The Influence of Patterns, Textures and Colors on the Quality of Space Design in the BNI City Station Building

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Abstract:- The quality of indoor environmental quality influenced by the interior design. To design a room, it need to consider how to apply patterns, textures and colors to the elements forming and filling the indoor so as to create visual beauty and suitability to the function of the room. All these components must be applied properly to achieve a good indoor environmental quality. The interior of the object in this research, is the BNI City airport train station has a variety of patterns, textures and colors that are combined to give a certain visual impression. This study will discuss the effect of pattern, texture and color on the quality of interior design in the station using a qualitative descriptive method based on actual conditions.

Keywords:- Patterns, textures and colors, Interior Design, airport train station.

I. INTRODUCTION

The airport train station has a function as a place to pick up and drop off passengers or users of special transportation for airport trains, being a waiting area and other supporting activities in it. BNI City Station, which is the object of this study, has an area of 21,748.63 m², with this area can accommodate many people who visit to use airport train transportation every day.

To support comfort in activities within the station area, good quality of the inner space design is needed. Design aspects that can support the visual appearance of the space in the station building include patterns, textures and colors. In the existing conditions of the space inside the BNI City station, patterns and textures are applied variously to the elements that form the space and filler of the space, the dominant color selection used is white and orange, with a touch of several other colors. However, the effect is not yet known on the inner space of the BNI City station.

This study was conducted to examine the influence of patterns, textures and colors on the quality of space design in the BNI City station building. An analysis of these variables will be carried out based on literature and precedents, then conclusions and suggestions will be drawn on several aspects that still need to be optimized. The results of this study are expected to be a reference for the design of spaces in buildings with a good visual appearance that can be applied to railway station buildings.

II. FOCUS AND SCOPE

The focus of this research is limited to discussing the influence of patterns, textures and colors on the design of the space in the BNI City Station building. The scope of the discussion in the form of questions and research limitations are as follows:
The questions in this study include the following:
- How the design of the inner space environment is applied to the existing BNI City Station Building, especially in aspects of patterns, textures and colors
- How do patterns, textures and colors affect the forming and filling elements of the space in BNI City Station

The limitations of this study are as follows:
- Emphasizing the design of the inner space environment in the airport railway station building from several aspects, including patterns, textures and colors
- The object of research on this paper is limited to the space in the 1st and 2nd floors of the BNI City Station building, Central Jakarta

III. LITERATURE REVIEW

Patterns, textures and colors can have a visual influence on the surface of objects and give meaning to the room, so that in a certain space a nuance will be formed that can be enjoyed by the five human senses. In the design of the inner space, these three aspects have their own influence on a room. Here is an understanding of patterns, textures and colors.

A. Patterns and Textures

Reporting from the Arsitur Studio page, **a pattern is a** significant repetition of certain visual pattern-forming elements. Patterns or patterns can be influenced by several effects, namely:
- Based on the visual effects that arise, patterns refer to the visual form of a repetitive element that can give a visual feel with some specific variations
- The material effect on the pattern gives uniformity to any surface because the pattern is something that repeats
- The effect on the room, the pattern directly affects the size of the room, can make the room look small or look bigger and vice versa. For example, if a small room is given ceramics measuring 60 x 60 cm, it will make it look bigger
- The effect caused by the color on the pattern will reduce the intensity of the solid color so that it looks simpler.

Examples of patterns in inner space are applying lines, geometric, organic, motifs, and prints on floors, wallpaper, furniture, carpets and various other surfaces.

Fig. 1: Differences in Patterns and Textures in Design

Source: https://www.arsitur.com/

According to Francis D.K. Ching in his book "Illustrations of Interior Design", **Texture** is a certain quality of a surface that arises as a result of a three-dimensional structure. Texture is used to determine the degree of smoothness or relative hardness on a surface. Textures can also be used to describe the characteristics of surface quality in materials that are similar to each other. Texture can be influenced by several effects including:

- Judging from the visual effects caused, texture refers to the surface of an object that can be felt with the sense of touch (skin) so that we know the existence of a rough and smooth texture by only looking at the pattern on the texture

- The effect of materials on textures defines the surface quality of a wide variety of materials
- The effect on the room on the texture gives a feel to a room, it can make the room feel warm or cold. For example, the rough texture gives a warmer impression and the smooth texture gives the impression of being cooler
- The effect caused by color on a rough texture will make the object look heavier, while a smooth texture will make it look lighter.

Examples of textures in the inner space are rough, smooth, gauze, slippery, hard, soft, patterned, plain, brilliant, gloomy surfaces, and others that are applied to floors, furniture, carpets and various other surfaces.

Fig. 2: Examples of Textures on the Surface of Objects

Source: Google

B. Color

Color is a natural phenomenon that occurs due to the presence of light elements, objects, and observers (eyes or measuring instruments) which then become the impression of light reflected by objects so as to display the color spectrum based on the experience of the sense of sight. Riadi, M (2020).

According to the theory put forward by Brewster (1831), that colors - colors that exist in nature consist of four groups of colors, namely:

- Primary colors (red, yellow and blue),
- Secondary colors (Mixing of primary colors in a ratio of 1:1),
- Tertiary color (Mix one primary color with one secondary color)
- Neutral color (Mixing of three basic colors in proportions of 1:1:1)

Reporting from the interiordesign.id page, the color in the inner space can be divided into three functions, including:

a) Aesthetic

Color can provide aesthetic value, beauty, and eliminate the impression of dullness and unkempt in a room, for that the room needs to be designed using certain colors to make it look much more beautiful than a room that is not colored and looks monotonous.

b) Manipulation

Color can give an impression to a room, by applying the right paint color to the inner space is one way to manipulate the room, for example by applying white to a room, it can create a sense of spaciousness and airiness, color is also able to manipulate a room that is too wide to appear more contained

c) Psychological

Color can give both positive and negative effects. The use of color relates to the psychological state of a person that will affect a person's body, mind, emotions and mood.

Some of the impacts of color selection on the quality of the spatial environment in a building can be explained in the table as follows:

Color	Impact
Blue	Calming, peaceful, can stimulate clear thinking, improve concentration. If applied excessively, it will give the impression of coldness and unpretentiousness, bring feelings of sadness and depression
Red	Making an object appear closer than the actual distance, giving it a warm atmosphere in the room, Tends to increase aggressiveness
Yellow	Providing a feeling of cheerfulness and optimism, giving a friendly impression also increases one's creativity, neutralizes nervousness and is able to increase one's self-confidence
Green	Bringing a refreshing impression because it is synonymous with nature and plants that provide a sense of security, balance, and harmony, the green color can also bring a feeling of peace and tranquility. The use of green into the interior is also believed to be able to improve a person's vision.
Orange	It increases appetite and provides comfort, gives a warm and friendly impression, but its excessive use can lead to reduced focus in studying or at work. Then this color is suitable to be applied in the dining room, or family room
Chocolate	It gives a serious impression, but it is very soft and warm.
White	Gives the impression of spaciousness and airy into the room. This color is suitable to be applied to a narrow and small room to get maximum comfort.
Black	Gives the impression of luxury and elegance in the room. Black color is able to create an atmosphere that tends to be serious. Black is also often used to suppress excessive appetite. However, when used predominantly and excessively, it can cause fear or feelings of insecurity.
Gray	Gives the impression of Intellect and Simplicity, but when used excessively tends to give the impression of sadness
Purple	It gives the impression of luxury, beauty, and elegance, and tends to encourage anyone to do meditation or contemplation. This color is often used to increase a person's self-confidence and reduce a sense of despair.

Table 1: Impact of Certain Colors on the Environmental Quality of Indoor Spaces

Source: https://interiordesign.id/ and personal analysis

IV. RESEARCH METHODS

A. Time and Object of Research

This research was carried out for 2 months, starting from November 11, 2021 to January 6, 2022. The object of this study is the inner space of the 1st and 2nd floors of BNI City Station located on Jl. Tanjung Karang No.1, Kebon Melati, Tanah Abang, Central Jakarta.

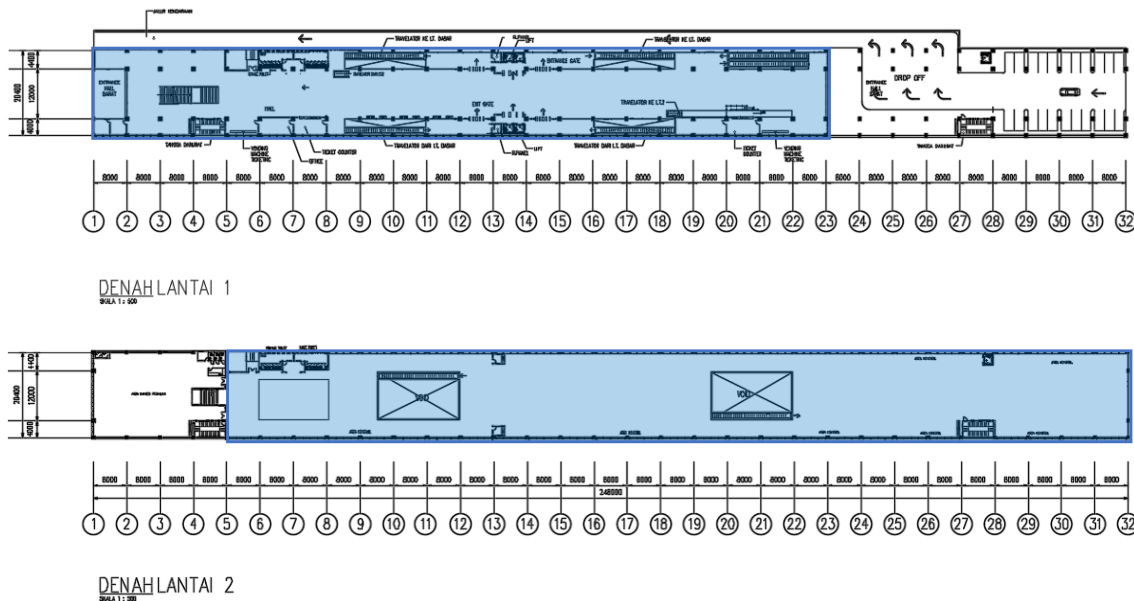Fig. 3: Location of the Research Object
Source: Google Maps

Fig. 4: Observation Area on the 1st and 2nd Floor Plans of BNI City Station

Source: Google Maps

B. Data Analysis Methods

The method used in this study is descriptive qualitative by collecting data related to the theory of patterns, textures and colors in the inner room design, then analyzing the object of study (BNI City Station) descriptively. Data collection was also carried out by direct survey to the research site to get an overview of the actual condition of the space inside BNI City Station. After the data related to the object of study is collected, it will then be studied in the results and discussion. Finally, to take conclusions related to how to apply patterns, textures and colors in the inner space of BNI City Station and provide suggestions on the application of these aspects so as to achieve better quality of inner space design.

V. RESULTS AND DISCUSSION

A. Analysis of Patterns and Textures

Patterns and textures in the inner space of the BNI City Station building can be found on the floor, walls, carpets and furniture used. Here are examples:

Picture	Surface	Pattern	Influence of Patterns	Texture	Texture Influence
	Ceramic Flooring	Geometric pattern / Square with the addition of Rectangular pattern	Dynamic, and gives power to the senses	Glossy/ Glossy	Reflects the rays on the surface of the plane, creating an elegant impression
	Parquet Flooring	Organic wood fibers	Dynamic and flowing (nature of nature)	Soft	Not slippery for pedestrians, natural
	Guiding Block	Line and Dot/ dot	Simple, balanced and clear as a hint	Hard	Not slippery for pedestrians
	Carpet	Abstract	Fun, cheerful, and free	Tender and rough	Comfortable, Not slippery for pedestrians

	Transparent Glass Wall	Geometric/ Square Patterns	Dynamic and visually empowering	Transparent, Shiny / Slippery	Reflects the rays on the surface of the plane, creating an elegant impression
	White paint finish wall	Unpolated/ Plain	Monotone	Soft	Simple, does not give the impression of exaggeration
	Exposed walls	Natural concrete pattern	Simple and natural	Soft	Gives a cool impression
	Green glassboard covered walls	Unpolated/ Plain	Simple, Not superfluous	Glossy/ Glossy	Reflects the rays on the surface of the plane, creating an elegant impression
	Wood Plastic Composite coated walls	Stripes, Organic patterns of wood fibers	Simple, balanced and calm	Smooth embossed	Gives a light and natural impression
	Wall covered wallpaper	Organic Patterns of red brick	Simple and natural	Soft	Gives a light and natural impression
	Wall clad wall panels	Geometric patterns	Dynamic, non-boring, and visually empowering	Rough	Gives a warm impression
	Aluminum Composite Panel (ACP) coated columns	Geometric, Rectangular	Dynamic and visually empowering	Perverted	Creating an elegant impression
	Gypsum ceiling	Unpolated/ Plain	Simple, Not superfluous	Soft	Simple, does not give the impression of exaggeration
	Wooden Ceiling	Stripes	Simple, balanced and calm	Smooth, embossed	Gives a light and natural impression

	Information center and lounge backdrop	Batik pattern	Simple, classic and traditional	Smooth, embossed. Glossy in the glass section	Gives a light and natural impression
	Chair furniture	Unpolated/plain	Simple, Not superfluous	Slightly rough tender	According to function, providing comfort

Table 2: Patterns and Textures in the Inner Space of BNI City Station

Source: Personal Analysis

B. Color-related Analysis

The colors used in the space in the BNI City Station building are predominantly white, combined with orange and brown colors. But on some sides of the room are found other colors. In the lobby area of the station, the floor and walls are given white to add a spacious and bright impression to the station, while the orange color on the ceiling can give a warm and comfortable feel, the brown color on the furniture can give a soft and warm impression.
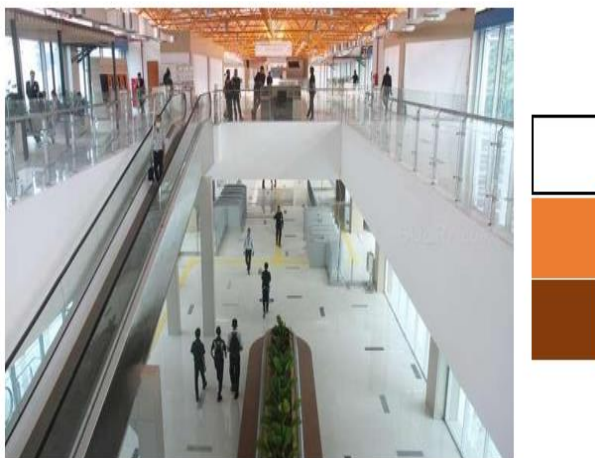

Fig. 5: White, Orange and Brown colors in the Lobby of BNI City Station

Source: https://www.suara.com/

A touch of green can be seen from the presence of synthetic plants in the waiting room area and the front wall of the toilet, bringing a refreshing impression because it is synonymous with nature which provides a sense of security, balance, and harmony, and brings a feeling of peace and tranquility for visitors who are in the BNI City station area.
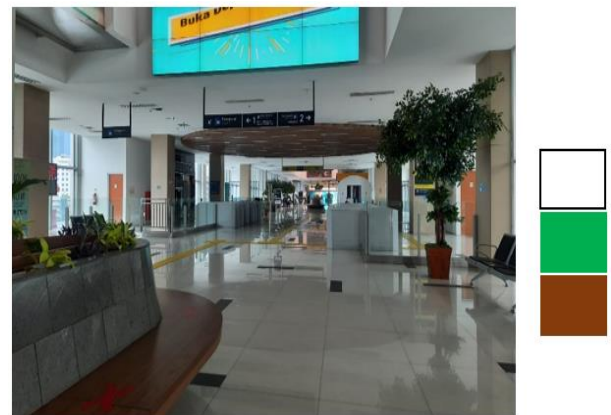

Fig. 6: Green in the Inner Room of the BNI City Station Building
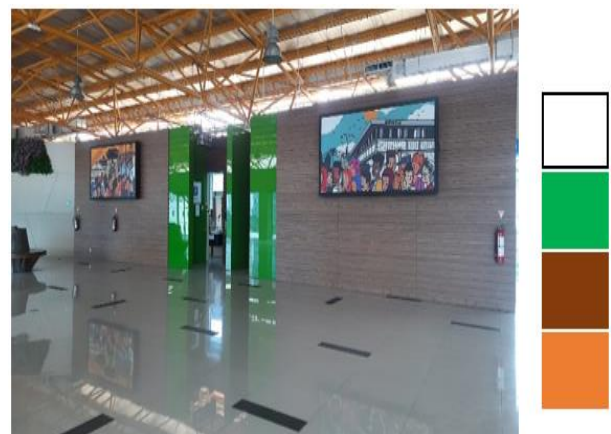
Source: Personal Documentation

Fig. 7: Green color in the Toilet Area of BNI City Station Building

Source: Personal Documentation

Colorful paintings on the walls can beautify the wall area of the inner space of BNI City Station, so as not to cause a dull and monotonous impression with the dominant use of white, and the colorful paintings can also be used as a focal point that attracts someone's eyes.

Fig. 8: Colorful Paintings in the Inner Room of the BNI City Station Building

Source: Personal Documentation

The colors of the furniture used are orange, gray and brown. These colors tend to give a warm and simple impression.
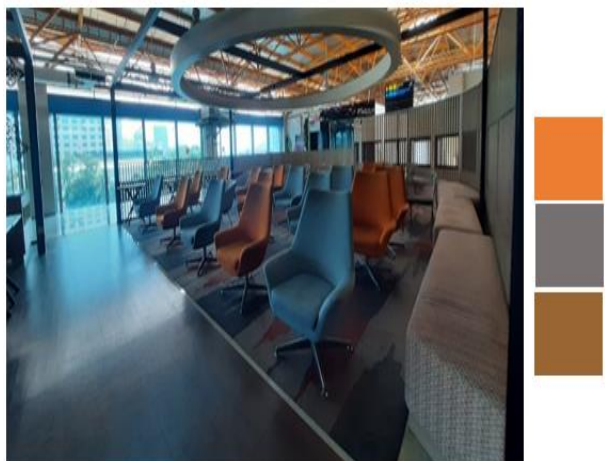

Fig. 9: Furniture in the Waiting Room of the BNI City Station Building

Source: Personal Documentation

In the area used as supporting facility rooms, the partition walls are colored blue and brown. This blue color can give a calming, peaceful feel, can stimulate clear thinking, improve concentration. In accordance with the use of ATM facilities that require a level of concentration for its users. While the cream color on the walls of other partitions gives a natural, soft and warm feel to the room.

Fig. 10: Blue and Brown Colors on the Partition area of SUPPORTING FACILITIES BNI City Station

Source : Personal Documentation

In the corner of the inner room area of the BNI City Station building, there is an exposed wall that is gray, which is like the basic color of cement. This color can give a sense of simplicity and naturalness by not giving other colors as a wall finishing.
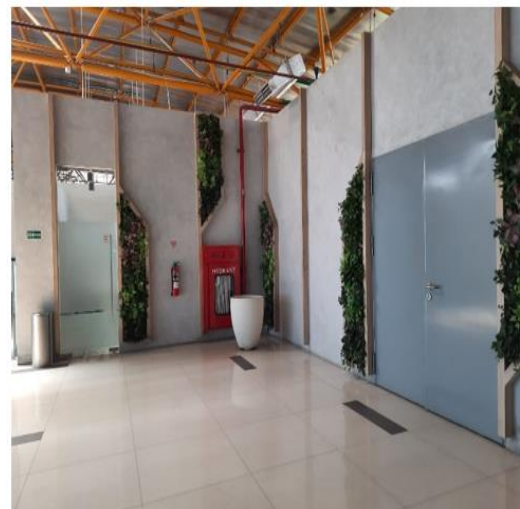

Fig. 11: Gray color on the Exposed Wall of the Inner Room of BNI City Station

Source: Personal Documentation

VI. CONCLUSION

Based on the results of the analysis of patterns and textures in the space inside BNI City Station, the dominant patterns used are geometric, line and organic patterns, where in general these patterns have a dynamic, simple and natural influence on the room. While the texture on the surface of walls, floors and furniture that is predominantly used is a smooth, rough and shiny texture. This texture is adapted to the surface function of the inner space elements and in general exerts a combination of weight, lightness, elegance and simplicity on each plane.

The colors used in the space in the BNI City Station building are predominantly white, combined with orange and brown colors. The white color of the inner space of the station can give a sense of spaciousness and lightness, orange and brown give a warm impression. On some sides of the room, other colors such as green and gray are also found which have a natural and simple impact. Plus colorful on the surface of the painting that gives the impression of cheerfulness and not monotone.

As for suggestions regarding the application of patterns, textures and colors in the design of the space inside BNI City Station to be more balanced in its use on the other side, for example a room with an exposed concrete finish only exists at one point, even though if it can be applied to other parts at a similar angle, it will seem more balanced. Likewise, in one room that has a plain color and is not textured, it can seem monotonous, it is necessary to place the filler element of the space combined with other colors or given a certain pattern or texture.

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