

Research on the Spatial Model Design of Teaching Units in Primary Schools Based on Innovative Educational Concepts

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Abstract

Traditional campus construction frameworks restrict the implementation of modern innovative educational philosophies, and the structural mismatch between physical teaching spaces and new teaching demands has become increasingly prominent, which makes targeted innovative teaching unit design an urgent research task. This study adopts an interdisciplinary integration framework combining pedagogy and architectural design. First, this paper sorts out domestic and international evolution trajectories of educational concepts, extracts core requirements of China's current educational reform, and analyzes how innovative teaching philosophies reshape teaching modes and curriculum frameworks; these two dimensions further impose direct and indirect demands on spatial layout, function configuration and scale standards of primary school teaching units. Second, from the user-centered perspective, the research analyzes teaching space influencing factors including children's behavioral patterns, psychological development characteristics and physiological scale indicators, and summarizes differentiated spatial demands for students at different primary school age stages. Third, field investigations are carried out on six operational primary school buildings, and comparative analysis is conducted on teaching philosophy, floor layout, spatial composition and combination modes to identify prevailing design defects and root causes. On this basis, this paper proposes systematic design strategies covering three dimensions: design principles of student-oriented teaching units, diversified horizontal layout modes and multi-form vertical circulation systems, and puts forward adaptable, replicable spatial transformation models for widespread engineering promotion. This research provides theoretical and practical reference for future primary school teaching unit architectural design under innovative education frameworks.

Keywords: Primary Schools, Teaching Unit, Spatial Model, Architectural Design

Introduction

Human society has evolved through agricultural, industrial and now the Internet eras, driven by booming 5G, artificial intelligence and new energy technologies (Handoko & Sartono, 2024). Information technology reshapes production and lifestyles across all industries, fuels China's rapid economic expansion and creates a nationwide shortage of innovative interdisciplinary talents. In the contemporary development context,

innovation has become the core competitive driver for individuals, enterprises and the whole country (Hou, 2020).

Traditional exam-oriented education prioritizes textbook theoretical indoctrination, cultivating students with strong executive capacity but insufficient innovative thinking and independent research competence. At three hierarchical levels, education bears irreplaceable functions: as a national foundational development project, a transitional guidance platform for children moving from family to society, and an individual carrier to explore self-potential, develop personal strengths and realize life value. Social transformation redefines core educational objectives: modern talent standards require innovative thinking, comprehensive information processing, cross-industry collaboration and rapid adaptive learning capacities (Li, 2021). Innovative educational philosophies embed these core competencies into daily teaching and campus activities, integrating contemporary social demands into student growth paths subtly (Gallagher & Savage, 2023).

The restoration of China's college entrance examination system normalized national education development, yet the traditional teacher-centered indoctrination model generated rigid, authority-conforming students lacking critical questioning and creative exploration (Ken, 2015). While this talent model supported national infrastructure construction, it created bottlenecks for high-end technological R&D breakthroughs. Amid frequent international exchanges and rising national comprehensive strength, the limitations of exam-oriented education have become fully exposed (Shen, 2021). Guided by practical problems, China absorbs mature Western education reform experience, shifts educational focus to all-round quality development, promotes aptitude-based personalized teaching and diversified campus learning environments (Li, 2021). Entering the knowledge economy era, cultivating innovative talents has become the central mission of modern education, expanding training targets beyond basic quality education (Zhang et al., 2022).

Educational philosophies fundamentally determine curriculum design, teaching organization and campus activity modes, while teaching space acts as the material carrier that visually reflects educational positioning. Traditional rectangular classroom units only support single-subject lecture activities, limited to fixed class learning, short breaks and basic teacher-student communication. As educational concepts iterate, campus learning activities diversify dramatically: interdisciplinary courses, group discussions, maker practice and student-led inquiry learning expand learning scenarios beyond fixed textbook classrooms (Yi, 2023). Existing conventional primary school teaching spaces fail to match diversified new teaching activities, forming rigid spatial constraints that hinder the implementation of innovative education. Campus architectural development chronically lags behind educational reform, creating a persistent mismatch between built environments and evolving teacher-student spatial demands (Gallagher & Savage, 2023). Therefore, comprehensive renewal and reform of primary school teaching unit spatial systems are necessary to adapt to new-era innovative educational philosophies and guide future campus architectural design.

Since the national “double reduction” policy launched in July 2021, domestic educational philosophy reform has entered a brand-new stage, bringing transformative changes to curriculum systems and teaching organizations. Existing literature has separately studied educational philosophy evolution or single classroom design optimization, yet domestic research on localized teaching unit spatial matching design has obvious research gaps this paper intends to remedy, as systematically sorted out in the literature review section. Compared with Western mature open teaching cluster practices, China has limited localized reform cases of integrated primary school teaching units; most domestic architectural studies only discuss single classroom plane optimization or whole-campus master planning, lacking systematic horizontal-vertical layout strategies for complete teaching unit groups supported by regional field investigation data. This paper supplements this theoretical blank through interdisciplinary pedagogy-architecture integration, field research on Chongqing primary schools and quantitative comparative spatial indicator analysis, forming generalized design strategies adaptable to China’s national educational policies.

Education occupies a core position in China’s medium- and long-term development layout, and national policy adjustments continuously raise new challenges for educational architectural design. Western countries accumulated decades of open classroom and clustered teaching unit design experience, while China’s localized educational space reform research started late with insufficient practical cases (Handoko & Sartono, 2024). This paper summarizes cutting-edge global educational philosophies and teaching space reform practices, combines field case investigations based on China’s basic education reality, analyzes development trends of primary school teaching units, and summarizes operable spatial design frameworks to build student-friendly, innovative campus environments for domestic primary schools (Ji, 2018).

Literature Review

Innovative Educational Concepts Abroad

European and American nations prioritized educational reform amid industrial economic growth, launching systematic modern mass education after the Industrial Revolution to cultivate industrial labor talents. Britain pioneered standardized examination education systems featuring one-way knowledge transmission (Hou, 2020). The defects of rigid indoctrination drove American educator John Dewey to propose progressive practical education theory, centering children in learning processes and advocating “learning by doing” to integrate theory and hands-on exploration (Ken, 2015). In the 1990s, constructivist learning theory dominated Western pedagogy, framing learning as active knowledge reconstruction through inquiry-based problem solving and experiential accumulation.

Driven by digital technology, U.S.-led Western countries integrated information technology into daily teaching, forming educational informatization as a mainstream talent cultivation trend, widely promoted in Finland, Japan, Singapore and other developed economies. Post-WWII Japan took the lead in Asian educational reform, absorbing Western pedagogy and combining localized national conditions to build a targeted domestic education system (Hao, 2016).

Corresponding teaching space architecture evolved synchronously with Western educational philosophy iteration. Early teaching spaces repurposed church seminary buildings without independent architectural prototypes. Comenius systematically formalized centralized teaching frameworks in *The Great Theory of Education*, laying the foundation for standardized classroom design (Yi, 2023). Pre-WWII schools adopted uniform rectangular partitioned classrooms for large-scale collective teaching, boosting efficiency but suppressing individual student development (Li, 2021). Post-war large-scale school construction accompanied reflective educational transformation, diversifying curricula for individualized learning and spurring open teaching space innovation. The UK led Western spatial reform, abandoning rigid regular classroom volumes and adopting flexible open layouts with movable lightweight partitions to boost student interaction and personalized activity zones (Shen, 2021).

Excessively open layouts generated noise interference and management difficulties, triggering a second round of spatial optimization: retaining open education core concepts while establishing specialized functional classrooms attached to standard teaching units. Japanese scholars proposed localized “teaching cluster” models, aggregating multiple standard classrooms and shared public spaces into integrated teaching units. By the late 20th century, Singapore developed clustered composite teaching spaces combining general and professional classrooms to adapt to diversified mixed teaching modes (Gallagher & Savage, 2023).

Educational Philosophy Research in China

Pre-modern Chinese education centered on the imperial examination system. In the early 20th century, overseas returnee scholars represented by Hu Shi promoted modern new-style schools, abolishing imperial examinations, advocating democracy and science, building human-centered curricula and respecting student individuality, establishing the foundation of China’s contemporary basic education system (Yi, 2023). After the founding of the People’s Republic of China, domestic education adopted Soviet centralized classroom frameworks, forming exam-oriented education with unified standardized teaching and single score-based evaluation that ignored individual student differentiation (Zhang et al., 2022).

Reform and opening-up restored the college entrance examination system and introduced international educational, psychological and architectural research achievements, shifting domestic pedagogy toward individualized, potential-stimulating quality education, issuing the *Decision on Deepening Education Reform and Comprehensively Promoting Quality Education*. Learning broke textbook boundaries, prioritized interest-driven knowledge expansion and balanced multi-dimensional student development (Ken, 2015). Facing globalized competition, cultivating internationally competitive innovative talents became core educational priorities. The *National Medium- and Long Term Education Reform and Development Plan Outline (2010–2020)* mandated innovative talent training models, requiring open, diversified teaching environments through curriculum and teaching method reform (Ji, 2018).

Innovative education defines cultivating innovative spirit and practical capacity as its core value orientation, prioritizing exploratory learning modes and divergent thinking training

(Hou, 2020). Rooted in hands-on creation, it guides students to apply textbook theories to solve real practical problems via teacher-led creative activities, collaborative group project work and iterative practice to enhance comprehensive core competencies (Shen, 2021). Its core characteristics include real situational learning, project-based pedagogy, interdisciplinary integration, collaborative teamwork and problem-solving capacity cultivation, supported by flipped classrooms, maker courses and inquiry workshops as mainstream teaching forms (Zhang et al., 2022).

Traditional single-subject lecture models position teachers as absolute authorities, set rigid disciplinary boundaries, fix learning venues and adopt one-way knowledge indoctrination, trapping students in passive learning with limited independent exploration and suppressed innovative initiative (Li, 2021). In contrast, innovative education transforms students into classroom protagonists, with teachers acting as facilitators of independent critical thinking and problem solving. Learning scenarios expand beyond fixed classrooms into multi-layered campus public spaces, stimulating autonomous exploration and constructing systematic multi-dimensional knowledge frameworks (Ji, 2018).

Traditional textbook teaching prioritizes fixed authoritative formulas and conclusions, requiring students to memorize established theories dogmatically, suppressing divergent thinking and standardized problem-solving logic that restricts innovative capacity development and social progress (Hou, 2020). New educational philosophies reverse this model, centering practical verification of theoretical knowledge: hands-on practice converts abstract universal theories into personalized experiential knowledge, enriches learning interest, encourages cross-boundary knowledge exploration and builds dynamic, interconnected knowledge networks (De Wit & Altbach, 2021).

Conventional score-quantified single outcome assessment generates utilitarian score-oriented campus culture, imposing unnecessary psychological pressure and premature student labeling that limits long-term growth potential. Innovative education advocates dynamic multi-dimensional evaluation mechanisms, weakening horizontal peer comparison and emphasizing vertical individual progress. It removes preset student development paths, fully mobilizes personalized learning interest and guides students to independently explore hobbies and strengths, gaining comprehensive growth far beyond textbook knowledge (Zhang et al., 2022).

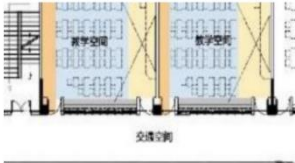
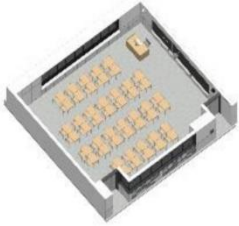
Explicit Statement of Literature Research Gap

Synthesizing global existing research on primary school teaching unit spatial architectural design, three core unresolved research gaps exist that this paper systematically addresses: First, Western research on open teaching clusters, landscape vertical circulation and flexible composite classrooms targets European, Japanese and Singaporean educational systems, lacking localized optimization matching China's "double reduction" policy, small-class teaching standards and primary school children's unique physiological and behavioral characteristics; Second, domestic architectural studies mostly focus on isolated single classroom plane optimization or whole-campus master planning, without systematic horizontal and vertical layout strategies for complete teaching unit clusters supported by first-hand field investigation data from

regional primary schools; Third, prior literature rarely quantifies spatial demand discrepancies between traditional exam-oriented education and innovative interdisciplinary/project-based teaching, lacking comparative analysis of per capita area, spatial openness and composite functional configuration under two opposing educational frameworks. This paper fills these three gaps through interdisciplinary pedagogy-architecture research, field surveys of six Chongqing primary schools, quantitative comparison of spatial indicators and development of generalized, replicable teaching unit spatial design strategies adapted to China's innovative educational philosophies.

Table 1

Schematic diagram of unit number and area ratio

Educational philosophy	Traditional	Innovative education
Class Size	45 seats	Group teaching: 6-8 people Full equipment group teaching: 23-30 people
Per capita land area	1.55 square meters per seat	2.22 m ² /seat
Cell Layout	 	 
Space form		

Traditional standard classes hold nearly 50 students, reaching maximum spatial capacity with per capita area barely exceeding the national minimum standard of 1.39 m² per seat. Uniform rectangular classrooms adopt matrix desk layouts, leaving students in rear and corner positions neglected by teachers, an issue unresolvable through periodic seat rotation. Conventional classroom volume only satisfies silent single-subject lecture demands, with no surplus area for discussion, hands-on practice or reading activities.

In contrast, new equalized student-centered innovative education caps class sizes at the maximum number manageable by individual teachers, generally limited to 10–15 students and adjustable according to curriculum type. Spacious unit volumes accommodate complete digital teaching equipment and reserve ample flexible activity zones for group communication, inquiry reading and interactive game-based learning (Zhang et al., 2022).

Traditional teaching units feature monotonous internal functional compositions solely supporting lecture-based teaching, with limited auxiliary storage and wall display zones; supplementary spaces including teacher offices, discussion zones and activity rooms are independently constructed outside classroom blocks (Ken, 2015). The practical orientation of innovative education diversifies teaching forms including independent thinking, group discussion and maker operation, requiring integrated supporting auxiliary functions. The most prominent feature is expanded informal spatial proportions: embedded discussion lounges, exhibition walls, relaxation corners and multimedia presentation zones directly connect to core teaching areas. Where total construction area is constrained, lightweight movable partitions and modular furniture realize flexible functional conversion, expanding usable functional categories without increasing gross building area and improving overall space utilization efficiency (De Wit & Altbach, 2021).

Research Methods and Framework

The research of this article began with reading a large amount of literature materials. With the help of the Internet, books and other media, aiming at the reform and development of the teaching space design of primary school buildings and the education concept, search and consult theoretical works, magazines and periodicals, academic papers in relevant fields at home and abroad and the corresponding policies issued by the state, sort out relevant materials, summarize and sort out the development and changes of the education concept and teaching unit space related to research topics, build a basic theoretical framework, and lay the foundation for the development of subsequent papers.

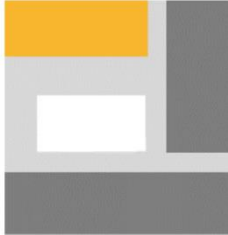
Based on my internship experience, I selected 16 primary schools of different types and administrative regions in Chongqing as research subjects. Understand the educational philosophy and teaching characteristics of each school in advance, and then conduct on-site visits to observe the layout, functional elements, physical environment, and other characteristics of teaching spaces under different educational philosophies. Analyze and organize the teaching space models from which aspects correspond to the teaching philosophy. At the same time, random interviews were conducted with teachers and students from these 16 schools to understand the actual usage of teaching unit space, existing problems, and the demand for teaching space. Then, a questionnaire will be randomly distributed to teachers and students in the form of an online questionnaire to provide feedback on their perceived demand for teaching space under the current educational philosophy.

Many cases in our studies are closely related to the spatial patterns of teaching units. Based on the research theme, the relevant parts of the cases related to the design of teaching units are studied and analyzed. Combined with the educational concepts implemented by the relevant case schools, the similarities and differences of teaching unit spaces under different educational concepts are analyzed. Based on this, summarize and explore effective design results for the new educational concept, in order to formulate practical and feasible design strategies that are easy to promote and apply. Organize the questionnaire results and combine relevant theoretical knowledge to analyze and summarize the behavioral patterns, psychological development status, and spatial needs of students in different age groups.

Changes in Spatial Combination Patterns

Traditional teaching units are divided into dynamic and static zones, with activity spaces placed on the ground floor and teaching areas placed on top to avoid mutual interference. The main functional area is enclosed with a courtyard as the center. The teaching units are arranged linearly and uniformly along the corridor in the horizontal direction, with a spatial tendency towards homogenization and a single walking path. Under the new educational concept, the connection between teaching units is strengthened and can be integrated for use. The horizontal transportation space is endowed with more uses, more than the composite use of public activity spaces, and the changes in form, such as twists and turns, and local enlargement, produce rich space. The main organizational forms are as follows:

Table 2
Horizontal organizational form under the new educational concept

Organizational form	Illustration	Case
Series connection		
Block		

Traditional teaching units mainly use evacuation stairs in series in the vertical direction, located at the end of the corridor, with a single vertical traffic form and limited capacity for pedestrian flow. In order to maintain a rational and orderly teaching space, and from a safety perspective, the frequency of cross floor activities is relatively low. Under the new educational concept, the space is active and open, with diverse forms of vertical connections, mainly consisting of landscape stairs and inter story running stairs, diverse walking paths, and strong spatial accessibility.

Table 2
Horizontal organizational form under the new educational concept

Organizational form	Illustration
Landscape staircase	

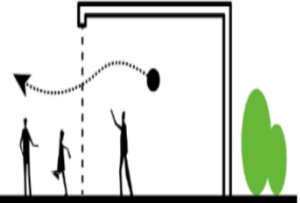
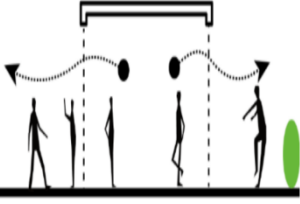
Straight flight stairs



An open environment brings more possibilities and inclusivity to teaching scenarios, and removing the limitations of physical environments is beneficial for students' behavior patterns to diverge and spread, promoting more interaction and dialogue. The new educational concept aims to create open teaching spaces for students of different classes and age groups to communicate and interact, leading to cognitive collisions and the development of critical thinking, collaboration, and innovation abilities. In addition, the open space blurs the integration of teaching units with other spatial boundaries on campus, allowing for flexible adjustment of space scope and usage functions, making it easy to use. On the other hand, the open integration of space enhances the connection between various spaces, diversifies walking paths, and enhances the fun of campus space.

Table 3

Spatial Openness Diagram

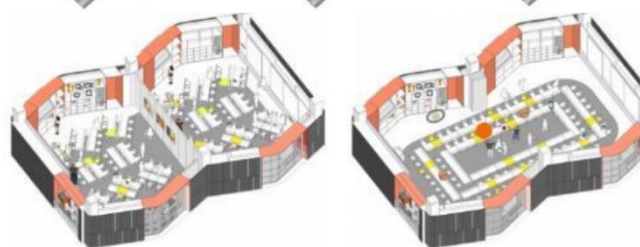
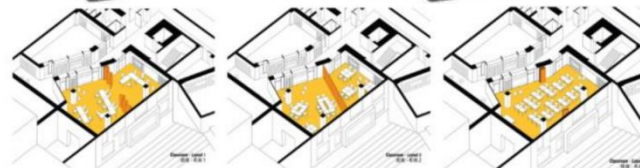
Space openness	Illustration	Case
Closed		
Half-open		
Open		

In primary school campus space, the teaching area has a large usage area and mainly carries out teaching activities. Teaching activities require the collaboration of multiple elements to advance. If group teaching requires a certain amount of teacher office activity space, maker education requires practical operation space, group discussions require communication and discussion space... To cope with the constantly changing course content, classroom forms, and user groups, the teaching and auxiliary functional space can be shortened by shortening the distance between teaching and auxiliary spaces, which can help improve classroom efficiency and optimize the course experience. Some teaching activities, such as computer science and scientific experiments, have

strong professional attributes and indeed require specialized classrooms to carry out teaching activities. However, functional spaces such as offices, communication and discussion, multimedia, etc. may be combined with teaching spaces. There are two main forms of functional integration in teaching spaces. One is to directly add other functions, fully utilize the teaching space, and use multiple functions at the same time, limited to functions that require small space capacity, such as offices and exhibitions. Another way is to achieve functional recombination through planar recombination, which is suitable for functions that require a large space capacity, such as gatherings, public events, etc.

Table 4

Functional combination of teaching space

Composite mode	Composite function	Case
Function Placement	Public activities/office	
	Entertainment/Communication and Discussion	
	Gathering/Exhibition	
Planar reorganization	Exchange and discussion/class activities	
	Seminar/Club Activities	

Case Study and Current Situation Analysis of Teaching Units in Primary Schools

This study conducts research on actual projects, verifies theories in the most intuitive way, and deeply understands the actual design and use of teaching units. The research subjects are mainly campuses built in Chongqing in the past 10 years. The research is mainly divided into two levels, one is the objective physical environment, and the other is to conduct interviews and surveys from the users to understand the real feedback of the two major users, teachers and students. Due to the epidemic, the control of external personnel in primary school proofreading is strict, and some primary schools find it difficult to enter for research. The author carefully records the teaching philosophy, curriculum design, class size, teaching mode, spatial form, and combination mode of the

six selected schools. Through horizontal comparison of schools implementing different educational philosophies and vertical comparison analysis of campuses implementing the same educational philosophy, the existing problems and advantages are identified to guide subsequent design.

Table 4

Overview of research cases

Educationa l philosophy	Educational philosophy	Horizontal Layout	Vertical layout	Campus Overview
Traditional				Featured teaching activities are concentrated in professional classrooms, with diverse forms of extracurricular activities and a dynamic and open campus. The second floor and below spaces undertake most of the teacher-student activities, with centralized teaching units and diverse horizontal connection forms. Public spaces are randomly set up with an increased proportion.
				Bright campus colors create a lively campus atmosphere, with open areas outside the teaching space and quiet and independent teaching units. The horizontal traffic space is partially enlarged to

Half-open



form a public activity platform, which is not sufficient to meet the needs of all classes. The teaching area and activity area are vertically divided, and landscape steps are set up locally to strengthen the vertical connection.

The vitality of campus space has increased, with more free time for activities.

Students can choose to participate in interest courses set up by the school

independently, and the professional course environment

and equipment are complete.

The spatial level connection

increases, the spatial

accessibility is strong, the

landscape

proportion

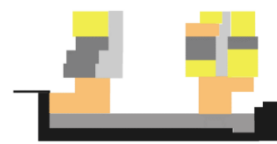
increases, and

public spaces are set up on

each floor for centralized

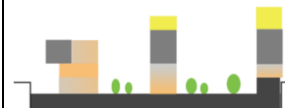
placement and dynamic and

static zoning.

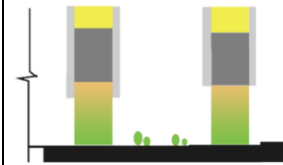
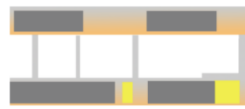


The campus is both closed and open, with functional rooms arranged correspondingly to professional teaching courses. In the horizontal direction, the staggered arrangement of teaching units significantly expands the scale of transportation space, and is used in conjunction with public spaces. The number of class activity areas increases, but the vertical connection is single and lacks communication.

Innovative educational philosophy



The curriculum system includes content instructions, and students can fully try to find their interests and strengths. The teaching adopts a combination of theory and practice. The horizontal and vertical transportation connections are rich, the spatial accessibility is strong, the transportation space scale is large, and it is combined with public activity



functions, resulting in high spatial utilization.

The main teaching mode is small class teaching, the curriculum is diversified, and teaching activities are carried out in the form of interdisciplinary integration.

Suitable interest courses are arranged according to the characteristics of students. The integration of public space and teaching space, with functions permeating each other, maximizes the campus landscape,

Traditional teaching mode: The campus follows the traditional education mode, with clear boundaries between the teaching area and the activity area. The teaching mode is mainly based on organized lectures, and the evaluation mechanism for teaching results is mainly based on traditional exams. The shape of the teaching units is regular, with a ratio close to square. Each teaching unit can accommodate about 45 people. The teaching units are arranged linearly along the corridor, with a complete square space inside. The furniture is arranged neatly, and the corridor width is set according to the standard of 2.5 meters. The main function is transportation, and the main activity time is concentrated after all courses in the afternoon. The design of teaching space mainly focuses on meeting the needs of basic behavioral activities, with less involvement of deep-seated psychological needs.

Semi open teaching mode: The proportion of campus public classrooms implementing semi open teaching mode has increased, and a teaching management mode of segmented learning, team groups, and mixed age system has been adopted. Personalized courses such as science, crafts, painting, etc. have been added for students to choose from after class learning. A dedicated area for showcasing photos and works of interest courses has been set up on campus. The internal functions of the teaching unit have been increased, adding reading and exhibition space. The outdoor corridors and corner spaces

have been partially enlarged, and furniture, greenery, and other facilities have been added to be used in conjunction with leisure spaces. Large outdoor steps have been set up to strengthen vertical transportation connections and increase floor accessibility. The number of spatial elements is gradually increasing, and attention is paid to psychological needs on the basis of meeting usage needs. At the design level, this is reflected in the use of bright colors and material changes. The essence of spatial design starts from practicality and functionality.

Innovative teaching mode: Schools that implement innovative educational concepts have relatively small class sizes, large per capita usage areas, and increased internal functional elements such as office and communication spaces. The teaching units come in various forms, with customized furniture based on the boundaries of the irregular teaching units for communication and display functions, and decentralized indoor seating arrangements. The proportion of interactive courses has increased. The classroom layout is flexible and versatile, and can be used with multiple functions. Diversified transportation connections are set up between each floor, with strong accessibility. The diversity of space has increased, and a certain proportion of public activity space has been set up on each floor for students to use for extracurricular activities. Secondly, in implementing innovative educational concepts on campus, emphasis is placed on spatial creation, using physical space to stimulate or constrain different behaviors. The concept of putting people first is more profound.

Secondly, the curriculum design and teaching mode have changed among the three different teaching modes. Schools that implement traditional educational concepts mainly focus on compulsory courses supplemented by elective courses such as humanities and social sciences, and the proportion of free activity time is concentrated before school ends; Schools implementing the concept of open education have reduced subject teaching time and increased interest courses and extracurricular activity time; The proportion of interest courses in schools implementing innovative educational concepts has further increased, and the proportion of regular teaching has been further reduced, aiming to increase students' exploration and development potential.

Discussion

The educational concept is linked to architectural space design through environmental behavior, environmental psychology, and other fields. Therefore, the teaching space constructed based on the current new educational concept needs to be comprehensively considered, fully understand the characteristics of the groups served by the building, and then design teaching spaces that meet the needs of the users, enrich the internal functions of the teaching space, and reasonably coordinate the relationships between different types of spaces. Through the interweaving and integration of spaces, it promotes communication and interaction between individual students, implements the cultivation characteristics emphasized by the new educational concept into space design, guides students' activities through the design of campus environment, stimulates their exploratory consciousness, encourages them to try, and cultivates the innovative ability of the new generation of young people. The integration process of teaching unit design in primary school campus space is based on the deduction process from educational theory to teaching space. Macroscopically, it designs the overall layout, form control,

public system, and flow line of the campus from the urban texture level, creating a dynamic and integrated campus space, and softening courtyards, public activity venues, etc. into functional spaces; On a micro level, the handover nodes and methods of each space should be carefully handled to flexibly control the openness of the space and increase positive space. By designing from the whole to the parts, the logical order of teaching space design can be enhanced. Otherwise, starting from a single level will make the design top heavy and difficult to achieve the expected results.

Conclusion

Global educational concept has undergone the transformation from the stage of information-based education, which focuses on open teaching to the stage of equal emphasis on teaching. The contemporary educational concept promotes the equal interaction between teachers and students, supplemented by an active learning model supported by external conditions such as "Internet plus", to explore the potential of students and transform to a sustainable learning model of independent exploration and innovative practice. The new educational concept intuitively brings about changes in curriculum design and teaching modes, which directly or indirectly affect the teaching space and demand functional elements, openness, and diverse modes of teaching space. On the other hand, the new educational philosophy proposes differentiated design requirements based on the physiological, psychological, and behavioral patterns of different individuals, and uses interdisciplinary research methods to interpret the endogenous transformation dynamics brought by the change in educational philosophy to the teaching unit space from the perspectives of sociology and psychology. Through research and analysis of actual completed projects, problems and advantages are summarized, and problem oriented design principles of openness, complexity, safety, flexibility, and sustainability are proposed. Comparative analysis of a large number of cutting-edge cases, sorted out from three levels: diversity of teaching units, horizontal organization, and vertical organization, and extracted practical and feasible design strategies from the cases. This study plays a certain reference value in the subsequent design of teaching units in primary schools.

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