

Research on Open Space Design in Elementary School Campus Room

Zixi Guo^{1,a,*}, Kamarudzaman Md.Isa^{1,b}

¹City University, Kuala Lumpur, 46100, Malaysia

^a18622080386@163.com, ^bdrkamarudzaman.isa@city.edu.my

*Corresponding author: Zixi Guo

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Abstract: The continuous progress of society has continuously changed people's pursuit of education. In the context of the new era, the change of education concept and the fluctuation of the demand for campus space resources have put forward new demands on the teaching space of primary schools. It is difficult to support the practice of a new type of education model. The teaching space design of elementary school campuses is of great significance to promote the healthy growth and comprehensive development of students. The multi-functional teaching space of Tianjin Elementary School, China, has a certain research value as a rare case of open space in the campus of elementary school campuses. The article analyzes the case analysis of the relevant theories of environmental behavior, and proposes a brief view of the space design principles of education space design principles for the open space of elementary school campus teaching open space, interaction behavior, and compound functional design.

1. Introduction

Unlike traditional closed education and test-oriented education, the current education is becoming more and more humanized. Emphasizing students' independent learning and comprehensive development of quality education has become a trend of education reform and development. Because elementary education is not affected by such a great pressure on education accompanied by the liberation of domestic education ideas more beneficial exploration of primary school quality education has occurred. As an education in the enlightenment stage, the quality of elementary education has an important impact on the life of a person.^[1] The free and open and comprehensive humanized education at this stage will have a profound impact on the establishment of students' future learning habits and personality. Traditional campus architectural programming and rigid design have difficulty meeting the requirements of educational development. Campus architectural design requires new ideas and new ideas.

As a new type of campus, Tianjin Primary School's purpose is to conduct new quality education centered on students, so that it can develop a diversified and personalized development in modern contemporary and future society and enhance comprehensive capabilities. In the design of teaching space it breaks the closed classroom unit structure and build an open learning area, so that students can learn here in many ways. The teaching relationship between teachers and students has also

undergone new changes. This article uses the teaching space of Tianjin Primary School as a research object, and researches and analyzes the design of the open space of the campus room in elementary school. It is hoped that it can provide new insights for the study of primary school teaching space design.^[2]

2. Overview of the Theory of Open Space for Open Space in Elementary School Campus

"Open space" has publicity, emphasizing the break and reconstruction of the boundary between space, the fluency and openness of the space structure. The expression of "open space in elementary school campuses" can be understood as types of space that has teaching attributes and breaks closed spaces for penetration. The interior open space of the middle school campus in this article is based on the type of space proposed by the case and the user experience. It refers to the functional public open space inside the teaching building. The original space rules, the space design of the realization of teaching activities, teacher-student communication, and information dissemination through the opening of space, is an indoor campus space based on derivatives and auxiliary practice.

The relationship between environment and behavior is a very important theoretical base point in environmental behavior research, and it is also a necessary design basis in space design practice. The theory of "environment-behavior" has gone through more than 40 years of development research. The more molding theoretical model that is the theory of wakening the theory, the theory of environmental load and the ecological theory. At the same time, environmental intuition and space cognition also occupy an important position in the research of environmental behavior science theory and introduce some theoretical knowledge in environmental behavior to elementary school. In the study of open space in the campus room, space design concepts can be raised into theoretical interpretation of environmental behavior.

3. Primary School Multi-Functional Teaching Space Research

3.1. Basic Situation of School Architectural Design

The construction area of "Tianjin Primary School" is 26622 square meters the number of students is about 1600 and the height of the teaching building is 4 floors. Formation of good sunshine and ventilation conditions. The overall architectural style is based on the college style elements and European-style architectural styles to create new campus vitality. Among them, the multi-functional teaching space is located in the teaching building of the learning center. The multi-functional teaching space studied in this article is located on the first floor of the learning center. It is an indoor open space that integrates multiple functions such as learning, discussion and activities.^[3]

3.2. Behavior

The behavior of teachers and students plays an important role in the design of indoor space. Students' learning behavior, teacher work behavior and teacher-student communication behavior are the main behavior activities in "Tianjin Primary School". As the most important group of schools students continue to change with the design of teaching space. Students can actively obtain knowledge in multifunctional teaching spaces, and can learn freely anytime, anywhere in different areas. This is difficult for traditional schools to achieve the teaching environment of "classrooms" as the unit. Teachers and students can use the teaching area together. Teachers open office in the teaching space, prepare lessons, teaching and other work, break the level of teachers and students in my country and achieve relaxation and equality. The biggest feeling of open space to use the main

body is the non-hindrance of communication. Open space blends the physical environment of the two groups of students and teachers. Teachers can experience students' lives, and students can also observe the behavior of teachers outside the classroom. Teachers and students can communicate and share in the multi-functional teaching space of the school communicate and get along like friends.

3.3. Physical Element

"Tianjin Primary School" multi-functional teaching space is between environmental behavior agencies between the central view and micro-scale. It includes both a class unit similar to the neighborhood unit and the personal behavior space of teachers and students. It is a middle school campus indoor space established by the structure color and layout of the structure color and layout.

3.3.1. Spatial Structure

Most of the ordinary middle schools in our country are a teaching area composed of closed classrooms, corridors and living spaces. Students in this space are carriers in this space. Everyone's learning and life are almost carried out in their own classrooms. Most of the communication is limited to the classroom. The teaching form of the classroom is also a way of lectures in the large class system. It belongs to the traditional space design suitable for test-oriented education. Multi-functional teaching space includes storage rooms, open teaching areas, leisure discussion areas, classrooms, reading rooms, and comprehensive activity rooms. These learning areas do not have obvious wall boundaries, and the overall open space design with complicated function is presented. For example, several classrooms are composed of a few stitching tables and chairs. Some classrooms use glass walls, which visually break the space obstacles. Student learning activities are covered by the entire teaching space, and students can learn and discuss anywhere. Such an open design gives students more autonomous learning space and opportunities. The space environment under the highly open structure can indirectly stimulate students, and gradually awaken students' pleasure in the pleasure. Students are interested in learning in environmental stimuli, perform spontaneous learning behavior, and improve learning efficiency. In the open structure of students, students can enter the environment that is conducive to the restoration of mental health by diverting attention, and learn in a state of relaxation; teachers can also eliminate fatigue in addition to nervous teaching.

3.3.2. Environmental Color

Color is another major element of space design, and its vitality can continue the penetration and vitality brought by the space in another way. In the traditional sense most of the teaching spaces choose white walls, wooden tables and chairs, and dark blackboards and podiums, which generally give the subject a serious sense of rules. The school's multi-functional teaching space generally adopts a white color environment and interspersed the original wooden teaching furnishings giving people a youthful modern campus feeling .The impact of environmental color on individual behavior is softer. According to color psychology research, color will give people different stimuli according to the changes in the environment. The important part of the environmental behavior is the reaction of the stimulus of color in the environment. Usually white will bring a free comfortable psychological suggestion and peace symbol to the subject; At the same time, the indoor and outdoor spaces are connected; the gray ground gives the subject to convergence in a bright environment, and at the same time increases the visual psychological experience of modern and modularized. Environmental colors are more secretive but have a greater impact on the subject.

4. Design Principles of Open Space for Open Space in Elementary School Campus

The relatively immature development of open space design in the campus of domestic elementary schools is not yet mature, and it is necessary to continue to adjust based on many aspects such as education and space design. Therefore, based on the author's survey of the school's multifunctional teaching space, I hope that the design principles of open space in the open space of elementary schools can be proposed.^[4]

4.1. Open Space Form

In space design, it is recommended to adjust the open form of space appropriately according to the education model. Taking the classroom teaching as an example according to the time and energy of students spending in the classroom and outside the classroom, the spatial proportion of the space ratio of the classroom and the extra-curricular free space can be adjusted. Compared with traditional classrooms the classroom needs a lot of students to check the energy of the information preparation before class and discuss after-class discussion. Therefore, it is necessary to provide a suitable reading area and discuss exchanges in the open space. In the space, the teaching order is performed in an orderly manner. Therefore the open space of the campus room can consider many aspects of space structure environmental color, and indoor layout, comprehensively use the design combination of various physical elements, and achieve visual richness and interest on the basis of the implementation of teaching models.

4.2. Interactive interaction

In the open space of the middle school campus room, the behavior of teachers and students is different from the traditional education space to have more exchanges and exchanges. What needs to be considered in the open design of the elementary school campus is the indoor interaction space design with the premise of "interaction". In the classroom, try to provide open space for discussing learning and practical activities as much as possible cooperate with teaching activities to reasonably break and reorganize the space, so that the interaction activities in the classroom will be more efficient and barrier-free; The main body interaction has more free distribution space, adjusts and design the spatial structure, and shared the space and behavior of teachers and students. Under the stimulus of the environmental subtle environment the change in the formation of communication cognition and behavior is an important part of the "interaction" of indoor interaction space design.

4.3. Compound Function Design

In space design, through the flexibility divided by open space areas, the limited space internal division can be more compounded. For example, the flexible movement of teaching equipment can meet the needs of multiple functions such as teaching discussion entertainment, and practice at the same time. Essence The division of different functional areas in the same space is conducive to the development of personalized education for students freely allocated and self-selected regions. The concept of "compounding" is based on the requirements of space design under the goal of student training. It can not only meet the needs of multifunctional teaching, communication, and activities in a limited space but also through the establishment of the environment to affect the behavior of the use of the subject, so that it can capture more signals. Essence In space design if you want to make the function of the space not only the flexibility and relaxation of the division is the entry point in the design process. The flexibility of the division refers to the comprehensive use of design elements such as structure color and equipment in the division of functional areas to effectively

disassemble and combine the space. The relaxation of the space is the duplication and division of the spatial functions displayed in the open space and blocking. In terms of function and visual effects it reflects more design characteristics of the open space in the campus.^[5]

5. Conclusion

Based on the theoretical knowledge of environmental behavior, this article conducts rough exploration of environment cognition, and behavior analyzing the multi-functional teaching space of "Tianjin Primary School", and discovered the closed -loop of spiral rising development between teaching environment and teaching behaviors. The practice and exploration of the model also put forward three opinions on the education space design principles of the open space of the open space in the middle school, and summarize the three opinions of open space forms interactive interaction behaviors and compound functional design. There are still many aspects that can be explored in the open space of the middle school campus in the environmental behavior model. The efficient coordination of media equipment, the fusion of natural elements, and the choice of building materials are all in the future of the middle school school space design in the future. Facing opportunities and challenges.

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