

The Influence of Children's Psychological and Physiological Development on Kindergarten Interior Design

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Abstract: The space design of a kindergarten is related to the development of children's psychology and physiology. The quality of kindergarten space and environment is important to the healthy growth of children - a special group, and should be attached enough importance. Firstly, based on the deep understanding of the physical and mental features of the children, this paper, from the real discovery of the problems in the kindergarten, meticulously observes and analyzes the kindergarten environment. Then it proposes the basic requirements and design principles of the kindergarten interior space, the analysis of the elements for the indoor space design of the kindergarten, and the methods for presenting design excellence.

1. Introduction

For the healthy development and growth in Children's psychology and physiology, educators and designers should think and cooperate together. They should start from the basic educational concept and construction of surrounding environment to study how to make efforts for the growth of children.

2. The relationship between the characteristics of young children and the space environment

2.1 The psychological and physiological characteristics of young children

For a baby, from the birth to the whole process of the development, its psychology and physiology will undergo different forms of change. The designer ought to understand the growth and development process of a baby and design an indoor space suitable for each child of each stage. As a designer, special attention should be paid to the psychological differences of each child and the needs of different ages, build and design the learning, living and entertainment space of young children by studying the physiological and psychological needs of infants and young children of every age group. Children from 0 to 6 years old are among the fastest growing stages of various organs and tissues. As for the psychological transformation, memory, attention, imagination and curiosity are changing rapidly. They are particularly curious about the sound, color, direction and shape of things. Young children need safe companionship. The companionship of space objects and the adult's companionship are important, and they can slowly influence the children in the space, affecting their physical and psychological development. In a safe space, young children can feel happiness and warmth, and are not restricted by behavior. Of course, children's sensitivity to space is diverse, and the exploration of space is infinite.

2.2 Children's behaviors and physical characteristics

Children's behaviors are different from those of the adults. Their behaviors are mostly spontaneous, random, and emotional. In the game process of grouped playing, children like to catch, climb, jump, run, turn over, etc. And they like playing in limited and private spaces. These behavioral characteristics of young children are inextricably linked to their own development. Designers, based on the grasp of the characteristics of children's behaviors, are capable of controlling the layout of interior space. The height of children is much different from that of the adults. Height, weight and vision are much inferior to those of the adults. The size of children's body directly affects the size

and utility of interior space design, which are the main consideration for our design. The average height of the child's body is less than 100cm, and the line of sight is shorter than that of the adult. In the design of the indoor space environment, attention should be paid to the consideration of the height of the child.

2.3 The influence of space environment on young children

Young children play games in the indoor space and environment. Therefore their behaviors are subject to constraints and limitations of the indoor space. Children's spatial perception ability is relatively poor. They are not good at perceiving and distinguishing spaces. When children are to make choice of space, they tend to be attracted to the space which is more colorful and unique. The behavior of children is usually about the activities of self-interest. They start from a particular interest point, then spread to other things around, and prefer to find places in the environment to stimulate their creativity. On top of that, different space environments can trigger different behaviors. In the process of designing the space environment, designers consider the space environment to create a space environment that allows children to perceive their own size, enhance their ability to recognize space and height, and thus improve the children's psychological confidence. From the overall layout of the space environment, the spatial detail design must take into account the characteristics of the size of young children, so that the kindergarten environment truly becomes a paradise for children.

3. Basic requirements and design principles of kindergarten indoor space

3.1 Basic requirements for environmental design to meet the needs of young children

First of all, we must create an indoor environment that can inspire children with free thinking. In the design and construction of the kindergarten space, designers should meet the basic needs of young children, the curiosity of young children and the desire to explore new things. The kindergarten space can guide the development of children's discovery thinking and creative thinking. And this should be considered in space design to satisfy their demands. Given to the game area and the sports area in the functional partition layout designed in the kindergarten space, the restrictions on the inherent space can be broken through the regional activities, so that the children can control the overall indoor environment, allowing them to freely choose space activities and provide innovative conditions. Let the children be the masters of the indoor space, and they can stimulate and release their active awareness, positive awareness, and creative awareness.

Second, we must provide enough space environment for children's sports. In the kindergarten space, we will maximize the space for children's sports, provide a variety of sports programs and equipment, integrate indoor and outdoor activities, and pay attention to the safety, fun and diversity of space design. Exercise can promote the growth and development of young children. The space environment can facilitate some activities that are flexible, changeable, detachable and assemble-friendly. Let the children build their own platforms. We should set up the upper- and lower-, inner- and outer- echoing spaces, the soft and safe material, and the balanced and bright colors in the space environment design. The sporting space environment provides children with climbing, running, rocking, sliding and crawling outdoors possibility with the special design.

3.2 Kindergarten overall environmental design principles

In terms of the principle of security, and in the design of children's space, we must pay attention to the safety issues of the children. Because the young children are pronged to be more active, more curious, and with vulnerability to get hurt. Thus the safety of them involves multiple layers in the given conditions. The children are clumsy when they move and need special care. The details of the space and environment design should take the curiosity and hyperactivity of young children into consideration in order to avoid harm to them. The safe space environment stems from meticulous processing of the size and interface. More arc and flexible materials are included in the space interface to prevent children from wrestling or injury. Hangings and protrusions should better not be made of metal or glass. Paper or plastic foam is used in the construction of such kind of decorations

to avoid unintentional injury to the children.

In terms of the interesting principle, the funny space can attract young children to actively participate in games and activities. They are encouraged to continue to exercise for a long time, thus having enough possibility to search for the curiosity of children and the desire to explore unknown things. Designers can design a variety of indoor and outdoor playgrounds, provide a number of motion spots and opportunities for motion, and give children a large amount of opportunities to choose from. Children will find their interests, focus on a thing to explore and the study. In the kindergarten space design, conscious creation of some elements that can be touched, tasted, observed and smelled should be an element of the environment. For example, balloons, wind chimes, leaves, toys, plants, etc., can be used for children to find, collect and put around as a treasure.

4. Kindergarten interior design elements and methods to present design excellence

4.1 Kindergarten space environment design

Composition of the interior space: The indoor space of the kindergarten is quite special. The main functional divisions include living area, service area, learning area and activity area. The living area, learning area and activity area are given special meaning. The subdivision is: activity room, bedroom, bathroom, cloakroom, storage room, game room, film and television room, etc. According to the size of the kindergarten, space design can be integrated to suit the condition.

Interior space features: In terms of the definition of the space, if a Table or a chair is put in special place, then the place is defined as a space, clearly it is not the case for the definition of the interaction area and the activity area. In an indoor space, an organized activity area can regulate the behavior of young children, encourage children to explore and use the equipment there. Therefore it must be a clear geographical position in the space that is suitable for the defined activity and set visible boundaries to ensure the safety of young children. A platform for young children to play and sit on is necessary in this kind of design,

4.2 Space processing methods in kindergarten indoor activity area

4.2.1 The method for processing the boundary of the indoor activity area

Kindergarten boundaries have the basic functions of zoning and protecting children's safety. These boundaries are different in methods of design and construction. They should be convenient for teachers and parents to observe and educate children, and can facilitate activities and communication between children. The activity area should be consistent with the height and size of young children. And the height of the boundary cannot obstruct the observation of the children and the supervision of the teachers. On the basis that the boundary can easily line the functional area, it is necessary to act as a protective layer as a wall. Thus a boundary of mobility and softness is in demand.

4.2.2 Interface processing method in indoor activity area

Ground handling: The ground is the place where young children often come into contact when leaving the warmth of their mothers. They like to play on the floor instead of sitting on the chair for a long time. The children have the characteristics of hyperactivity and climbing. The height, color and pattern of the ground can be designed to paste some cartoon characters that children like, or educational figures, pictures, stick figures and other patterns to enrich more texture choices to choose from.

Wall treatment: In the living area and activity area in a kindergarten, the psychological characteristics and physiological characteristics of the children are matched by design. And some wall treatments which are conducive to storage, display and communication are made, so that the wall surface becomes more active and vivid in the entire space environment.

Top processing: The top treatment of the top in a kindergarten should be separated and decorated according to the basic functional division and lighting requirements. The purpose is that it can increase the sensitivity of the children for changes in spatial height, as well as the acoustic and optical

perceptions.

4.2.3 Color processing methods in indoor activity areas

The color processing in a kindergarten is the most characteristic and influential part, which can affect children's physical and mental health development, and can create a colorful world for them. In color design, designers should be conformed to color psychology of children. The use of warm colors in the space has the effect of propelling, and the cool color has the effect of retreating. Choosing a light, low-saturation hue in an indoor environment can make the room look large and bright. In indoor spaces where the room is small and the roof is low, it is often necessary to use light, low-saturation colors to make the room look bigger.

4.3 The selection of the decoration items in indoor rooms

In the space design of a kindergarten, the enhancement of the space environment requires the designers to have a good understanding of the common rules of furniture, color and decoration. If the designers choose suitable decorative items for an indoor design, the space and environment can effectively enrich the space environment of the kindergarten. During the design process, designers should select appropriate indoor furnishing items such as furniture, fabrics and decorating items, and etc. This kind of thought can make other monotonous designs soft and full of speciality.

5. Conclusion

Educators and design practitioners should pay attention to the development of children's physical and mental health. From design concepts to practical projects, designers should work hard to reject the status quo and any design concepts based on business interests, and actively try to adopt new forms and the new methods to create a space environment that is most suitable for the healthy growth of young children. They should design and construct all the creative and feasible spaces, and then carry out continuous research and exploration. We hope that more people will pay attention to the environment in which children grow up. More professional designers will participate in the construction of the kindergarten space environment, and we need everyone's common efforts.

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