Store Design and Store Atmosphere Effect on Customer Sales per Visit

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Abstract—the purpose of this paper is to measure the store design and store atmosphere effect towards customer sales per visit of Widely Project Concept Store. This paper proposes that store design and store atmosphere has a significant effect on the shopping experience which can increase the amount of merchandise that customer purchase. Customer sales per visit as dependent variable. Fixture and display product arrangement, layout, space, signage, window display and entrances, dressing rooms, lighting, atmosphere, music, and scent indicated as independent variable. The data gathered from direct observation, interviews with the management, and questionnaire distribution. Frequency analysis, crosstab analysis, and multiple regression analysis applied in this paper to construct a quantitative result showing the relationship between independent and dependent variable. The result indicates that there is a positive correlation between the dependent and independent variable. In addition, all independent variable gave influence simultaneously as much as 48.9% on dependent variable.

Keywords—concept store, customer sales per visit, store atmosphere, store design

I. INTRODUCTION

CONCEPT store is a retail store that provides a different buying process with philosophical meaning. It offers mix of items from different designers and brand addressed to particular group, for example urban people. The varieties of products sold also have a certain theme [1]. The concept of the store was the important aspect that needs in-depth consideration. It will be the identity of the store that affects the philosophy expressed in the design of the store and the atmosphere, and underline the character of the products. All of that offers an opportunity for the customer to buy physical products provided with emotional and sensory experience [1]. Those experiences will be associated with the store design and store atmosphere. This kind of retail venture is still new in Bandung. As Bandung famous of its factory outlet, concept store should struggle to sustain in order reach the right target market.

The case study is conduct in Widely Project Concept Store located in Bandung, Indonesia. Widely Project Concept store is the biggest concept store in Bandung that provides more than 180 local brand and designers with a huge variety of product for urban lifestyle people with middle-upper social class from 15-35 years old and young mother.

The store manager claimed that the store design and store atmosphere in Widely Project is one of the business issue that faced by the management. Widely Project has made a unique concept of urban lifestyle that different and they provide more complete product variety than the other store, but the number of sales did not as expected before.

According to the business issue, the problem should be solving by making research objective as the guideline for the research. The objective of this research is to evaluate the current condition of Widely Project store design and store atmosphere, measure the effectiveness of store design and store atmosphere towards sales per visit, and to evaluate the elements of store design and store atmosphere that has most effect in increasing sales per visit.

The research questions will ask 1) What is the current condition of Widely Project in terms of store design and store atmosphere?, 2) Is the store design and store atmosphere in Widely Project effective to increase customer sales per visit?, 3) Which elements of the store design and store atmosphere that has the most effect on increasing sales per visit?

The respondent scope of this observation will be the customer of Widely Project around Bandung, 15-35 years old, male and female. The research conducted from January-July 2012.

II. LITERATURE REVIEW

Theory that uses in this research is about store design, store atmosphere, consumer behavior, and customer perception.

A. Store Design

Store design objective is to show a product at its best advantage. It can attract customers to visit location, increase the time they spend in the store, and increase the amount of merchandise they purchase. An effective store design provide a rewarding shopping experience that encourages repeat visits and have a long-term effect on building customer loyalty. There are three elements of store design [2]:

1. Layout

Store layout defines the total selling space, how it divides into specific selling areas [3]. Layout also consists of space utilization, aisle planning, and area arrangement. It affects how the merchandise presented and influence directly on what products customers see during their visit and furthermore it
will affect the purchase decision. To maintain the circulation flow inside the store, Widely Project uses the free-form layout.

**Free-Form Layout**—is the simplest type of store layout where the fixtures and merchandise arranged into free patterns on the sales floor and in asymmetric pattern. It suits well in small fashion store; provide relaxing environments that facilitate the customers to browse all of the merchandise.

2. **Signage**
   
   Signage help customers to locate specific products offered in category and departments, provide product information, and identify the location of merchandise categories within the store [1]. There are three types of signage:
   
   - **Category Signage**—to help identify the types of product offered, located near the goods, which they refer
   - **Promotional Signage**—Describe special offers
   - **Point-of-sale Signage**—Information about the price and other detailed

3. **Feature Area**
   
   Feature area is the area that designed to get customers’ attention [1]. They include:
   
   - **Window Display**—Attract customers into store by reflecting the type of merchandise offered by visual message
   - **Entrances**—the first impression caused by the entry area affects the customer’s image of the store
   - **Fixtures**—A structure that uses to present the merchandise, holds the correct number of products
   - **In-store displays and trend area**—consist of product supported by props arranged, contains topical product by either trend or look
   - **Dressing room**—Space which customers decide whether to purchase an item
   - **Cash Wraps**—Point-of-purchase counters where customers can purchase merchandise
   - **Product Handling**—Display of products [4]
   - **Product Adjacencies**—Product arrangement [4]

B. **Store Atmosphere**

   Store Atmosphere is the design of an environment by stimulation of the five senses. It arouses customers’ perceptual and emotional responses and affects the purchase behavior. There are five designs in atmosphere:
   
   - **Lighting**—Use to highlight merchandise or simply to flood the store with enough light. It could positively influence customer-shopping behavior. The right lighting in the dressing rooms make the products to its best displayed [5]
   - **Color**—It is a sense expression that can create emotions and effect the customers mood. It might activate and stimulate memories, thoughts, and experiences [5]
   - **Music**—It can influence both conscious and unconscious customer action. The tempo of music can affect people’s perception of time. It can affect customers to the extent that they feel comfortable and decide to stay longer in a store, spend more money, and recommend the store to others [6].
   - **Scent**—It has a large impact on customer’s mood and emotions, positive impact on customer’s level of excitement and satisfaction with the shopping experience. Customers in scented stores think they spent less time and motivate them to revisit the store.

C. **Consumer Behavior**

   Consumer behavior is the process when individuals, groups, or organizations select, secure, use, and dispose products and services to satisfy their needs. [7] It is about how the customer perceives and evaluates goods and services in the marketplace and act accordingly. Consumers are people who end up using a particular good or service. [8]

D. **Customer Perception**

   Perception defined as the process by which an individual selects, organizes, and interprets stimuli into a meaningful picture of the world. It is how each person recognizes, selects, organizes, and interprets stimuli based on each person’s own needs, values, and expectations [9].

III. METHODOLOGY

   To conduct the research, the data gathered from direct observation to Widely Project concept store; in-depth interview the current condition with the store manager to get the other perspective from the management, and questionnaire distribution to the customer. The sample of the research is the customer of Widely Project with population of 18,250 visitors that do purchasing in a year. The sample size is determined with Slovin Theory, using the standard assumptions of sampling errors is still tolerated (e) by 7% of the sample size. The information based on the average customers that do purchasing in a year, last year. The total respondent of the survey was 202 customers.

   Moreover, the total question in the questionnaire is 23. The question items divided into ten variables that furthermore will be the independent variable are:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Question Number</th>
</tr>
</thead>
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<tr>
<td>Fixture and display product arrangement (X₁)</td>
<td>4, 10, 14</td>
</tr>
<tr>
<td>Layout (X₂)</td>
<td>1, 11, 13, 15, 16</td>
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<td>Window display and entrances (X₅)</td>
<td>8, 9</td>
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<tr>
<td>Dressing room(X₆)</td>
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<tr>
<td>Lighting (X₇)</td>
<td>17, 18, 19</td>
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<td>Atmosphere(X₈)</td>
<td>20</td>
</tr>
<tr>
<td>Music (X₉)</td>
<td>21, 22</td>
</tr>
<tr>
<td>Scent (X₁₀)</td>
<td>23</td>
</tr>
</tbody>
</table>

IV. DATA ANALYSIS

   After the data collected, the data analysis will provide the result from the questionnaire using the SPSS 19.0 application. The result presented in quantitative analysis to construct a
quantitative result showing the relationship between independent and dependent variable.

A. Frequency Analysis

The frequency analysis shows the respondents perception towards the store design and store atmosphere performance in Widely Project. The description data of the variables uses distribution table by clarifying respondent’s answer into three categories. The categories are Good, Fair, and Poor based on (1)

\[ c = \frac{X_n - X_1}{k} \]  

\[ c \] = class interval length  
\[ X_n \] = highest value  
\[ X_1 \] = lowest value  
\[ k \] = number of class, 3 in this case (good, fair, poor)

Store design performance variable highest score is 77 and the lowest score is 38. Therefore, the result interval score for each of category for Store Design Performance is 130 people or 63.36% consider the store design as in “Fair” category, and the least are the respondents who has a perception about the store layout as “Poor” with 33 people or 16.34%.

Store Design Performance divided into 3 sub-variables, which are store layout, signage, and feature area.

Store Layout—Store layout performance highest score is 20 and while the lowest score is 8. Therefore, the result interval score for each of variable of store layout performance is 130 people 108 people or 53.47% are those who perceive the store layout as “Fair” category, and the least are the respondents who has a perception about the store layout as poor, with 17 people or 8.42%.

Signage—Signage performance highest score is 15, while the lowest score is 8. The respondent perception result is half of the respondents approximately 102 people or 50.50% have a “fair” perception about signage; the least is 41 people or 20.30% of the respondents that have a “poor” perception of the signage performance.

Feature Area—Feature area performance highest score is 43 while the lowest score is 22. Therefore, the result interval score for each of variable of feature area performance is 122 people or 60.40% have a “fair” perception about feature area; the least is 30 people or 14.85% of the respondents that have a “poor” perception of the feature area performance.

Store Atmosphere Performance highest score is 33 and the lowest is 17. Respondent’s feedback on store atmosphere performance results that 120 people or 59.41% have a “fair” perception about the store atmosphere; the least is 36 people or 17.82% of the respondents that have a “poor” perception of the store atmosphere performance.

B. Cross Tabulation Analysis on Buyer

The crosstab analysis is use to make sure whose the frequent store visitors in Widely Project and how much the visitors spent per visit. By crosstab the occupation, it can shows the specific market of the store, how the store should be design, the suitable atmosphere that could make the buyer’s comfort, and to suit the product variation.

1. Occupation to Expense per Month

The expense of the buyer is important to make sure that Widely Project has reached their target market or not. According to the table above, more than half of the visitors, 140 people or 69.3% are college student. 65 of them are having expense range from Rp1.000.000–Rp2.000.000. 32 of them has Rp2.000.000–Rp3.000.000 range of expense. Widely Project positioned themself as a store for people in middle-upper class. The range of expense for middle-upper social class is more than Rp2.000.000. The total visitor with range of expense above Rp2.000.000 is 82 people or 40%. This is below the expectation.

2. Occupation to Fashion Expense per Month

Fashion expense is important to know whether the college student can afford the product sold or not. This becomes important to focus more on the college student as Widely Project’s target market. Based on the result, most of the college student range of fashion expense is about Rp250.000–Rp500.000. The range already matches the product price range in Widely Project. The second highest is Rp500.000–Rp750.000 with 34 people. Next is below Rp250.000, 26 people. The rest is dividing into two groups, college student with range of expense Rp750.000–Rp1.000.000 and more than Rp1.000.000 with 16 people. This shows that college student is potential to become the target market of Widely Project.

3. Occupation to Customer Sales per Visit

The college student mostly spend below Rp250.000, those who perceive 81 of the visitor answer that. The second highest is Rp250.000–Rp500.000 sales per visit, this means they spent around that range, each they came to Widely Project. The rest divided into two ranges, 11 college students spent around Rp500.000-Rp750.000 and one of them spent Rp750.000–Rp1.000.000.

4. Customer Sales per Visit to Customer Visit Frequency

Last is cross tabulation of customer sales per visit and customer visit frequency. This became important to analyze the business issue that faced by the management. The result shows that from 202 respondents, half of the respondents or 102 visitor of the store already visits Widely Project 2-4 times. Most of them, 53 people, spent <Rp250.000. The second highest is 35 people who spent Rp250.000-Rp 500.000. Although those visitors cannot categorize as the loyal customers, they are potential enough to become a loyal customer. Loyal customers are the visitors who already visit Widely Project more than 4 times. From the result, loyal customers spent mostly on Rp250.000 – Rp500.000, in fact, some of them still spend below Rp250.000. Whereas, Rp250.000 are mostly below the products price range that sold in Widely Project.
Moreover, most of the respondents, 104 of them, spent below Rp250,000. This represent the business issue that faced by the management of Widely Project, that the number of sales did not as expected before.

C. Regression Analysis

According on the research using the F-test, the F\text{count} obtained for customer sales per visit as the independent variable is 1.285 with significant value of 0.241. Due to the F\text{count} \textless F\text{table} value (1.285 \textless 1.881) and significant criteria below 0.05, then H\text{0} accepted, means that independent variable simultaneously influence sales per visit (Y\text{1}) but not significant in affecting customer sales per visit.

Partial hypotheses testing or T-test is also required in this analysis. This test is used to test the comparative hypotheses. The testing criteria is Reject H\text{0} if t\text{count} > t\text{table} or t\text{count} < -t\text{table}, accept on other conditions With criteria level of significance (α) is 5%, and degree of freedom is (v) = 200 (n – 2) obtained t\text{table} value of 1.972. There are 4 significant variable in affecting the customer sales per visit, which are: fixture and display product arrangement, layout, signage, and lighting.

V. Result

The result answering the research question is as follows:

A. Current Condition of Widely Project

The current condition based on the interview with the management, this is the result:

Widely Project actually have a concept that unite many variety of products for people ages 15– 35 years old that has an urban lifestyle in one-stop shopping store. Every part of the store design inside Widely Project support the urban concept itself. The furniture that uses in the store are represents the concept, the designer pick combination of wood, unique shelves, and urban details all over the place. They constantly renew the product to meet customer needs, by choosing the product from each brand and sorted it according to the urban style matches the Widely Project concept of products to keep the product quality and to increase the sales.

The area is located at 600 square meters. The building looks semi-permanent, which will make you clearly see the ceiling and walls with some painting. To attract customers to enter the store; they use a window display that shows the unique product that is sold inside. Window display updated every month. However, it also depends on the new arrival products; if it arrives, the store manager will change the display to show the new product. There is no theme for the window display, except when there is an event or season.

The floor layout inside the store categorized as free-flow layout or a boutique layout, arranges fixtures and aisles in asymmetric pattern. It accommodates both customers and employees to walk around and see the products clearly with sufficient space. The advantage of using a free-flow layout is it supports the hedonic benefit that offers customers an entertaining and enjoyable shopping experience. This shopping experience encourages customers to spend more and facilitates the customers to browse through all of the merchandise. From the retailer, it is effective to use free-form layout because it is flexible and allows changed of layout every month, when there is a special event or theme, they can change the layout to support the event or theme. There is a standard for the employee to serve the customers fully, from greetings, asking what they needs, offers the new collection of products, and as a fashion advisor.

To control the cost in using the merchandise, they do not use fixed merchandise, because they constantly change the layout every month to bring new image for the customers so they are not bored with the layout and provides flexibility.

Widely Project store designs are also considering people with disabilities, the store are fully accessible for people with disabilities. They provide wide 32-inch-wide and more pathways in the main aisle, to bathrooms, dressing rooms, and around most fixtures.

For signage, they do not put any signage; only sometimes, when there are sales, they put discount signage near the product brand. Soon they will add some category signage with brand name near all fixtures; bathroom, and cashier signage.

For the features areas, the first ten-feet from the entrance are not free of merchandise. In the left side, they put table fixtures for displaying accessories and the cash wraps located in the right side of the entrance area. Because there are many customers go to these areas and may wait in line to make a purchase, Widely Project use this area to display impulse items. The designer use mid-floor fixtures to display the products. Gondolas, tables, furniture, found objects, vendor fixtures, and hanging rails. They do not use mannequin. In-store displays and trend are now use for displaying the furniture products.

Dressing rooms are located in the back of the store, there are five rooms with one square meters wide, enough lighting, big mirror, fixed hanger for four clothes, and curtain for replacing the door. The cash wraps are located near the entrance. They also do some product handling strategy, which is color blocking, vertical merchandising, product blocking, symmetrical merchandising, and anatomical merchandising. The product adjacencies based by genders; they differentiate the location of the product by male, female, and kids.

They combine four aspect of store atmosphere to customers’ perceptual and emotional responses and ultimately affect their purchase behavior. Widely Project logo used white and black color to enhance a classy image. Light brown color, cream, and white dominate the colors; this combination of color will bring out the image of products, neutral, and represent the word simplicity in modern way. The lighting is not too bright and mostly used to highlight the merchandise. They use fast tempo music to create a fun shopping atmosphere. There is no room fragrance inside the store.

Reminding that Widely Project is offer almost 180 brands inside the store, the elements of store design, the layout, and the store atmospheres becomes an important thing. The customers often change their mind if they hard to find the best thing on the shelves. Actually, all store design part in the store plays a big role in affecting customer’s mind.
B. Store Design and Store Atmosphere Effectiveness in Increasing Sales per Visit

The analysis tools used in this research is multiple linear regression analysis with Fixture and display product arrangement (X1), Layout (X2), Space (X3), Signage (X4), Window display and entrances (X5), Dressing rooms (X6), Lighting (X7), Atmosphere (X8), Music (X9), Scent (X10) acts as independent variables, and the dependent variable is Customer Sales per Visit (Y). Equation (1) is the formula for multiple linear regressions:

\[ Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + e \]

(1)

Where: Sales per Visit (Y), Fixture and display product arrangement (X1), Layout (X2), Space (X3), Signage (X4), Window display and entrances (X5), Dressing rooms (X6), Lighting (X7), Atmosphere (X8), Music (X9), Scent (X10), Constant numeric (b0), Regression coefficient (b1, 2, 3, 4, 5, 6, 7, 8, 9, 10), Error (e)

The formulation for this multiple regression model are:

\[ Y_1 = 0.772 + 0.760X_1 + 0.576X_2 + 0.240X_3 + 0.548X_4 + 0.311X_5 + 0.045X_6 + 0.409X_7 + 0.057X_8 + 0.027X_9 + 0.027X_{10} \]

(2)

The customer sales per visit variable will; increase 0.772 if all X variables are zero; increase 0.760 if the management enhanced one point in fixture and display product arrangement (X1) variable; increase 0.576 if the management enhanced one point in layout (X2) variable; increase 0.240 if the management enhanced one point in space (X3) variable; increase 0.548 if the management enhanced one point in signage (X4) variable; increase 0.311 if the management enhanced one point in entrances (X5) variable; increase 0.045 if the management enhanced one point in dressing room (X6) variable; increase 0.409 if the management enhanced one point in lighting (X7) variable; increase 0.057 if the management enhanced one point in atmosphere (X8) variable; increase 0.027 if the management enhanced one point in music (X9) variable; increase 0.027 if the management enhanced one point in scent (X10) variable.

The value of coefficient of correlation (R) in this research is 0.699, which almost close to 1. It means the sales per visit in Widely Project have a strong relationship with the independent variables.

The value of R² in this research is 0.489, it shows that the independent variable collectively has 48.9% effect in customer sales per visit, whereas the rest or 51.1% are explained with the other variables which not discussed by the researcher.

C. Elements of the store design and store atmosphere that has the most effect on increasing sales per visit

From the calculation of Coefficient Beta x Zero-order, it is known that the most significant independent variable in affecting the customer sales per visit is fixture and display product arrangement (X1) with 18.90%. The second is Layout (X2) with 11.90%. The third is Lighting (X7) with 7.95% in affecting the customer sales per visit.

APPENDIX

TABLE I

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<thead>
<tr>
<th>Variable</th>
<th>Sub-Variable</th>
<th>Sub-Sub-Variable</th>
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<td>1. Layout</td>
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<tr>
<td></td>
<td>1.2 Category</td>
<td>1. Category signage</td>
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<td></td>
<td>1.3 Feature</td>
<td>1. Window display</td>
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<tr>
<td></td>
<td>Areas</td>
<td>2. Promotional signage</td>
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<td>3. Point-of-sales signage</td>
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<td>1.1 Lighting</td>
<td>1. Highlighting merchandise</td>
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<td>1.2 Colors</td>
<td>1. Colors in the Atmosphere</td>
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<td></td>
<td>1.3 Music</td>
<td>1. Type of music</td>
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<td></td>
<td>1.4 Scents</td>
<td>1. Type of scents</td>
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<td>Customer Perception</td>
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<tr>
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REFERENCES

