

Research on Light Luxury Style in Interior Smart Home Space Design

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Abstract—According to the characteristics and development trend of modern home decoration space design, combined with the case of interior decoration design, this paper probes into the ideas and methods of the light luxury design in home decoration through the analysis of the characteristics of light luxury style. A detailed analysis of the light luxury design style of external manifestations was conducted from the interior space layout, facade design, furniture furnishings, decorative color and other aspects. This paper also analyzes the application principles and design expression of smart home design in modern home decoration space design, and the light luxury style and intelligent interior home space design integration were interpreted from a practical point of view.

Keywords: Interior space design; Light luxury style; Modern design; Design principle; Smart home

1 INTRODUCTION

1.1 Light luxury style overview and Present situation

Light luxury life is a kind of life concept advocating "light luxury, new fashion". Light luxury is a way of life that respects the quality of life. It has nothing to do with wealth and status, which represents a more rigorous pursuit of high-quality life details, as is light luxury design. People say that light luxury is the current mainstream element and the collision of retro design concept, both in design and life. Light luxury has gradually moved to the mainstream, which is the perfect replacement for extravagant "bling" and it also broke the blind worship of luxury. People show great appreciation for the rational and healthy characteristics of light luxury wind. More and more people like to put this style on the home, interior, clothing and other fields. Light luxury wind is particularly evident in the design field, especially in the interior design [1].

"Light luxury" interior decoration style is based on modern and simple style, with cleaner and simpler, harder straight lines and simple and elegant decoration to express "light". The texture is highlighted through some exquisite soft outfit, and some unusual functions are added in details, in order to show the low-key "luxury." So today's popular "light luxury" decorative style can be summarized as the following categories according to different elements [2].

1) American "light luxury"

American "light luxury" has the simplicity and practicality of traditional rural wind, but it weakens the rugged rural style and excessive American rural atmosphere. Therefore, the

American "light luxury" does not have too many modifications and constraints, but the design of freedom and spontaneity has a kind of casual romantic atmosphere in the original American-style noble, atmospheric and casual "light luxury" atmosphere.

2) *Italian "light luxury"*

Italian "light luxury" is also a kind of style that is prevalent more in China, which can also be called modern light luxury. Italian light luxury has both classical and modern characteristics. Combining aesthetics and function closely, its design is mainly based on a rational and gentle aesthetic design. Simple and noble soft outfits and highly characteristic decorative lines and other elements are used to show its texture, making the monotonous space fuller.

1.2 Smart Home Overview and Present Situation

In the design of smart home based on the Internet of Things technology, in the background of civil housing environment, various devices in the home are connected through a certain communication protocol, and the direction adjustment is made based on a certain electrical control system. At present, the commonly used electrical control methods and means are lighting control, curtain control, telephone remote control, indoor and outdoor remote, anti-theft alarm, environmental monitoring, HVAC control, infrared forwarding and programmable timing control. With the continuous improvement of people's quality of life, the hardware and software configuration and functions of smart home system are also becoming increasingly perfect. Smart home also has the characteristics of low energy consumption, convenient operation, user-friendly settings and so on [3].

At present, the application of smart home in China is reflected in high-end luxury homes. For ordinary people, there is no complete set of production standards, and production technology can not meet the needs of the general public, and the market is relatively small, with high cost, so smart furniture is not really popular. Most of the homes abroad are single-family villas, and the development of smart home technology is earlier than that in China. Technology is relatively mature, more applications are in entertainment and communications. Because of the wide penetration rate, the market is large, so the price is relatively low, and the probability of ordinary people choosing smart homes is also high.

2 RESEARCH AND PRACTICE OF LIGHT LUXURY STYLE IN INTERIOR SMART HOME SPACE DESIGN

2.1 Hankou City Square decoration design project overview

This project is to be located in Vanke Hankou Legend Residential Home Design, Jianghan District, Wuhan City, Hubei Province. Vanke Hankou legend is located at the intersection of Xinhua Road and Development Avenue, and Vanke Hankou Legend covers an area of 42,389 square meters, with the construction area of 292,637 square meters. The surrounding large commercial center and other public building facilities are readily available, allowing residents to enjoy the convenience of comprehensive supporting facilities and a modern and high-quality life. Vanke Hankou legend is also a city with the ideal of upgrading, once again returning to Hankou center. Many years of urban ideal life are collected, and the site selection,

layout, planning, design, decoration and other aspects are investigated based on the fragmentation and reorganization of Hankou's long history and culture to build the largest Wuhan Vanke Hankou Center.

2.2 The concept and orientation of home decoration design in Hankou City Square

This project uses a modern light luxury style design. The main tone of modern light luxurious style is concise, paying attention to hard decoration techniques, but it is not as simple and casual as the general style. The seemingly simple and simple appearance often reflects a kind of hidden noble temperament, which is mostly reflected by some delicate and soft elements. A comfortable, transparent, reasonable use of space is created, so that the entire space reveals a clear, quiet, peaceful and elegant beauty.

3 HANKOU CITY SQUARE HOME IMPROVEMENT DESIGN SCHEME

3.1 Design Overview

The project area is about 143 square meters, with the design style of modern light luxury style design as the main tone. This plan emphasizes the rational planning of indoor static and dynamic zoning, paying attention to comfort and practicality, and combines new ideas, new technologies, new materials with traditional living needs. According to the different functions of each space, the streamline shape of the space and the division between the functions of the relationship are determined through the arrangement of space layout, so that the space can use space more smooth, reasonable and fuller. And modern young people aesthetic furniture and furnishings are selected, and combined with lighting and natural light and other auxiliary means, the functions of space and atmosphere have been further embellished and enhanced. The layout of the bedroom should be considered comprehensively, paying attention to the practicality of the bedroom, and meeting the needs of the owner's life as far as possible.

3.2 Project Positioning and Analysis

1) Project Positioning

This project is designed in the modern light luxury style, combining new concepts, new technologies, new materials and traditional life needs in the design. Modern light luxury style is a kind of fashion and practical new design style, combining modern and classical, emphasizing simple luxury, feeling the fusion of modern and classical. Light luxury style emphasizes both modern and classic design principles, while hard decoration emphasizes modern design techniques, and reflecting the classical style through furniture and some soft outfits is an important feature of low-key luxury. Modern light luxury style is warm and comfortable, aiming to enjoy life. This kind of enjoyment is not only a luxurious vision everywhere, but also a luxurious feeling that satisfies the body and mind. Modern light luxury style interior design is suitable for the psychological needs of young people tired of the hustle and bustle of the city, more in line with the needs of the owners to have a spacious and peaceful living environment to relax the pressure, and enjoy life.

2) Project Analysis

The public activity area of the living room of this program is the place that needs to be designed. This scheme maximizes the activity space of the living room, which is directly connected with the dining room, so that the negotiation and dining excessive are not abrupt. One can also watch TV to discuss important matters in the dining, and this design can share resources. When a number of people can be free to move tables and chairs at any time, there is no extra wall for shackles (Figure 1).

In terms of the streamline and functional zoning, the design allows customers to clearly see the flow of people in different areas in the design, and to ensure the smooth flow of people in every area. One of the most important concepts of this program is to turn the space into an integrity of a shape space, and the living room dining room and study form an integral shape space. The flow line is clear, so there is no extra wall barrier in this space, with clear vision. You can get what you want to see, and at the same time, you can get the maximum lighting surface and ventilation surface. The program from the door to the kitchen and then to the dining room is the relatively frequently used route, from the entrance to the living room to the bathroom bedroom is the most frequently used route, and from the sitting room to dining room to study is relatively less used route. In these moving areas, less cumbersome small objects furniture is placed, which is suitable for large objects necessary for life, making the entire moving area simple and spacious, and convenient for daily life. The quiet area of the bedroom is the reasonable use of each space in each space, while also ensuring the privacy of the room, maintaining the overall quiet environment, which is conducive to sleep [4].

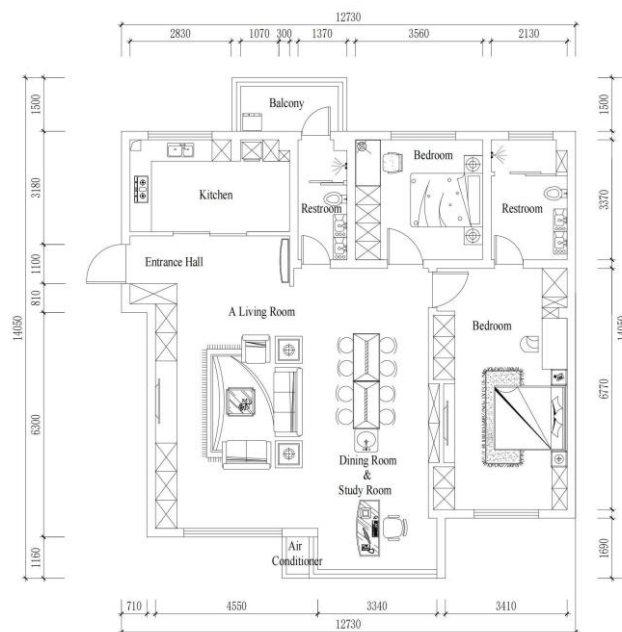


Figure 1. Floor Plan Source

Image source: Drawn by the author

4 DESIGN SCHEME AND DESIGN HIGHLIGHTS

4.1 Design scheme

1) Entrance hall

In this project, the entrance of the design adopts light-colored marble tiles and white paint, and the overall tone is neutral, giving a calm and comfortable feeling. The white baseboard and entry door brighten the entire space. The wooden floor shoe cabinet on the right-hand side of the door and the decorative background wall of the entrance, while taking into account the practicality and beauty, visually block the master bedroom entrance and the part of the view of the living room, to protect the owner's personal privacy to a great extent.

2) A living room

In this project, the living room area is larger and connected with the dining room and the study, and the traditional TV background wall is cancelled. This project completely abandons the TV background wall to obtain a larger space, without the wall barrier. The spaces are connected by rings. The spatial benefit in terms of modeling is that the owner has a wide field of vision and clear and transparent actions in daily life. In daily life, it will naturally enter another area from one area, and tourists can move freely, no more worrying about space constraints. During the day, the large space without barrier features can allow the living room to accept more natural light, so that the entire living room is more spacious and brighter, improving the owner's convenience in daily life. In the decoration, the living room uses the beige marble floor with pure white TV cabinet and beige white background wall, which gives people a simple and pure feeling while being harmonious in the same color. There are also golden metal decorative strips, different shades of the metal coffee table, milky white sofa and dark metal bookcase, all of which together form a modern light luxury system of "black, white and gray". The seemingly single-color space is composed of several low purity color coordination combinations. In addition to these gray elements, some high-purity complementary colors are used on the soft furnishings to form a contrast of light and shade with the overall space. The living space is more ingenious and breathable, neither gorgeous nor flamboyant, but produces a surprising visual effect (Figure 2, Figure 3).



Figure 2. TV Background Wall Renderings

Image source: Drawn by the author



Figure 3. Living Room Renderings

Image source: Drawn by the author

3) Dining Room and Study Room

The dining room and study of this project are designed in terms of activity space. The dining room adopts a space design without barriers, which is connected with the living room and study room to form a large shape space. This design allows many people to use the activity space, and walk around at will. In the design of the dining area, the table is far away from the kitchen and restroom, so a sink is set next to the table that can be used by many people to facilitate cleaning during the meal. The background wall of the restaurant adopts the same color as the dining table, and the metal luster is perfectly integrated into the overall design, creating a calm and deep feeling for the whole space. In this study, a fully open design was chosen, and the use of this kind of non-shelter design enables the owner to have more ventilation and wider lighting surface during use, improving the convenience of daily life (Figure 4, Figure 5).



Figure 4. Restaurant renderings

Image source: Drawn by the author



Figure 5. Guest Restaurant Renderings

Image source: Drawn by the author

In the application of color, the study and the dining room use the same color of furniture, and the combination of brown and brown tables and chairs is used in the furniture of the two spaces, and such as gold metal chandeliers and accessories, etc. are used in the decoration. This design makes the two spaces more integral, and also echo the accessories in the living room. At the same time, the large area of gray application is contrasted, adding vitality (figure 6, figure 7).



Figure 6. Study room effect picture

Image source: Drawn by the author



Figure 7. Study room effect picture

Image source: Drawn by the author

4) Kitchen

The kitchen design of this project is L-shaped, which can maximize the use of the operation space in the middle of the kitchen area, improving space utilization, and adequate storage space and kitchen mobile route are also in line with people's habits and needs. The ambry is made of white fireproof bake lacquer board, with black marble mesa, black and white match, giving golden handle and veneer. The metope and ground of the kitchen are made of marble tiles: the ground is 600 * 600 gray marble floor tile; the walls are 600 * 600 white marble wall tiles. The overall color is noble and elegant, which echoes the main colors of the living room, playing a role in the entire interior design harmony (Figure 8, Figure 9).



Figure 8. Kitchen Renderings

Image source: Drawn by the author



Figure 9. Kitchen Renderings

Image source: Drawn by the author

5) *Bedroom*

The bedroom design of this project should give priority to the three elements of the comfort of the bedroom "quiet, convenient, private." Any design should be based on the premise of these three points. The ground of the bedroom is the dark brown and the living room is dark brown. The dark itself will give a person a sense of stability and tranquility. The light brown curtains are unified with the overall tone and also add a romantic warmth to the whole space. Master bedroom and second bedroom are equipped with independent desks with practical equipment such as computers and storage boxes. The function is not reduced, so that the whole living space is more spacious and beautiful at the same time. Downlights are the main lighting in the bedroom, and there is no main light, so that the whole space is open and atmospheric. The integral design of the bedroom pursues the perfect unity of function and form, which is elegant and unique, concise and lively (Figure 10, Figure 11).



Figure 10. Bedroom Renderings

Image source: Drawn by the author



Figure 11. Bedroom Renderings

Image source: Drawn by the author

4.2 Design highlights

The design aims to reduce and avoid harmful gases emitted by interior decoration materials, such as non-toxic, non-irritating, non-radioactive coatings and high-strength, wear-resistance, acid-resistance and durable natural marbles, because the harmful gases emitted by interior decoration materials are also responsible for people's health. At present, green design is advocated in our country, so this scheme also follows the principle of design ecology, paying attention to saving energy, and energy-saving materials are used in the design, such as aluminum alloy wood composite doors and windows, light plates, dimming glass and natural diatom mud insulation walls, which not only improves the heat insulation, refrigeration, lighting and sound insulation of residential buildings, but also does not harm the environment and human health[5]. The program also adds intelligent furniture, which is popular with young people, and embeds today's cutting-edge electronic technology into furniture. Users can easily exchange data, transmit data, play video and audio through mobile phones and tablets; air conditioning and lighting throughout the house can be adjusted, turned on or off through simple mobile device operations; and heating, tea making and other functions can be realized through the touch of desktop glass. The intelligent touch control system embedded with touch mirror is used to realize the functions of glass anti-fog, room music opening and dehumidification [6].

5 CONCLUSION

The interior design emphasizes modern light luxury design concept, and the overall space is gentle and quiet. For example, the dining room and study are made of brown and coffee-colored tables and chairs, which form a light contrast with the gray-tone living space, bringing a subtle and elegant style to the entire living space. The avant-garde design concept makes the structure of the interior design no longer rigidly adhere to the traditional layout mode. For example, the television background wall can be directly canceled to obtain a larger space, etc., and the indoor design layout is flexible and variable [7]. Through the collection and collation

of pictures and cases of interior design at home and abroad, the reading and analysis of the molding scheme are conducted, so the control of the overall living space and the consideration of local details have a high reference value. It is concluded that the research on modern light luxury style interior design has uniqueness, value, application, humanization and artistry. And its breaks break the conservative concept of traditional home improvement in the design of science and technology and environmental protection elements.

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