The Study on Interior Design of Yunnan New Rural Residence Based on Spatial Structure Complete Computer CAD

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Abstract. Based on the detailed research and analysis of the current situation of the new rural residence in yunnan, this paper combined with the construction of the new rural residence space to express the re-thinking of the interior design. The use of definitions and dimensions considering interior design as a starting point, detailed analysis of some issues without the actual interior design of the new rural residence in yunnan. Combined with computer CAD technology, some targeted optimization or rectification methods are proposed to be more in line with the actual situation, so as to obtain new research results in the construction of new rural housing.

Keywords: Spatial Structure, New Rural Housing, Interior Design, computer CAD

1. Introduction

Under the background of new rural construction, the living environment of rural residents has been greatly improved, and many residents have built small foreign buildings on their original homestead. However, in order to really improve the living environment of rural residents, it is necessary to improve the level of indoor environment design of rural housing, otherwise the living comfort of rural housing is difficult to improve, and the desire of rural residents to pursue a better life is difficult to realize. In this case, this paper analyzes the problems existing in the indoor environment design of rural housing under the background of new rural construction, and on this basis, focuses on exploring the countermeasures to optimize the indoor environment design of rural housing under the background of new rural construction, and strive to contribute theoretical basis and practical countermeasures to improving the level of indoor environment design of rural housing. When the relevant elements in the building space structure are organized according to some form and combined with the characteristics of the components, the space of the building itself will show many different possibilities. Under the diversified form, the architectural space also showed many different forms of aesthetic feeling. The
feeling of beauty itself does not have any fixed pattern, different systems under different mandarin. Then in the process of designing the building space structure, it is necessary to organize and apply the components according to certain forms.

2. Interior design of new rural housing

2.1. Definition

Interior design is a relatively abstract concept, essentially is interior space design, through the structure of the house to make a spatial arrangement to meet the needs of people living, rest, entertainment and so on. Interior space design includes two aspects: physical space design and psychological space design, each of which has a great influence on the design effect of the whole house. Interior design has existed since the beginning of human civilization, after thousands of years of development, each historical period of housing features will also have different characteristics. Interior design is an art, which has high requirements for designers, not only in the space structure, housing environment, Chen decoration placement and other aspects of deep research, but also in the visual aesthetic requirements. Physical space design and psychological space design are two organic combination of the whole, inseparable. Simple physical space design can only meet the functional requirements of the house, and this is only a small part of the complex design process. Only by combining the two in the design process can we achieve the pursuit of space, vision, aesthetics and spirit[1].

2.2. Physical space design

Physical space design is to make a spatial arrangement of the physical structure of the house to achieve the functions of different types of houses. Physical space design requires designers to have a strong overall grasp ability, such as wall partition and space division, ceiling design, function room processing and television background wall modeling, not only to let them achieve the function of the house, but also to carry out a reasonable space placement, so that the house in the overall more coordinated.

2.3. Psychological space design

Complete an interior design not only in space to meet the requirements of all aspects, but also to achieve psychological results. Psychological space design is not a separate design step, but in the process of physical space design which add psychological factors, so that the physical space design more effective completion, to achieve psychological spiritual pursuit.

3. Problems in interior design of new rural housing in Yunnan

3.1. The interior design of the main functional areas does not conform to the production and living habits of rural residents

In the current interior design of rural housing, the interior design of the main functional areas of rural housing does not conform to the production and living habits of rural residents. For example, in order to pursue the beauty of the living room on the first floor, white tile is laid[2]. However, because of the blurring of the boundaries of rural production and life, white tiles are not resistant to dirty, thus affecting beauty and increasing the cleaning burden of residents; for example, many farmers like the
city's brilliant decorative style, but in fact gold is dark, easy to put pressure on people, is not conducive to, and with the rural surrounding natural environment is not in harmony. Rural housing versus urban housing spatial function pairs as shown in Figure 1.

3.2. The coordination between the interior lighting design of rural housing and the residential functional areas is insufficient

For a long time, the interior design of rural housing generally does not attach importance to the lighting design inside the residence, which makes the interior design of rural residence with the help of light assisted design content less, thus making the interior environment design of rural residents more monotonous and boring[3]. Moreover, some rural residents because the comprehensive education level is not high, the lighting collocation carries the hard set city similar building, finally causes the rural residential indoor lighting design and the residential function area coordination to be insufficient, the resident experience feeling is not good.

3.3. Lack of health evaluation and environmental protection considerations in the selection of materials for interior design of rural housing

Because of many reasons, such as economy, market supply and so on, the indoor environment design of rural residential buildings usually does not fully consider the health problems of decorative materials and environmental protection problems. On the one hand, the health problem of decoration design materials will affect the health of rural residents, but rural residents do not pay attention to, for example, for some formaldehyde exceeding the standard materials, because of cheap, many residents still insist on buying, used to decorate the interior decoration of residential buildings; on the other hand, because of the income of rural residents, rural residents often lack planning in interior decoration design, which is easy to cause waste of decoration materials.

4. Optimal countermeasures of interior design of new rural residential in Yunnan province

4.1. Based on the actual living needs in rural areas, interior design should not only be convenient for living but also conducive to sideline production
Based on the actual living needs of rural areas is the concept of interior design optimization of new rural housing in the view of beautiful rural construction. The living habits and ways of rural residents are significantly different from those of cities, and the indoor and outdoor activities of rural residents are closely related. Therefore, at the level of interior design, rural residential interior design should be convenient for both living and sideline production\(^4\). Figure 2 shows the general functional needs of rural housing.

**Figure 2.** General functional needs of rural housing

4.2. **Respecting local cultural customs in rural areas, interior design should not only function well but also accord with residents' aesthetic standards**

Respecting the local cultural customs in rural areas is an important guarantee for the optimization of interior design of new rural housing in the view of beautiful rural construction. The countryside of each area needs its unique characteristics of humanistic customs, so it is necessary to respect this convention in the process of interior design. For example, in the southern region, the living room of the rural area is the ancestral god above, the living room is the largest room in the room, and connected with the dining room, which is not only a conventional design style, but also a convenient choice to worship ancestors during the New year' Day.

4.3. **Combining with the rural local natural environment, interior design should be both people-oriented and integrated into the natural environment**

Combining with the rural local natural environment to design the new rural interior decoration is the key to improve the rural interior design level. First of all, according to the local climate conditions to design changes in indoor space, such as the selection of wall materials, color matching, and so on; secondly, all kinds of materials in the design as far as possible to achieve local materials, so as to make the best use of materials at the same time can reduce costs; moreover, interior design should be in line with the surrounding environment of housing, improve living comfort.

5. Conclusions
With the improvement of economic conditions and the improvement of cultural level, the rural residents' demand for living has changed, from the pursuit of living function demand to the pursuit of living comfort function direction development, to achieve this demand change, we must optimize the rural housing interior design[5]. Under the background of its geographical and ethnic particularity, the interior design of the new should be based on the actual living needs of rural areas, respect the local cultural customs of rural areas, and combine with the local natural environment of rural areas. Interior design must adhere to these three standards, the specific connotation is: to be convenient for life and also conducive to sideline production, both functional sound and in line with the resident aesthetic, both people-oriented and integrated into the natural environment[6].

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