

An Overview of Children's Room Interior Design



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ABSTRACT: The paper analyses the state of children's room interior design today from the viewpoints of furniture and space, outlining the issues in both areas as well as the concept of children's room interior design and the variables influencing it. The study focuses on how interior design can be sustainable, how to create conditions that are conducive to children's development, and how children's needs for indoor spaces vary as they become older. By elaborating on the concepts of space and furniture related contents, this paper aimed to discuss the connection between spatial design concepts for children's growth and the functional sustainable adaptation characteristics required for furniture. The realistic needs of children's room illustrating the influence and importance of interior design on the targeted approaches. In terms of space, it mainly solves the problems of "security" and "comfortability". For furniture, the issues of "growth (adjustable and adaptable)", "modularity" and "detachable" are mainly addressed. The study concludes with recommendations and outlook for the future development of children's room interior design in China. It provides assistance for children's healthy growth and practical guidance for green design.

KEYWORDS: Interior design, children's rooms, sustainable adaptation, space, furniture

INTRODUCTION

People can use indoor space freely for their daily activities. Due to the enhancement of living spaces and the in-depth study of interior design theories, individuals have higher expectations for the artistic quality of indoor spaces. In interior design, the shape and proportion of the space have a deep impact on the user's feelings, through scientific analysis and evaluation, we can create a more comfortable, practical and beautiful interior space (Zhen, 2024). At the same time, furniture occupies a large proportion of indoor space and has a prominent volume, so it is also one of the important factors in shaping the indoor space. Although the space of children's room is small, but its interior design is not simple and easy, it is easy to ignore its nature, which results in overcrowding and inconvenient use. In modern interior design, sustainable adaptation design has become an important direction of research in the field of design.

The concept of sustainable design takes green ecological design as the main design direction, based on the principle of ecology, to reduce pollution as well as the adverse effects of design on the environment and ecosystem, to achieve the goal of energy-saving and moderate design, and then to protect the harmony of natural ecology (Sun, 2021). Sustainable adaptation of children's room interior design coincides with the modern concept of environmental protection and low carbon, which can functionally reduce the possibility of secondary design and reduce resource consumption and pollution. Childhood is an important stage of physical and mental development and a critical period for cultivating good living habits (Zhou, 2019). Basically every child has his own room in the indoor space in China. The changes both psychologically and physiologically throughout the process of growth is considered an issue in designing children room. We should take this as a starting point in the design, give full consideration to the children's mobility, convenience, safety, etc., design some corresponding auxiliary facilities or activity space, and focus on the details of the embodiment of humanistic care to create a good environment for children to grow in.

An Overview of Children's Room Interior Design

CHILDREN'S ROOM INTERIOR DESIGN

Chinese interior design can be said to be an ancient and long discipline. As early as the budding period of human civilisation, it was born with the rise of ancient architecture. From the initial functional needs to the introduction of emerging technologies, more and more designers are pursuing green eco-design principles in the creation of functional, reasonable, beautiful, and comfortable embodiments of the users' self-worth and spiritual life in the indoor space environment. Interior design is a bridge connecting material civilisation and spiritual civilisation, and human beings improve their living and working environments through interior environment design (Wang, 2017). All of these can reflect that China's interior design is evolving and enriching in the modern society. Because the interior design of a children's room is very closely related to social ideology and socio-economic development level, The environment can play a role in promoting the growth of children (Chen, 2019). A positive and sunny living environment will make children active and lively.

On the contrary, a negative and gloomy living environment will inevitably make children negative, depressed and self-destructive. Children's room space environment interior design should be a holistic combination of science, art, and life. It is the integration of form, function, and technology through the shaping of material conditions and the pursuit of spiritual quality in order to create a living environment. The substantial goal of children's room interior design is not only to serve the design function of individual objects, but its positive significance lies in the creation of a high-quality space that embodies the ecological science and technology of life.

CONSIDERATIONS IN DESIGNING CHILDREN'S ROOM

When designing and organising children's rooms, there are many factors to take into account. These factors will directly affect the room's functionality, safety, aesthetics, and the way that children's growth and development are related to each other. When deciding what kind of furnishings will always be appropriate for the children's psychological changes and what kind of soft furnishings will be more ergonomic to the children's physical characteristics while ensuring their appearance and functional needs, designers should be more methodical and rational (Qin, 2021). Children's room interior design and sustainable adaptation design need long-term thinking as well as flexible modification and application because the space's role varies with the growing of the child.

i. Sustainable adaptation of interior design for children's rooms in China

The spatial environment is the first requirement for children's rooms to be sustainably adapted. As per Armaghan and Servatju (2014), interior environments are a result of our imagination and architectural perspective. Spatial layout is an architectural aspect of interior design that cannot be disregarded (Xie, 2024). A children's room's interior design must take into account the various needs of the users by implementing sensible regional planning. In order to ensure that the entire area is functional, cosy, harmonious, and fluid, handle the relationships between each space in accordance with needs through the spatial structure based on the existing building. to fulfil the inner-city children's demands.

ii. Chinese Children's Needs for Changing Indoor Spatial Environment

According to Li et al. (2021) children are the main characters in their life tales. The interior design of children's rooms needs to take into account the ways in which children's growth is changing. The capacity to engage with and experience novel sensations is likewise growing. Acquiring a child's contentment could be enhanced by acknowledging their rights, which are impacted by their surroundings and the community in which they reside (Habbak & Khodeir, 2023). Both the living environment and the child's development have a significant impact on the child's understanding of the world and the development of their relationships. This part of being able to support the child's development in a healthy way. It is important to consider how a child's surroundings shapes their personality.

PROBLEMS OF DESIGNING CHILDREN'S ROOM

Although it has been progressively highlighted in recent years and has been somewhat influenced by outside factors, Chinese and foreign children differ greatly in many other areas, including growth environments, family situations, and educational attainment. The lack of a sustainable adjustment renders the designs and functional reserve inadequate when considering the features of children. Nowadays, there are a lot of issues with children's room design. The architecture of interior spaces is continuously changing, and the area designated for children's activities has an impact on the development of their physical

An Overview of Children's Room Interior Design

and mental health (He, 2023). The needs of children for the functions of a children's room are ever-changing and expanding as they get older. As a key remedy to the problem in this paper, children's rooms should be designed with the needs of young children in mind, taking into account the behavioural traits of children of varying ages. The character of a space is determined by its interior design (Oeden, 2021). Since children are constantly growing, being in an indoor environment that does not support their requirements for safety may also negatively impact their psychological and physiological development. As a result, designers are often unable to fully understand the deep psychological needs of contemporary children and are more likely to use adults' subjective imaginations to conjure up images of childhood in their minds or even to use adult furniture that is smaller than children's furniture (Liu, 2014). The children's room has a bed near to a floating window, as seen in Figure 1, but guardrails or other safety measures were not installed, which ultimately resulted in a catastrophe. It is evident that such children's rooms lack protection within their internal spaces.



Figure 1: Examples of “3-Year-Old Boy Falls to His Death from 27th Floor; No Guardrail on Window”

(Retrieved from: http://news.sohu.com/a/669992564_121661817 April 25,2023)

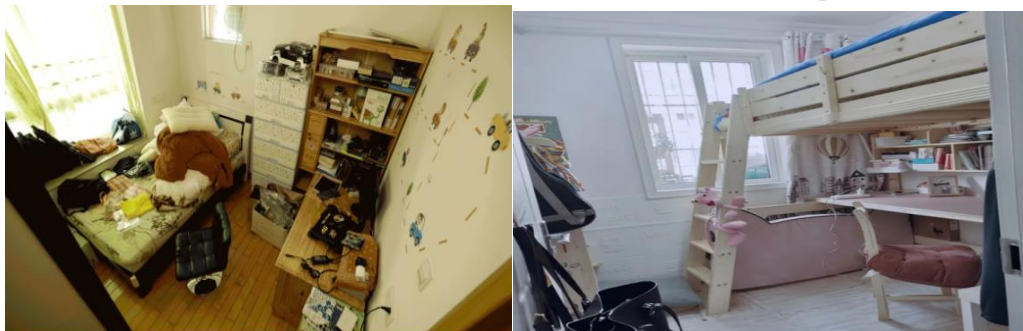


Figure 2: Examples of “Children's room environment”

(Retrieved from: <https://www.hunantoday.cn/article/201607/201607261500595390.html>. April 20,2023;
<https://www.zhihu.com/question/546966769/answer/2609981330>. Aug 04,2022)

The room on the left in Figure 2 is not very comfortable because of its disorganised layout. As you can see, such a children's room's interior is uncomfortable. Large and hefty furniture eats up space and interferes with the room's lighting in Figure 2's right photo. It will be incredibly difficult to dispose of or replace. Due to the current furniture arrangement, it will be challenging to modify the indoor setting of the room for the children as they grow and evolve. The aforementioned case pictures illustrate frequent issues with children's room interior design. Designers must take into account the peculiarities of children in order to achieve the intended design, as the expected design and functional reserve are insufficient and cannot be transformed in a way that will be sustainable. Since children are continually growing, being in an indoor environment like this can have negative effects on their psychological and physical development in addition to posing a safety risk that is out of proportion to their stage of development.

CHILDREN'S ROOM INTERIOR SPACE DESIGN PRINCIPLES

An integral component of interior design is space, and the goal of interior space design is to create and organise clearly defined architectural space (Dong, 2015). In contrast to natural space, interior space is the result of human effort and a tangible good required for the structuring of a human life that is orderly. From meeting their physical demands to meeting their spiritual ones, people's desires for space evolve throughout their lives. People's needs change as society develops and as space changes

An Overview of Children's Room Interior Design

over time; this is a dynamic process that is influenced by both parties and is related to one another. As a result, the meaning of interior space is always being added to, improved upon, and supplemented.

i. Security

From the perspective of interior design, the interior environment of a children's room should prioritise comfort and safety, with particular attention to the physical and mental well-being of the children. To achieve sustainable adaption in the children's room, space planning for the space must be based on the stage of children's design—the application of sustainable design in children's rooms. to fulfil the children's room's multifaceted development. When it comes to spatial layout, it may accurately represent the thoughtful design of user-centred space, improve the quality of life for occupants, more effectively address the individual needs of users, and create more comfortable indoor spaces for people to live and work in (Ge, 2021). The goal of a sustainable design concept is to logically optimise the indoor structure, creatively decorate, and arrange furniture so as to provide a suitable environment for people. This is because the concept is human-centered, meaning it aims to provide a comfortable environment for people to live and work indoors. Therefore, there should be fair regional planning in the layout of children's room space according to the various needs of the occupants. In order to maintain the functionality, security, comfort, integrity, and flow of the entire space, modify the scale and proportion of the spaces based on the existing building and the need to address the relationships between the spaces.

focussing on the many requirements of children in multipurpose indoor environments. It satisfies the requirements for usage by young children and aligns with the contemporary notion of sustainable development in society (Wang, 2021). 6–12 year olds require a distinct spectrum of activities because 3-6 year olds are comparatively fixed with vertical activity area. Safety is the first concept to consider when designing a children's room; security is a demand that must be met, and it is a requirement that is far greater than the requirements of beauty. Children are therefore highly susceptible to accidents in daily life and frequently require adult supervision and guidance due to their lack of self-control, self-management, and security awareness regarding the assessment of consciousness for external stimuli. In order to eliminate dangerous elements and guarantee the children's health and safety in the room environment, the children's room should be designed with the "people-oriented" principle in mind, taking into account the unique needs of this group as well as the children's human scale standards.

ii. Comfortability

Being comfortable in a space refers to feeling warm and at ease. The logical arrangement and segmentation of every functional space in interior design significantly minimises needless hassle throughout the decorating process. Modern interior design's primary objective is to make a space conducive to people's pleasant and cosy lives, which calls for increased indoor comfort. While there are benefits to using ergonomics in domestic interior design, there are also drawbacks to using comfort. The four primary components of a comfortable interior design for a children's room are: (1) indoor activities; (2) space size to accommodate children's behaviour; (3) movement stretch appropriate; and (4) visual, tactile, and overall comfort. One of the most crucial safeguards against ensuring the completeness and comfort of indoor space is the adjustment of the scale and proportion of indoor space, the scientific and rational partition of indoor space, and the coordination and articulation between various functional spaces in the interior. According to Wang (2007), children who have their own rooms experience a stronger feeling of self-reliant living and a stronger sense of belonging to their homes. Children of different ages have different needs for children's rooms; in addition to taking into account the child's personality and maturation, designers should also take security and comfort into consideration. The goal of children's room space design is to give children a pleasant, free little world.

INTERIOR FURNITURE DESIGN PRINCIPLES

The purpose of furniture is to fulfil people's daily needs. Children are in a physical development stage where age-related changes in height and weight occur. Only the appropriate size of children's furniture is used when choosing furniture for long-term usage in order to accommodate the unique characteristics of children's growth, development, and living habits. In order to support the life and emotional needs of children of different ages, children's furniture should be developed in accordance with children's growth and take various functions into consideration at different stages (Shi & Zhang, 2020). In addition to being a methodical process, furniture design is an artistic endeavour that aims to harmonise the interactions of people, things, and surroundings. It also functions as a type of lifestyle design. The needs of children's rooms in various growth periods are

An Overview of Children's Room Interior Design

met by the sustainable design approach with changeable themes, adaptable furniture, and adjustable functional sections (Ma, 2016). One of the most important elements in setting a scene is furniture. Children's furniture that is both sustainable and flexible can be designed with their evolving psychophysiological demands in mind. In the process of developing children's furniture, such furniture can increase the furniture's lifespan and support children's healthy growth. It is simple to modify the features of the realisation of the diversity of shapes when one starts with the living and behavioural patterns of children, ensures dependability and safety, and doesn't interfere with the furniture's intended function.

i. Growth

Practicality and growth are just two of the many considerations that go into the design and production of children's furniture. When furniture for children is practical, it can better accommodate their everyday needs for learning, relaxation, entertainment, and other activities. Practicality, in this case children's furniture that can accommodate children of all ages and heights and support their development, is another aspect of growth. To ensure that children's furniture has a range of forms and rich functions, designers should carefully consider, analyse, and improve functionality while also taking into account the real needs for flexible creation and updating (Zhu, 2021). In order to extend the product's service life, furniture function and form are transformed in tandem with children's growth processes. This way, the design guides and fulfils user consumption demands through "growth," prevents resource waste from repeated product use, and achieves sustainability. The display of children's furniture design will always carry out the concept of growth for young children, who are still in the early cognitive stage of their physical and mental development. The child's physical and mental growth is crucial for enhancing their perception and cognitive abilities.

ii. Modularity

The term "modular design" refers to the process of recombining various components to create a system that maintains its integrity and yields a range of products with varying types, functionalities, and other characteristics (Chen, 2018). By quickly combining and transforming various modules in the children's room, modular furniture design can create furniture with a variety of shapes and purposes and realise the transition of functional regions. To increase the product's usefulness, children and their parents are allowed to mix and match the functional area to suit their individual needs. Children's needs for living space will continue to change as they get older, including the size, style, and arrangement of the furniture. However, since it is not practical for most families for a child to replace a set of furniture every few years, modular furniture can be adjusted by changing its height or by combining tables, closets, beds, chairs, and other accessories.

iii. Detachable

According to Sun and Liu (2019), detachable design, which is primarily used in the early stages of furniture design, takes into account the product's full life cycle disassembly in order to meet performance and function requirements. This is done on the basis of the idea that detachability can constrain structural design, making furniture products easier to disassemble, maintain, reuse, and recycle, which lowers waste emissions and conserves resources. Detachable furniture realises the idea of a personalised and useful house, breaking through the fixed and boring of the preceding frame furniture and giving human ingenuity full rein. The main benefits include its ease of movement, storage space savings, and ease of assembly, disassembly, and combining. The detachable structure of children's sustainable, adaptable furniture should not only be straightforward to comprehend, simple to assemble and disassemble, and not interfere with the furniture's strength, rigidity, or multiple assembly rather, it should enhance the room's flexibility and functionality in light of children's behaviour and growth characteristics.

CONCLUSION

Given the foregoing, it is clear that thoughtful space planning can enhance the effectiveness of room usage and that it aids in children's spatial conceptualisation. Multifunctional furniture can adjust to children's changing demands, and appropriate furniture can promote children's development and activities. These essential components working together can assist create a children's room that is both safe and helpful, promoting the healthy growth and development of young people. Children's living and bodily demands, as well as their psychological and spiritual needs, can therefore be satisfied.

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An Overview of Children's Room Interior Design

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An Overview of Children's Room Interior Design

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