrast. These qualities can be achieved with energy-efficient lighting that is energy-code compliance. The light source is supposed to be close to the merchandise. Efficient and diffuse sources such as fluorescent lighting should be used for ambient lighting, while, for accent lighting, narrow-beam spotlights such as low-voltage MR-16s or halogen PARs should be used (Binggeli, 2009).

Light colors on the interior surfaces of shelving are very significant because they reflect light onto the merchandise. To assist the clients to navigate the merchandise displays easily, an organized pattern of light fixtures should be applied. Partially concealing ambient lighting with baffles or louvers accentuates the merchandise or product (Binggeli, 2009). Accent lights need to be placed close to the displays, and decorative or exposed accent lights should be used to help build a high-end store's image or create attention. High-color-rendering lamps are safe for both task and ambient lighting. Pegler (2007) argues that the type of lighting to be used in a given business depends on the type of atmosphere that the client wants to make. For instance, bright and harsh overhead lighting can be used to create an ambiance that will keep customers alert and willing to shop more.

Retail Design

Retail design is a commercial and artistic field that incorporates a number of different areas of expertise collectively in the structure and design of retail space. Retail design is, principally a specialized practice of interior design and architecture; however, it also combines elements of advertising, ergonomics, graphic design, industrial design, and interior decoration (Riewoldt, 2000; Gordon, 2004; Waldrep, 2009).

As a consequence of the heavy demands directed on retail space, retail design is considered to be a very specialized field or subject area. The principle goal of retail space is to stock products as well as sell them, to clients or consumers; hence, spaces should be designed in a manner that encourages a hassle-free and enjoyable shopping experience for the customers (Martin, 2012). Space should be particularly-tailored to the type of product to be traded in that space; for instance, a bookstore needs several big shelving units to suit small products that can be organized categorically whereas a clothing store needs more space to display product fully (Okonkwo, 2007; Kliment, and Barr, 2004; Hahn, 2004).

Retail spaces, particularly when they create a part of a retail chain, should also be designed to attract customers, into the space to shop. The front section of the store should act as a billboard, often using large display windows that allow consumers to view into the product and space inside. In the context of a retail store chain, the particular spaces should be unified in their plan. A retail designer should create a thematic experience for the customer or consumer, by making use of spatial cues to entice and entertain the customer to purchase products as well as interact with the retail space (Lopez, 2003; Barr and Broudy, 1990). In most cases, retail designers are aware that the background to the merchandise is the store and their designs and

therefore, their work is to create the best possible environment that will portray the merchandise attractively to the target consumer group (Lopez, 2003).

In-Store Security

Safety and security concerns should be taken into account while creating a retail store. Although the retail security is to make, retailers and customers feel safe; retailers are supposed to make sure the security systems in use do not, intrude into the customer's sense of freedom and enjoyment during shopping (Piotrowski, 2011). Many retail stores use a lot of resources to prevent losses from larceny, from outside and inside. Smaller retail stores mostly rely on a layout that provides the employees good visibility and alert employees, while larger retailers mostly rely on scanners, cameras, floor walkers and other surveillance strategies. Clients are usually given access to the store through certain doorways because of security reasons. When clients are restricted to designated entryways, security personnel and surveillance equipment are in a better position to monitor activity.

Retail stores use various security precautions to protect their customers, employees and their goods from criminal activities. The precautions used by retailers range from security guards to different methods of technology. Some of these precautions are expensive, but they are considered efficient due to the role they play in providing security in stores. Many retail store use surveillance cameras as part of their security system. Interior designers can assist security personnel monitoring these cameras, by introducing different ways to view the floor. This can be achieved by installing mirrors over the corners of the walls and the top of hallways so that workers can be in a position to view people in different regions of the store and where they are heading to. According to Hadjiyanni and Kwon (2009), including interior designers in the conception and implementation of electronic monitoring systems or schemes will expand the

interior design field contributions to the realm of security. Racks used for floor displays should be positioned in such a manner that they do not block the hallways. Cameras are supposed to be installed in, such a way that they offer a full bird's eye view of the activities taking place throughout the store. Therefore, they should be installed in areas such as in the ceilings or along the walls (Slater, 2011). It is, therefore, the work of the interior designers to advise on the optimal location and best configuration of camera security systems so that they can assist retailers to effectively monitor areas such as shop front displays, entrances, and checkouts (Stanley Security Solutions, 2013).

Store Layout and Design/ Visual Marketing

A good layout of the store and design is very essential because it is a very vital way of communicating and helping clients to buy. A good retail design should pose the following under consideration.

- The atmosphere of the shop should be consistent with the retail and brand image
- The design should play a large role in influencing consumers buying decision
- It should encourage optimization of productivity from retail space (Arunachalaih, 2008).

Store design

This refers to planned physical site and organization of commodities, exhibitions, and checkout counters, non-selling regions and sections. The overall, purpose of a decent shop approach is to provide customers and retailers' convenience (Store Layout and Design, 2010). In this regard, a good program should do the following;

- Attract customers to move all over the shop to purchase
- The plan should promote consumer movement in a definite circular pattern

- There should be a sense of balance concerning shopping and sale spaces at the same time
operative products, demonstration

A typical design of a store has four parts

- Selling area
- Great retail space
- Customer space
- Personal space

Types of floor design

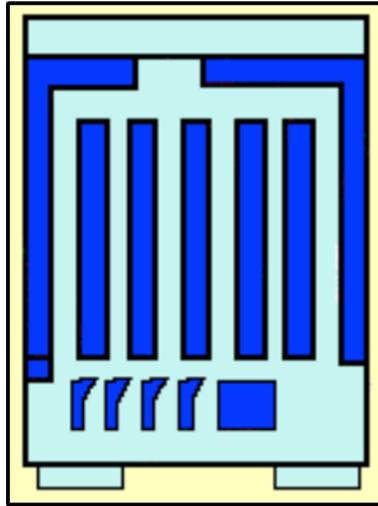
Grid Layout

Grid design is a linear design where objects are organized to create vertical and horizontal aisles all over a selling floor. It is a universal plan in groceries, supermarkets, boutiques among other retailers. It is a good strategy in that it is convenient and gets a lot of products on display. It is also very economical and efficient in the use of space. Shoppers are able to move freely and are able to view a lot of products due to the orderly stacking. It is, efficient to maintain and navigation is very easily predictable. It allows customers to serve themselves very fast where self service is available. The strategic location of departments ensures that consumers are drawn through the store and exposed, to all merchandise categories (Store Layout and Design, 2010).

The central weakness of the grid design is that it constrains buyers to the psychological effect where they feel rushed and constrained. It is not pleasing at all in that it has long gondolas of merchandise and aisles with repetitive, monotonous effect that bore the customers. Certainly

the central aisles will get a lot of exposure, but the secondary aisles are often overlooked and, as a result, sales are missed.

Figure 1. Grid Layout



Source Harcourt Brace & Company

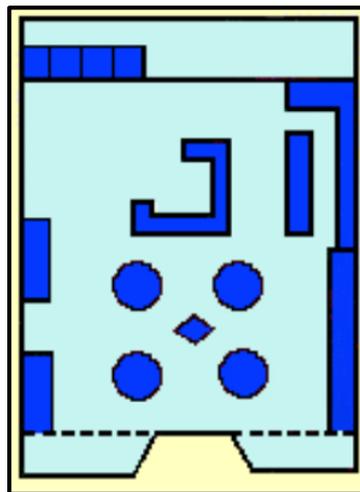
Free flow layout

This is an asymmetrical arrangement of the store and goods in a much unstructured kind of flow. It is mostly used in areas having specialty stores and also contained by departments within departmental provisions that put emphasis on ambiance and personal retailing. This arrangement is very flexible (Store Layout and Design, 2010).

Advantages: It does not restrict customers from looking from one place to another and impromptu buying. It also improves interior design, as distinct sections are more easily notable. It leans towards providing additional tranquil environment. Free flow layout emphasizes personal selling a lot.

Disadvantage: The chief weak point of this design is that its use of space is very inefficient thus leading to consumer disorientation. This kind of setup requires sophisticated security measures and high labor force. There are lots of blocked visions thus making natural surveillance quite challenging. The critical factor is providing sufficient area amongst fixed object.

Figure 2 Free Flow Layout



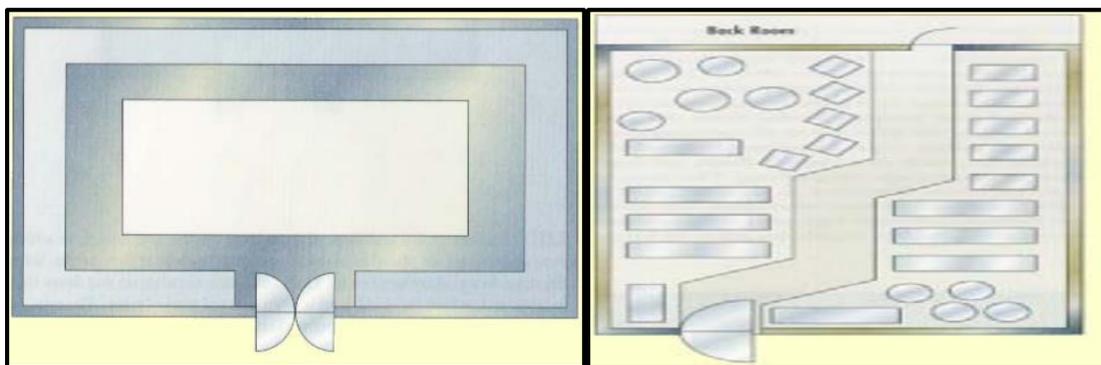
Source Harcourt Brace & Company

Soft Aisle Layout: In this sort of layout, merchandise walls are the most generators within the shop. There are wide foot walkways along which fixtures are arranged in clusters. The layout encourages customers to shop the walls and move easily around the shop (Arunachalaih, 2008).

Minimal Floor Layout: This is like a gallery in its simplicity. It shows small selections of handcrafted or very exclusive merchandise. The products are offered dramatically on the walls of the shop. This has led to the minimal retailing of fixtures on the floor. It also gives room for wide open spaces in the center of the shop (Arunachalaih, 2008).

Combination Floor Layout: It combines various features of floor layouts. This is done in an overall plan that suits a retailer's particular approach. It blends free flow design in the 1st third of the shop and a grid plan in the back of the shop (Arunachalaih, 2008).

Figure 4. (a) and (b) Circulations Loop



Source Harcourt Brace & Company

The above highlighted weaknesses of the different layouts can be summarized as follows;

1. The central aisles of the grid get a lot of exposure, but the secondary aisles are often overlooked and, therefore, sales will be missed

2. The other weakness of the grid design is that it constrains buyers to a psychological effect where they feel rushed and constrained.
3. It is also not pleasing at all in that it has long gondolas of merchandise and walkways with repetitive, monotonous effect that bore the customers
4. The chief weak point of the mixed floor plan is that its use of space is very inefficient thus leading to consumer disorientation
5. In a mixed floor set up a lot of sophisticated security measures are required due to lack of natural surveillances
6. A lot of high labor force is needed to control the clients especially during peak seasons
7. There are also lots of blocked visions thus making natural surveillance quite challenging.
8. It is also very difficult providing sufficient area amongst fixed object
9. In all the layouts above, head guiding signs and departmental visual aid offer graphic hints to the location of other units, aiding shoppers while shopping. Despite construction, interior design and safety expenditures are extensive

Sustainable Design

According to World Commission on Environment and Development (1987), sustainable development is considered as the development that fulfills the current needs without compromising the ability of future generation to fulfill their personal needs. In the past, man's actions had an insignificant impact on the environment, but this state has changed since the beginning of the industrial revolution era. Today individuals spend more of the earth's resources than the planet can rejuvenate (Philip, 2009). The speed at which the built environment is growing at globally is three times faster than the population growth rate (Green Building Council, 2010). In the U.S., buildings use 40 percent of raw materials, consume 39 percent of

total energy use; add 38 percent of carbon emissions into the atmosphere, and generate 30 percent waste output. These practices affect the environment in a negative manner and cause climate change, resource depletion, and pollution (USGBC, 2010).

Presently, sustainability is one of the main concepts which are influencing the design of global architecture, community planning, manufacturing, technology, energy resources, economics, and government policy (Maher & Baum, 2013). Sustainable design, also referred to as Green design, is a design technique that minimizes the negative impact of buildings on the environment. Sustainable buildings are designed so as to change consumption of resources to recyclable or recycled products, to consume only the vital resources, to reduce waste, and to reduce the reliability on nonrenewable resources (Mandler & Odell, 2000). Sustainable design produces solutions that resolve the environmental, social, and economic challenges of the project at the same time, and sustainable energies are used to power these solutions (Maher & Baum, 2013).

The principal objective of sustainable architectural design is to offer architectural solutions that sustain profitability, the environment, and the existence and well-being of society. Sustainable design not only seeks to minimize adverse impacts on the environment and humans, but it also objects to produce buildings that economize costs in terms of water and energy while offering at least the same ambient quality (Philip, 2009).

Green buildings are described as structures that are reused, operated, renovated, constructed, and designed in a green-efficient and environmentally manner. Green buildings demonstrate a high level of engineering, economic and environmental performance, including material and resource efficiency, indoor environmental quality, energy efficiency and

conservation, transportation efficiency, occupant health and productivity, and improved environmental quality including ecosystem, limited resources, land, water, and air. That is, sustainable design commends the use of nonpolluting materials with higher recyclability and durability, and lower operating energy requirements. In sustainable design, long-term value through life-cycle and modifiable building systems is opted to least-cost investment's craftsmanship and timeless delight (Loftnesse et al., 2005).

Nevertheless, sustainable development is a programmatic implementation strategy and an acceptable policy initiative that has been the subject of significant controversy and debates (Clark, 2010). Researchers have criticized modern architecture and sustainability concept because it relies heavily on technology, and they have pointed out the necessity of coming up with a new substantial and perspective contribution to architecture so as to create a real sustainable environment (Van der Ryn & Cowan, 1996; Pontikis, 2010; McDonough, 2005). As stated by Williams (2007), technological solutions tend to create greater problems than those they were supposed to solve, needing storage of toxic materials, further clean up, and additional taxes to pay for such services.

Pattern Language

According to Alexander (1979), individuals can shape buildings for themselves, and they have managed to do this for a long time, by using languages which Alexander refers to Pattern Languages. A Pattern Language offers every person who utilizes it the potential to create an infinite range of new and unique structures, in much the same manner that an individual's ordinary.

Alexander noted (1979), so long as there is a common alive Pattern Language alive building and towns can be created. In his studies, in a pattern language, he establishes that the language (likewise any other language) is used to tie the patterns together, whereas each pattern defines “a problem that occurs over and over again in our environment and then describes the core of the solution to that problem” (Alexander et al., 1977). “Patterns summarize design solutions that make people more comfortable in experiencing and using built form. Their relative value was they were deciding on a firm basis, rather than on just opinion” (Salingaros et al, 2006, p. 33). Alexander emphasized the need of putting together both structural and human components to deliver a good Pattern Language; consequently he introduced the theoretical framework of “the nature of order” that is associated with pattern theory (Alexander, 1999).

Alexander (1979) then introduced the method of “Pattern Language” to the field of architecture and urban design, with the primary concern being “to bring awareness of the use of towns and buildings to bear on the discipline” (Crabtree, 2002). Works on the pattern language and Alexander’s concepts support the worth of providing pattern language as an essential in design; conversely the necessity of fresh advancement and transformed use of pattern language has put emphasis precisely in the field of architecture and design (Mehaffy, 2007). Some architects considered patterns as an incomplete method, because, in some instances, they were not successful in their combination (Salingaros et al, 2006). Pattern Languages have delivered a collective vocabulary and a mutual base of understanding what is imperative (Salingaros et al, 2006).

CHAPTER III

METHODOLOGY

Research Approach and Design

This study relied heavily on qualitative and quantitative methods. According to (Grove, 1993) quantitative research is a formal, objective, systematic process to describe and test the relationship and examine cause and effect interactions among variables. Surveys make use of descriptive, explanatory and exploratory study. A questionnaire collected original data from a representative portion of the shop owners. Information got obtained from a representative population where shop owners responded to a series of questions posed to them by the investigator. The descriptive survey provided an opportunity for respondents to air their opinions and views freely.

Interviews relied on key informants, to whom a series of questions were posed. These included experts with expertise in urban issues, especially retail shop designs. There was a recording of the verbal conversations between the researcher.

The qualitative design audit identified design models that are present within the store and how they affect the shop's image and productivity. Designs relied on a strategy based on observation of the most efficient pattern language.

Research Setting

The study focused on retail clothing store located in downtown Los Angeles. CA. The size of the store was 4,500 Sq. Ft. It borders other mega developments and relies on the adjacent businesses and other local businesses.

Figure 5. Location Map (Google Earth 2013)

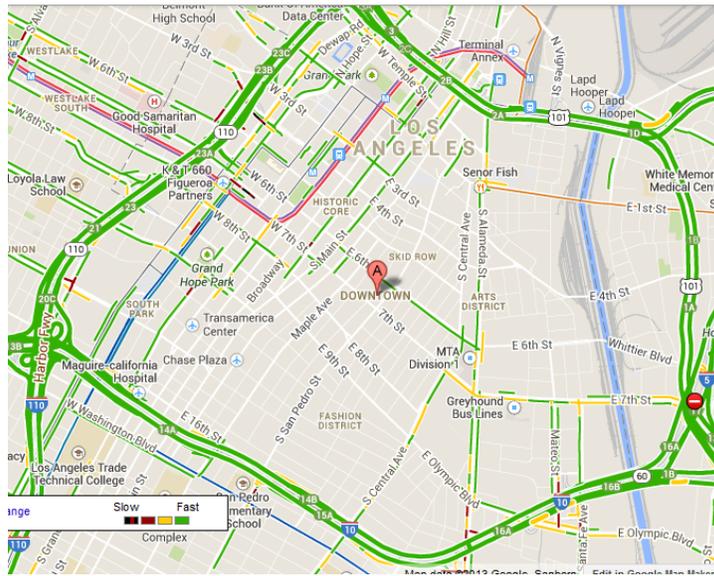


Figure 6. Existing Exterior



Figure 7. Existing Interior



Interviews and Store Observations

In order to achieve the outlined goals a set of questions was posed to the client, staff and key experts who have the knowledge and experience in a retail store design. The questions were aimed at exploring the current problems facing the store and the ongoing trend in a retail store development. These unstructured interviews were carried out after visiting the store and making several observations. This was the most critical stage in setting up the basis for the design.

Expert Discussion

During data collection two experts in the field of interior design were interviewed through discussions. Both the experts are lectures at University as well as professional practitioners. The purpose of the discussions was to understand the various factors that influence the interior design industry, particularly with regard to the retail shops. A series of questions was posed to them.

1. What is the current trend in clothing stores, interior design, products and layout?
2. What factors do you believe are influencing the evolution of clothing store design?
3. What technological factors do you believe have caused the greatest changes in store planning and design?
4. What is the extent of applicability of sustainable designs (humane and green patterns) to the modern clothing stores?
5. In what layout and design way do you understand these factors have expressed sustainable designs?
6. How has the market changed over time? What are the reasons behind this?
7. Can you describe for me any government policies that have impacted to the changes observed in a retail store development?

8. What do you think can be done to improve the overall productivity of the retail store?

Client and Staff Discussion

A discussion held between the client and the staff aimed at identifying the various problems that faced the store. The issues raised were very useful because they informed the design process.

1. What factors would you identify that you believe were behind the actual location of the store? (Physical and or spatial factors or economic factors)
2. How was the initial design and the spatial layout of the store?
3. What are the contemporary design and layout of the store?
4. What factors do you think contributed to the changes in design and layout? (If any)
5. How have the layout and design impacted the productivity?
6. How has the market changed, over time? What are the factors behind this?
7. What are the best selling products in the shop?
8. What is the estimated budget for the renovation?

Guideline Assessment in Terms of Humane-Green Design

The guideline is structured into two parts; Humane Design and Green design. These are further categorized into subcategories. The various categories were discussed and analyzed within the research. The new pattern languages were developed using the set out guidelines.

The following guideline was made:

Part I. Humane Design

A) Retail spaces

1) Layout

Do functionality spaces support activities?

Public and security/ do spaces have the right degree of public engagement and security?

2) Circulation

Are entrances and exits visible, welcoming and well lit?

Does circulation provide opportunities for viewing and accessing the merchandise?

Approach Finding/ can people comfortably find their way within the store and also easily reach the merchandise?

3) Social spaces

Are there indoor and outdoor spaces, which promote public contact, public social life natural surveillance and culture?

4) Personalization of space

Do spaces provide the freedom for the owner and the staff to personalize and adjust them to the store needs?

B) Natural light

1) Daylight

Is there sufficient daylight in spaces?

2) Connection to outdoors

Do doors and windows provide views and connection to visually pleasing outdoor merchandise displays?

3) Window treatment

Are there serviceable window treatments to soften the light and provide the proper degree of privacy and protection from the sun?

C) Color

1) Comfortable background color

Does the background color reflect much light than the merchandise?

2) Colors of different sections

Do different sections accommodate different colors merchandise that suit men, women, boys, girls and toddlers?

D) Furniture

1) Comfortable and ergonomic furniture

2) Built in furniture

Part II. Green Design

1. Energy conservation

1.1 Do the energy features consume energy efficiently

2. Material conservation

2.1 Are the used materials and paints environmental friendly?

Developing the Pattern Language

The design process relied on a design philosophy developed by Christopher Alexander entitled 'Pattern Language'. The language creates a network that is composed of links that include larger and smaller patterns. This defines the order in which the patterns should be applied to the design. This is known as a pattern language sequence. The preliminary stage of the design involved creating patterns by finding related patterns to stores in the "A Pattern Language" book by Christopher Alexander. The patterns identified from the book relating to retail are as listed.

The patterns are; 87 Individually Owned Shop, 110 Main Entrance, 112 Entrance transition, 122 Building fronts, 126 Something roughly in the middle, 127 Intimacy gradient, 129 Common areas at the heart, 130 Entrance room, 132 Short passages, 135 Tapestry of light and

dark, 142 Sequence of sitting spaces, 149 Reception welcome you, 160 Building edge, 165 Opening to the street, 167 Six foot balcony, 179 Alcoves, 180 Window seat 182, 185 190 Ceiling height variety, 191 The shape of indoor space, 193 Half- open wall, 194 Interior windows, and 196 Corner, 198 Closets between rooms, 199 Sunny counter, 200 Open shelves, 201 Waist high shelf, 233 Floor surface, 235 Soft inside walls, 238 Filtered lights, 245 Raised flowers outdoor and 246 Climbing plants. Identified patterns were then categorized.

Using this as the basis, original patterns were created in regard to the store. A few modifications were made to fit the need. Problems were identified in regard to the survey carried out. Descriptions and images have been used to add weight to the strengthened patterns.

Created, Store Humane Patterns

Category	Subcategory	Patterns
(a) Space planning	(1) Layout	1.1 Functional
	(2) Circulation	2.1. Signage 2.2. Easily accessible spaces
(b) Lighting	(1) Ambiance	1.1. Appealing
	(2) Visual communication	2.1. Decorative shade 2.2. Accent lighting 2.3. Ambient lighting 2.4. Task lighting
(c) Retail identity	(1) Signage and graphics	1.1. Eye catching
	(2) Exterior design	2.1. Eye catching 2.2. Provocative 2.3. Elegant

(d) Interior Design	(1) Merchandise presentation	1.1. Shelving 1.2. Hanging 1.3. Folding 1.4. Stacking 1.5. Dumping
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Created Store Green Pattern

(a) Security	(1) Natural Surveillance	1.1. Clear vision 1.2. Open floor layout
(b) Energy efficiency	(2) Lighting	2.1. CFL light bulbs or LED lights 2.2. Lighting sensors

Post-Design Evaluation

Evaluation by Experts

The proposed pattern language for the store will be reviewed, and evaluation will rely on professional experts. The store supervisor identified the experts based on their experience, knowledge of pattern language and their contribution to design practice. An introductory letter, the developed Project Pattern Language, and questionnaires were e-mailed to the experts. The experts then provided feedback after reviewing the detailed designs. Personal details of the experts were not revealed for confidentiality reasons. The detailed drawings are placed in the final chapter.

Experts' Characteristics:

Expert Reviewer # 1 is a renowned architect and author. He is presently working in

Los Angeles and is a University Professor of architecture at a distinguished university. He has been involved in a number of outstanding projects within the United States and abroad.

Expert Reviewer # 2 is an interior designer and runs one of the most established design firm in New York. He has a lot of experience in designs involving Christopher Alexander's theories.

CHAPTER IV

RESULTS

This chapter explores out the fundamental weaknesses as shown by the existing design of the store, and how the defects have impacted on the store's image, productivity and language pattern. The primary and secondary data collected and analyzed showed the store is in dire need of redevelopment. Considerable constraint is experienced within the store space, where the aisles have become narrow, with no standard dimensions or pattern thus making circulation and display difficult.

Key Informant Interview

A set of questions were posed to the store owner, who identified several pressing issues that affected the business. These problems gave an insight into the most urgent problems that needed an immediate response. The most pressing problems were store image, productivity, space adequacy and the overall design. The designer centered on these issues, and came up with a SWOT analysis of the store.

Through SWOT analysis, the designer was able to focus on areas that would give the store competitive advantage in the market. Data on how long the business had been in operation were gathered. Shopping behaviors were analyzed, and the results revealed that the market category of soft goods sales is not stable at this time.

Staff Interviews

The data gathered from the discussions were fairly consistent between the shop owner and the employees. For example, almost every worker reported an issue to do with the store's image and circulation. The owner also emphasized this. However, workers raised an extra

problem in regard to the security of the shop. They felt that surveillance was quite problematic due to the arrangement of the merchandise.

The store owner and staff proposed rearranging the store layout into a free flow layout that would facilitate circulation of clients and surveillance. Improvement of the store image and production of the shop was also strongly recommended.

Analysis of the Results

The retail store has become inefficient, subjecting buyers and sellers into a lot of snags that include crowding, customer conflict, obstructions, insecurity, as well as reduced lighting and visibility. In many cases, these problems are a consequence of numerous conflicting interests for retail storage space and lack of overall coordination by all persons. This has tarnished the image of the stores; thus they are unable to attract customers. This has led to the loss of business. The fundamental findings attributed these problems mainly to the existing layout plan and reduced image of the store.

Existing Layout of the Store

The store is among numerous others that form a grid layout. There are minimal detachments from the neighboring stores. The store entrance is quite poor in that there is little allure into the shop. Use of numerical signs and overhead lights is missing. The facade does not clearly create a strong image for the store.

Figure 8. Existing Rear Part of the Store



The store is dealing in clothes. Ample space on the ground is cluttered. Different sections contain different collections. A lot of products are on display, and clients can be able to move along the narrow corridors as they browse the displays. Separate sections have distinct clothes. Sections include boys, the girls, adults section and babies.

Impact of the Layout to the Image and Productivity of the Store

The store is cluttered with minimal space for clients. Browsing by the consumers is quite challenging due to the reduced space along the corridors. The lighting system used is at the top of the ceiling. Illuminations on the cloths are quite impoverished.

The straight aisles block clients from viewing other sections of the store. In figure 9 below browsing is challenging because clothes seem to be cluttered and not arranged according to color. It is quite difficult to change the layout setting to display seasonal products. This is because the shelves are long and permanently fixed.

Figure 9. Merchandise Layout



The counter right at the front of the entrance makes the clients feel uneasy. This is because the cashier is always staring at the customers as they make their way into the shop. This further reduces the space available to consumers.

Figure 10. Circulation within the Store



Humane and Sustainable Patterns

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(2) An Exquisite Visual Communication

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Part two: Sustainable Pattern

(a) Floating through the Security

(1) Crime Prevention through Environmental Design (CPTED) Principles

1.1. Thriving wild clear hallucination

1.2. Wandering over the exposed floor outline

b) Feasible Energy efficiency

1.1. CFL light bulbs or LED lights

1.2. Lighting sensors

Part I. Humane Patterns

Space Contestation

(1) A Firmly Cemented Outline

1.1. Functionality flit

Figure 11. Existing Situation



Figure 12. Inspiration Solution Photo



Problem Statement: The store faces a lot of imbalance in the allocation of space for the various uses. The corridors are narrow and congested. Space for merchandise is inadequate, thus leading to a cluttered display. This does not create a welcoming mood to the incoming customers.

Discussion: Functionality of any given space is very crucial towards the overall performance of any business. There is the need to ensure the various uses within the store are arranged and allocated in a manner that they function. This is important because spaces are interdependent of each other.

Solution: Space budget was carefully calculated, exploring various alternatives. Space was distributed according to the various uses. The uses considered included;

1. Office space and other functional spaces: This will accommodate the management activities and will be located at the further end of the store. The space allocation was 108 by 72. Tables, chairs and office equipment will all be accommodated in this space.
2. Back room space: This space will be used by employees for their respective needs. This will include testing space and an area where they can keep their items. 144 by 96 will be adequate for these activities.
3. Non selling areas of the central sales floor such as aisles and service areas: These spaces will facilitate circulation within the store. The space will also be used during loading of fresh products. These spaces will be 40 wide.
4. Wall merchandise space: All merchandise will be situated a maximum of 36 from the wall. This will allow consumers browse without difficulties at the same time are able to reach products at ease.

5. Merchandise space on the floor: The remaining space will contain the various fixtures that will be used to display the merchandise within the floor.

(2) Flowing From End to End

2.1. Signage and Graphic gazers

Figure 13. Lack of categorization



Source author

Figure 14. Category and Fashion Trend guide



Problem Statement: Moving from one section to another within the shop is problematic because there are no category signs. It is very difficult to differentiate adult sections from those of kids and vice versa.

Discussion: Striking signs and graphics lure the attention of the consumer and empowers them to make a buying decision within the shortest probable time, and consequently improving the retailing process. Signage guides clients in any given business. The display and presentation of the signage matter a lot to the overall performance of any business.

The signs give the first impression of the clients, even before getting into the shop. Signs are not only significant on the frontage but also within the shop.

Solution: Several graphics will be made of stiff boards and others on electronic visual display. The graphics will add beauty, romance, improve the overall store image and provide more information about the store. Signage combined with graphics, creates an extraordinary eye catching entrance.. The signage will be durable and distinguish the shop from the rest. Category signage will be used to help customers circulate within the store to the distinctive clothes categories. Not only are they informative, but are also eye-catching. The style of lettering used, the colors, the art work and the materials will further the store's and the products image. This will complement the overall design of the store.

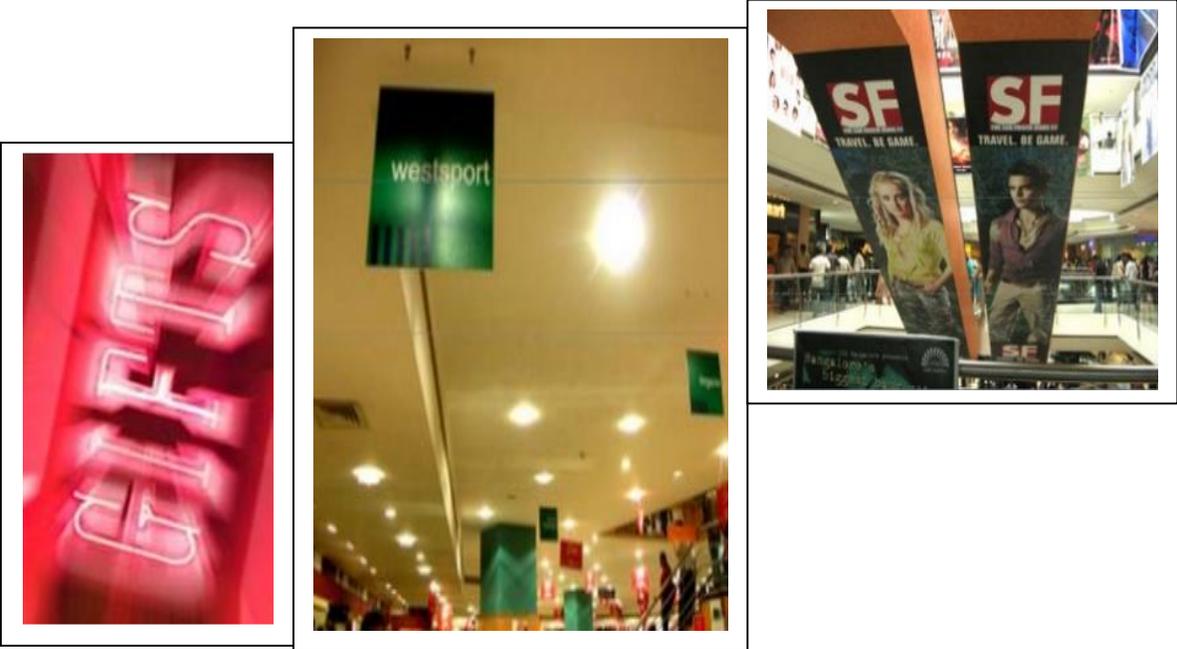
Signage will focus on four different levels; directional, departmental, marketing and information. Directional signage will be used to direct customers to the shop. This will include large billboards that are miles away. Entrance signs will be used to generate an impression as customers get into the shop. Unique and seasonal entrance signs will prepare customers for the shopping experience through anticipation and excitement.

Figure 15. Category Sections Signs



Departmental signs will be located inside the shop. This will be above the products where they are clearly visible. They will include wall signs, service signs, banners, handouts, icons and maps.

Figure 16. a, b and cWall Signs



Marketing signs will be located within the displays. They will be made colorful and portable. They will include frame signs, cardboard and corrugated plastic signs.

Figure 17. Movable Signs



Information signs will be used to describe products and provide details of the product. The signs will include card signs and tags.

Figure 18. Section Signage



2.2. Clip Clipping Along the Floor

Figure 19. Existing Circulation



Figure 20. Circulation Inspirational Photos



Problem Statement: The fundamental weakness of the existing flow is that it constrains buyers to the psychological effect where they feel rushed and constrained. It is not pleasing at all in that

it has long gondolas of merchandise and aisles of the monotonous, repetitive effect that bore the clients. The layout seems congested with merchandise cluttered all over the floor area.

Discussion: Circulation of people in any given store is dependent on the spatial outline of the floor area. Poor space budget for assorted uses leads to the cluttered organization of activities. Methods of merchandising and fixture selection also contribute to the flow of space.

Solution: Free flow circulation was used. This circulation does not restrict customers from more looking from one place to another and impromptu buying. It also improves interior design, as discrete sections are easy to note. It leans towards providing an additional environment. The uncontrolled flow layout will emphasize personal selling a lot. Meandering will also be employed. This would permit unrestricted wandering and browsing of the clothes. This is expected to lead to impulse buying. This circulation is also flexible and influences visibility.. The loose flowing layout saw various sections created. The layout design ensured that merchandise got displayed in an organized manner that is expected to spur impulse buying, as customers move uninterrupted meandering around the racks. High demand clothes were placed at adequately spaced areas that have low traffic. The clothing arrangement is in a manner that complimentary clothes are located adjacent to each other or in adjacent sections. That is in terms of design, colors and customers. High margin items were placed in high traffic areas.

(b) A Lightning Gleam

Figure 21. Circulation Inspirational Photos



Figure 22. Proposed Spot Lighting



Problem Statement: The current lighting is reduced because it diminishes the painting quality of the merchandise resulting to decrease in product clarity and overall sales.

Discussion: Lighting is used primarily to improve the display of merchandise. The lighting system used significantly influence the reaction of customers to the displayed products.

Solution: In this store apparel, the amount of light will be valid to pull shoppers over to the displays, using colored lamps and soft light to create a buying mood. The store illumination will use both the primary and the secondary lighting. Primary lighting will supply to the bare essentials of the store, including the marquee lights and the sidewalk for the window shoppers.

Figure 23. Display Windows Lighting



This will also include light along aisles and the office. Specialized display of merchandise will rely on secondary lighting. Spot and floodlights will be used in brightening the shelves, basic window lighting, lighting the cases, the merchandise and the counter.

Figure 24. Spot Lighting



Light Sources

Apart from the natural light, other sources of light will include fluorescent lighting, fiber optic lighting, incandescent, high intensity discharge, neon and halogen.

Incandescent

These are known as PAR or R bulbs that come in low voltage. They are usually in floodlight or spotlight form. Their low voltage will bring out the colors of the merchandise, create spectacular lightening effects and enhance textures. The bulbs will also help save energy.

Figure 25. Incandescent Lights



Fluorescent Lighting

This lighting will be used in floor and wall cases, interior ceiling, lighting tracks and shadow boxes. They are cost effective and come in a variety of colors that will be used to produce desired effects of warmth and coolness. Filters will be used to enhance the white tubes for temporary presentations, especially during different seasons.

Neon

These lights will be used outside and inside the store. Outside the store, they will be used to show the identity of the business. Inside the shop, it will be used to produce special effects. The lights incur minimal costs. Due to their many colors, the light will be used to build excitement. It is generally good for special effects as opposed to a total illumination.

Figure 26. Neon Lighting



Figure 27. Entrance Neon Lights



Fiber Optic Lighting

It is composed of remote light source carrying glass optical fibers. It is very good at eliminating ultraviolet and infrared wavelengths. It has very good floodlighting and spotlighting. Power consumption is low and maintenance is simple. This lighting will be used in the jewelry section due to its cold light. Jewelry is usually sensitive to heat.

Lighting Fixtures

The variety of lighting fixtures enables retailers acquire distinctive decorative and lighting fixtures that can complement any décor. They always become focal points in most store interiors.

Recessed Lighting

This is a kind of a lighting system that will be located on the ceiling. Cans will be used to hold floodlights for illuminating broad areas as well as spotlights for illuminating narrow areas. Incandescent and fluorescents will also be recessed for overall and general lighting.

Figure 28. Recessed Lighting to be used on the Ceiling



Track Lighting

Track lighting will be used in key specific areas. This light unlike recessed lighting that is permanent are adjustable. Their direction and location can easily be changed.

Figure 29. Track Lights



These lighting does not use complicated wiring and, therefore, are quick to install.

Lighting Accessories

Accessories will be used to provide special effects. They will comprise framing projectors, dimmers, flashers, swivel, gels and sockets.

Figure 30. Example of an Accessory



Lighting that spotlight the products; will be appealing to customers because illumination would be from beneath the products. Use of different shades is also attractive, because, cool sunset colors create a sensuous atmosphere. Light and bright colors create a fun atmosphere. The overhead lighting system will be brought a little bit to products by using hanging fluorescent lights. Surplus lavish textures to the different sections would encourage clients to browse the merchandise.

(1) Ambiance

Figure 31. Example Accessories



The interior has decorated walls and a nice style of lighting fixtures. The furnishing of the store is attractive and placed such to enhance the visual impact on customers.

Discussion: The store environment plays a very important part in enhancing client clothes shopping experience. The ambience is generally made through visual communications, music, lighting, colors among others, to make a spur amongst the customers' opinions and emotions that influence their buying behavior.

Solution: The stage for display will be set by superior glass cabinets made from polyester lacquer. Motion sensors will be used to turn the cabinets backlight on when someone enters into the various sections. Color will be used to create drama and mood in the presentation of fashion merchandise. To affect the atmosphere, different color combinations will be used for

floor coverings, ceiling, walls and overall décor. Flashing pictures and colors will be used on window displays to attract customers. Violet, green and blue colors will be used to project elegance while yellow, orange and red will be used to convey intimacy. Cool colors will be used in displays to calm atmosphere and prolong customers stay. Seasonal looks will also be conveyed through colors. For example, red and green for Christmas, red and pink for Valentine and black and orange for Halloween.

Figure 32. Use Of Different Seasonal Colors



The interior will have discrete touches that allure customers into the shop. The touches will be generated physically and visually. Roughness will be used without customers feeling it.

Materials that appear smooth and rough will be used as well as textures that reflect light as opposed to those that absorb light.

Figure 33. Different Textures



This is a good strategy for the business because impromptu buying would occur. The style creates certain emotions and moods in buyers.

1.1. Appealing

An Exquisite Visual Communication

Visual communication targets all customers. The main role is to retain customers and make them feel welcome. Latex based paint will be used because spills and brushes can be removed easily just using soap and water. The paint also dries up quickly. Display areas will have permanent floor covering with rich textual and visual qualities. The materials shall comprise vinyl tiles, netting, grass mats, straw rugs and ropes.

(c) A Swooping retail identity

Awe-inspiring Signage and Graphics (logo and Name)

Figure 34. Existing Situation



Figure 35. Inspirational Solution Photos



Problem statement: The retail store lacks a unique identity that can be associated with it.

This makes a distinction from the rest of the shops difficult.

Discussion: Retail identity refers to a unique brand such as a trademark or name which is owned by a single business.

Solution: branding was used as one of the ways of communicating with consumers. It will, inform the clients what it is and what it can offer them. A contemporary brand name and a decent logo have been proposed for the store. This will give a positive image, and change the perception of the consumers. A very nice example of a trademark is the one used by Target Apparel retail store. The designers of its logo included the stores name and designed it professionally. Such a logo will be designed for the retail store and will be to market its identity both on physical boards and the internet.

Figure 36. Example of a Nice Trade Mark



1.1. Eye Covetous

Problem: The existing design and elements is unnoticeable and unattractive to consumers. Distinguishing the shop from the rest is quite incomprehensible. Amongst the shops, none has a clear distinguishing element.

Discussion: To generate a unique experience with the clothing store, understanding the

consumer visual concept is of prime significance. Through the use of provocative elements consumers will be allured into the shop impromptu.

Solution: In order to solve this problem customer's attraction will use the appropriate combination of eye covetous elements. Underlying themes on the various displays will be brought out clearly to convey a strong message. This will help the customers understand what the display is all about in a matter of seconds.

Figure 37. Eye Covetous Displays with a Theme



Figure 38. Eye Covetous Displays



(2) Attractive Store Front

Figure 39. Existing Exterior



Figure 40. Inspirational Solution Photos



Problem Statement: The store is located along other stores. There is a negligible distinction of the store for the rest. The owner highlighted that consumers complain that getting directions into the store is quite complicated due to lack of distinctions.

Discussion: Modern stores are relying on eye-provoking storefronts that make a brand of uniqueness. This uniqueness help in satisfying the customers and generates a warm, friendly sense which positively enhances a customer’s frame of mind and expands the probabilities of turning a distinct sale into an extended band. A good design will provoke customers, increase their curiosity and heighten their imagination.

Solution: The outdoor area will be made visible, eye-catching and exciting thus is able to allure customers into the shop. A suggestive sign will be put above the entrance and some landscaping will also be introduced. An elegant glass window display will be used to create a sense of welcome.

Intuitive Light

Figure 41. Flashes



Light will make merchandise and displays more dramatic. Shadow and light shall be balanced to bring out details in a decent manner. The amount of light will be valid using soft light, colored lamps and so on to pull shoppers over to a display and create a buying mood.

Figure 42. Lighting Inspirational Photos



Problem Statement: The existing visual cues within the shop do not attract consumers and thus generate fewer sales.

Discussion: Creative displays draw customers and their attention into specially displayed items. They are eye catching, exciting and encourage clients to stop, browse and shop.

Solution: The components of the display normally utilize color, lighting, balance and simplicity. Colors of different intensity will be used. Intensity refers to the brightness or dullness of a color. Intense colors catch the eye and hold the customer for a long time such that he or she is able to realize the merchandise. Stimulating colors are usually the higher intensity ones. Low

intensity colors are usually dull in appearance. These colors will be used to create restful and calm mood.

Figure 43. Different Color Hues

Low value



High value



Balance and simplicity will be produced by use of related colors. i.e., colors adjacent on the color wheel. Such colors utilize one or more hues in common thus produce a stable feeling and usually express the mood of the hue of the color freely and clearly. Shadow and light shallow be balanced to bring out details in a decent manner.

1.2. Provocative Transitory

Figure 44. Provocative Transitory Entrance



1.3. Stylish Cool Entrance

Figure 45. Modern Entrance



D) A Magnificent Blooming Interior

(1) Attractive and Ergonomic Merchandise Display

Figure 46. Current Display



Figure 47. Inspirational Solution Photos



Fixture selection

Problem Statement

The existing fixture selection is very weak and not pleasing at all. There is not any order of merchandise presentation. Cloths are cluttered on hangers, boxes, paper bags and the shelves.

Solutions

The fixture will combine gondolas, four way fixtures, round rack and other fixtures such as tables, bins and flat-based decks. Round racks will be used to hold merchandise while the square (confronting) racks will be used to display unique items. Square racks will face the front article on the direction of clients.

Figure 48. Illustration of Fixture Selections



The fixtures will be combined to create an alluring atmosphere, and make browsing easy. Separate sections will have unique fixtures according to the clothes offered on those sections.

4.2. Merchandise Presentation

Problem Statement: The existing methods of merchandise presentation lack organization and some are old-fashioned. The shelves are long and look solid thus they put off potential customers.

Solution: Unique shelving will be used, and this will raise the consumer's esteem. The shelving system will maximize space with proper utilization of the space, loading capacity and clothing storage.

4.3 Methods of Merchandise Presentation

1.1 Shelving: The moment customers enter the store; their eyes are always caught by the shelves. Modern unique shelves will replace the existing elevated shelves.

Figure 49. Nice Looking Shelves



1.2. Hanging: Hanging will be used for clothes made of linen, rayon and pure cotton. This will help these clothes keep off wrinkles and have a smart display. Padded hangers will be used for slippery satins and silks as well as delicate fabrics that get crisis easily such as chiffon, taffeta, raw silk and velvet. Suit hangers will help keep overcoats, suit jackets and blazers away from crashing.

Figure 50. Hanging Clothes as a Way to Display



1.3. Folding: Folding will be used for heavy sweaters and jumpers as well as other knitwear that include tops, pants, dresses and skirts. Pants and other casual wear made of rugged materials such as khakis and jeans will also be folded.

Figure 51. Folded Clothes



1.4. Dumping: The merchandising process took into consideration psychological factors that included; angles and sidelines, fashion/value image and vertical color blocking.

Figure 52. Proposed Arrangement of Merchandise



Part II Sustainable Pattern

Floating Through the Security

(1) Crime Prevention through Environmental Design (CPTED) Principles

1. Thriving Wild Clear Hallucination

Problem Statement: The shop owner and the worker highlighted shoplifting as the major concern. This was manifested by loss of commodities from the store. Inadequate security was attributed to the design of the store that has several blockades. The blockades hinder vision and, therefore, shoplifters cannot be identified.

Solution: Crime Prevention through Environmental Design (CPTED) principles applied in this store. This was in contrary to the prevailing trend that invests so much into innovative technology that is not sustainable. Returns and store safety were recorded to have increased tremendously upon employment of natural surveillance. Natural surveillance makes the assumption that store staffs are keen at all the time. This was achieved by fixing the motion sensor lights at strategic places. Blind spots and corridors blocking vision were removed. This led to a clearer area that allowed easy supervision. However, several cameras will be fixed to aid the CPTED at strategic points.

Figure 53. CCTV Cameras



Feasible Energy Efficiency

Lighting

1.1 CFL light bulbs or LED lights

Figure 54 CFL and LED lights



All stores rely on lighting for presentation of their merchandise. “Incandescent lights use a lot of energy and eject most of energy as heat, which consists of the A/C system” (Sustainable Foodservice Consulting, 2011).

Therefore: High efficient fluorescents will be installed in open areas. These will include T-8 fluorescent that utilizes reduced energy. Incandescent bulbs that use less energy will be used to replace the compact fluorescents. These bulbs are very suitable for use in hallways, storage rooms and outdoor lighting (green sheets, 2006).

1.2. Lighting sensors

Lighting is a vital design element of any clothing store. Sustainability advocates for reduced lighting where possible so as to save energy.

Therefore: photo and motion sensors will be used to control lighting within the store. That means to light will be accessible only when needed. This will help reduce the overall energy bill for the store. Energy Star qualified appliances will be purchased for maximization of energy efficiency.

Figure 55. Motion Activated Wireless Sensor Auto



3. Environment and air quality

3.1 Interior designs and construction

The remodeling will take into consideration alternatives that reduce energy consumption at the same time improving the quality of the air within the store.

The proposed designs for the store are as outlined below.

Figure 56. Layout Plan for the Store

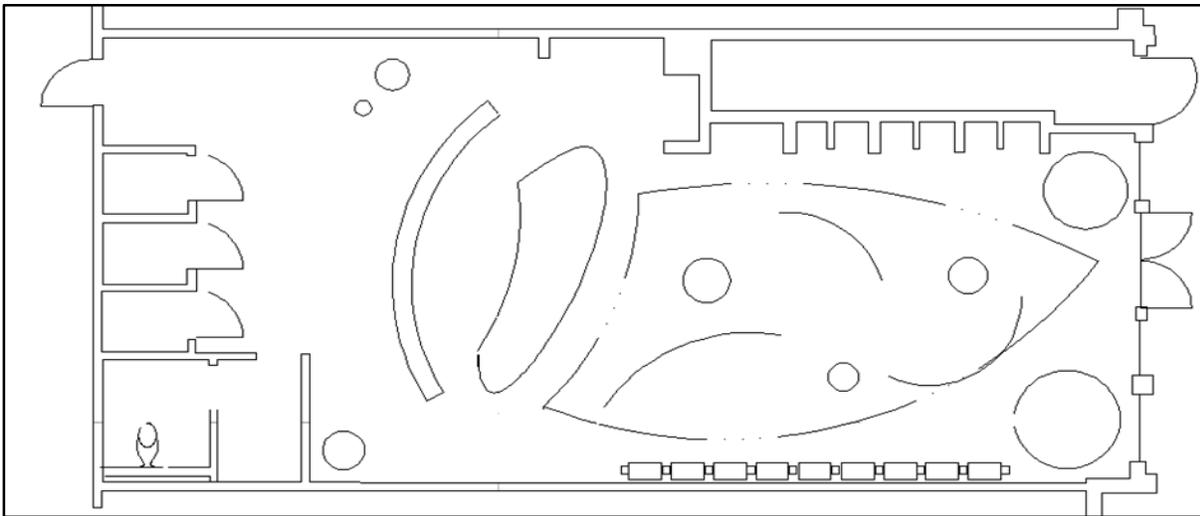


Figure 58. Entrance



Figure 57. Display



Figure 59. Different Fixtures of Merchandise Presentation



Figure 60 waiting areas



Figure 61. Changing Rooms



Figure 62 Waiting Area



Figure 63. Interior Elevation-North Wall

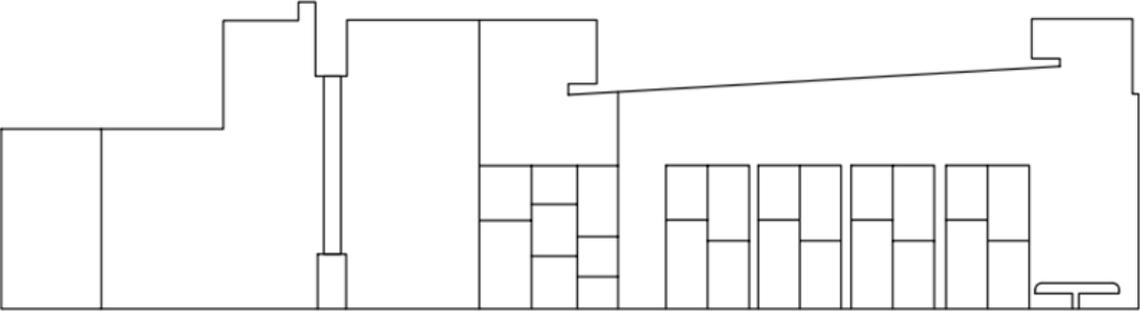


Figure 64. Longitudinal Section

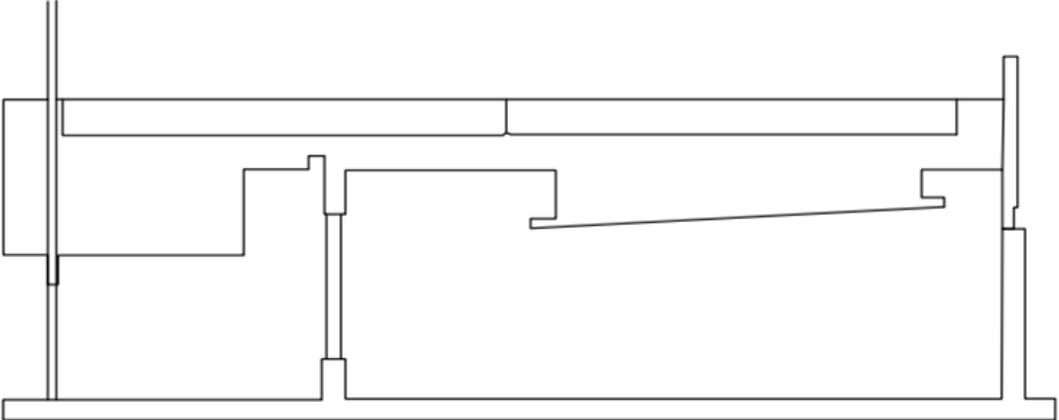


Figure 65. Interior Elevation Feature Wall

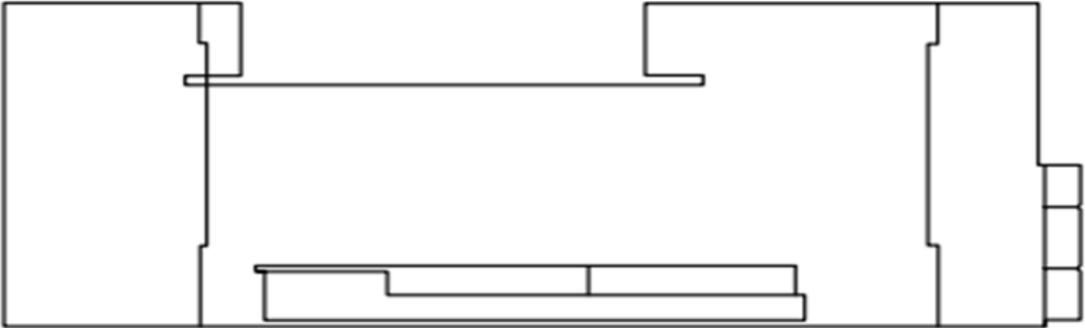
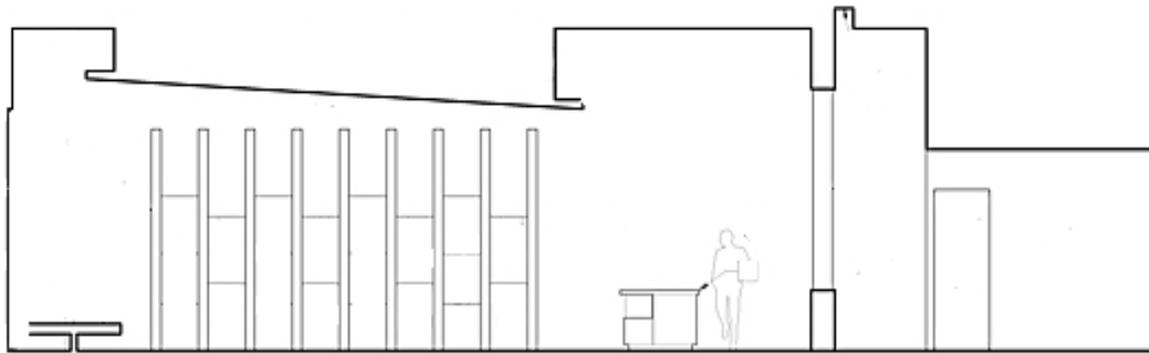


Figure 66 Interior elevation west

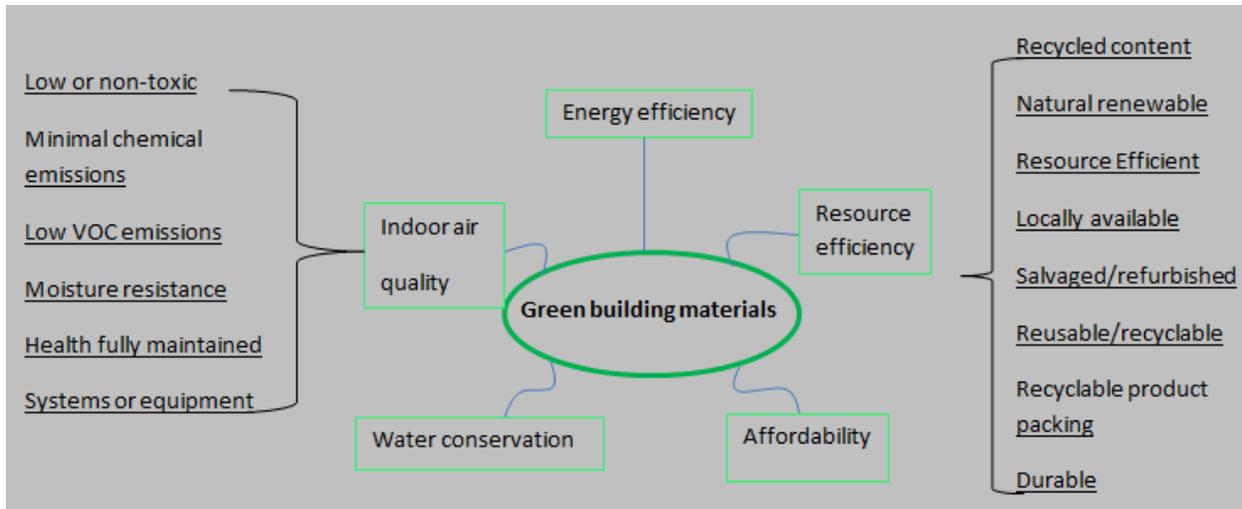


Green materials

Green materials will offer explicit paybacks to the store owner, staff and clients. The owner will experience health and productivity, negligible maintenance costs, energy conservation and greater design flexibility.

Therefore: renewable sources of energy will be used such as defensible harvested woods, natural linoleum flooring and counters instead of using marble, granite, vinyl, gypsum and hardwood flooring (Going GreenerGuide, 2010). Recycled tiles and carpeting will also be utilized. The walls will be painted with low VOC paints and adhesives that will not impact significantly to the overall atmosphere (Green America, 2003).

A judicious selection of decorative treatments for the wall will be made in order to reduce fire hazards (Christine & Elizabeth, 2013). Construction materials will be outsourced from within in order to prevent pollution associated with long distance transportation.



Source: <http://www.calrecycle.ca.gov/Greenbuilding/Materials/>

Post Design Evaluation Results

Expert reviewers provided their feedback regarding the promoted and adopted pattern within several days. Below are the replies from the reviewers.

Replies of the Expert Reviewers:

1. Is this pattern language easy to understand?

Please rate in a scale beginning from 1 to 10 where 1 is “very difficult to understand” and 10 is “very easy to understand”

Compressed up to manageable levels. This will make the meaning in the patterns dense at the same time cut the cost.

2. How valuable will be this pattern language as an example of a design methodology to somebody who is planning to remodel a clothing store?

3. Please rate the Humane pattern category from 1 to 10 with 1 being “less successful” and 10 being “very successful” share any comments you have.
4. Please rate the green pattern category from 1 to 10 with 1 being “less successful” and 10 being “very successful”. To share any comments you have.
5. Please rate this pattern Language in a scale ranging from 1 to 10 with 1 being “less useful” and 10 being “very useful”
6. Please rate the design of the store from 1 to 10 with 1 being “less successful” and 10 being “very successful”
7. The pattern language included humane patterns and green patterns. Did you find this to be a good format of a pattern language development? Please provide any comments about how this combination of two categories of patterns can be further enhanced?
8. Is the pattern structure easy to understand?
56. Please provide below any additional remarks or recommendations concerning this thesis project

CHAPTER V

DISCUSSION

The goal of this project was to come up with a comprehensive design for a clothing store located in downtown Los Angeles. The design took into consideration both human and sustainability qualities that would impact on the overall environment of the store. The study relied on an adapted pattern language framework. This is a design philosophy developed by Christopher Alexander in his book ‘‘Pattern Language’’.

The remodeling was necessitated by the dynamics of the modern market, demand for competitiveness and efficiency in the operation of the store. The designer proposal aimed to solve the existing issues through sustainable design that incorporates humane, green principles and Crime Prevention, through Environmental Design (CPTED) principles, as opposed to exclusively being dependent on the modern technology. The outcome of the project was very fundamental in providing a guideline that can be applied by professionals within the built environment that includes, designers, architects, constructors and urban planners.

The design was at first anchored on an interrogative course that was carried out through literature review, interviews, observation and photography. This helped to set out a parameter

that guided the design towards the establishment of green patterns, humane patterns and the environmental patterns. At level two of the project, the established guidelines have been applied writing a new pattern language by means of analyzing the Alexander (1979) pattern theory. A proposed design was developed using the patterns and this was further evaluated by selected experts and their review comments were of great importance.

Discussion of the Findings and the Adaptations

Discussion of the Expert Assessment

Post design evaluation relied on a credible manner that was carried out by independent experts. This ensured that designs and patterns were developed in an efficient manner. Impacts of the new pattern were brought out by the experts. The research design, data collected, and the whole methodology process was said to be detailed and captured the necessary data. The reviews were very encouraging, but further areas of investigation within the field of Pattern Language were recommended.

Expert Reviewer #1

Was certain that the pattern would improve the overall needs of the store since they were based on the concerns raised by the owner and the staff.

Implications

The methodology for this project geared towards creating a pattern language, particularly for retail clothing store. The design relied mainly on sustainable principles including humane design aspects. The outcome of the project is a clear indication of the path to be taken by other

designers may it be in the retail sector or other businesses. The result provides a guideline that can be used to upscale other businesses through sustainable designs.

The modern world market has become very dynamic. This has been as a result of advancement in technology and new customer needs. While observing technological advancement, this design has put emphasis into alternatives that are environmentally friendly and cost efficient.

This approach can be used as a breakthrough not only in retail clothing but also in other business ventures and other spaces and facilities, both in the commercial sector, recreation, public purpose and public utilities. This could include restaurants, hotels, hospitals, sports arenas, workplaces, supermarkets, etc.

The project faced numerous challenges including minimal literature review on the applicability of Pattern Language in retail clothing stores. Time was also a limiting factor especially when involving the stakeholders. Some aspects of the design were also not met due to restraint in budget allocation.

Conclusion

The project attempted to integrate sustainable designs within a clothing store in order to solve the existing problems in a viable and cost effective manner. The design anticipated integrating humane designs, green designs and Crime Prevention, through Environmental Design. These were incorporated within the guidelines that steered towards the development of the pattern language.

A lot of investigations has been carried out regarding sustainable designs. However, their applications in retail clothing stores remain marginal. There are a lot of areas for further

investigation within the retail clothing that requires more consideration in regard to sustainable development. Even in cases where sustainable designs have been applied no case to our awareness has made reference to the Pattern Language.

In the modern economy, stores have to shell out an enormous chunk of their venture to create a decent clothes shopping experience. In most cases, the cost of creating such shopping experience is directly transferred to the customers. With competition becoming firmer gradually, and the accessibility of the similar marques across many shops, the only way out to tell apart is to be conspicuous.

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APPENDIX A

Questionnaire:

1. Is the pattern language easy to recognize?

Please rate in a scale beginning from 1 to 10 where 1 is “exceedingly challenging to understand” and 10 is “tremendously cool to comprehend”

2. How valuable will the pattern language be to somebody who is planning a clothing store setting?

Please rate in a scale ranging from 1 to 10 with 1 being “less useful” and 10 being “very useful”

3. Is the pattern simple to trial?

Please rate in a scale of 1 to 10 with 1 being “not simple to follow” and 10 being “simple to follow”

4. How does this pattern language provide an accommodating guide to an all-inclusive sustainable approach?

5. What techniques can be used to value-add the available pattern language?

6. Please indicate any additional remarks or recommendations below in the provided space.

APPENDIX B

The following images show the store's current status quo

