



Customized Experience

Explore how interior design motivates students' enthusiasm for learning

Through the design of a nature-based public school, the design focuses on the interaction between people and people and between people and nature to stimulate students' interest in learning and improve their comprehensive abilities, as well as provide children from low-income families with better educational resources.

Thesis Statement

Customized Experience

This Thesis explores How interior design motivates students' enthusiasm for learning

Due to the slow economic development and low income in rural areas, education resources are scarce. Many children from poor families who need education cannot receive education. Alleviate this problem by sharing urban educational resources.

Through the design of a nature-based public school, the design focuses on the interaction between people and people and between people and nature to stimulate students' interest in learning and improve their comprehensive abilities, as well as provide children from low-income families with better educational resources.

USER GROUP By designing a multi-functional public school that shares existing educational resources for children from poor families in rural areas who need education, the uneven distribution of educational resources can be slightly alleviated.

Students can also act as teachers in the school. For example, older students mentor and assist in teaching younger students using remote or technologically lead lessons (Ted Talks, Khan Academy, etc) or as teaching assistants (or student lead teaching). Seniors and retirees be utilized as additional teaching resources in a way that benefits the school and those who may be facing isolation and lack of purpose.

SITE I chose Dahua Cotton Mill as my site, located in the XI'AN city, China, because this factory has been abandoned, so I can use existing resources. Moreover, it is located at the junction of the city and the countryside and there are two schools nearby, which not only facilitates the students from the countryside to come here more conveniently, but also benefits the teachers in the city to come here.

DESIGN METHOD Taking into account the introduction of natural elements into the interior and the integration of unique local cultural characteristics, my design method is to use Xi'an's unique Feng Shui, a branch of the Book I Ching describes the impact of natural elements on architecture, as a connection between different programs. I also use a lot of curves to make the room more dynamic, so as to stimulate the interaction between students

WHAT ARE THE SOCIAL PROBLEMS

PSYCHOLOGY AND SOCIAL ISSUES BY HERBERT HAMSHER & WORLD POVERTY AND HUMAN RIGHTS BY THOMAS POGGE

OVERPOPULATION

It can result from an increase in births (fertility rate), a decline in the mortality rate, an increase in immigration, or a depletion of resources.



GLOBAL WARMING

Climate change includes both the global warming driven by human emissions of greenhouse gases, and the resulting large-scale shifts in weather patterns.



FOOD SAFETY

It refers to handling, preparing and storing food in a way to best reduce the risk of individuals becoming sick from foodborne illnesses.



SOCIAL ISSUES

ENVIRONMENTAL POLLUTION

is defined as "the contamination of the physical and biological components of the earth/atmosphere system to such an extent that normal environmental processes are adversely affected."



CLASS CONFLICT

also referred to as class struggle and class warfare, is the political tension and economic antagonism that exists in society consequent to socio-economic competition among the social classes or between rich and poor.

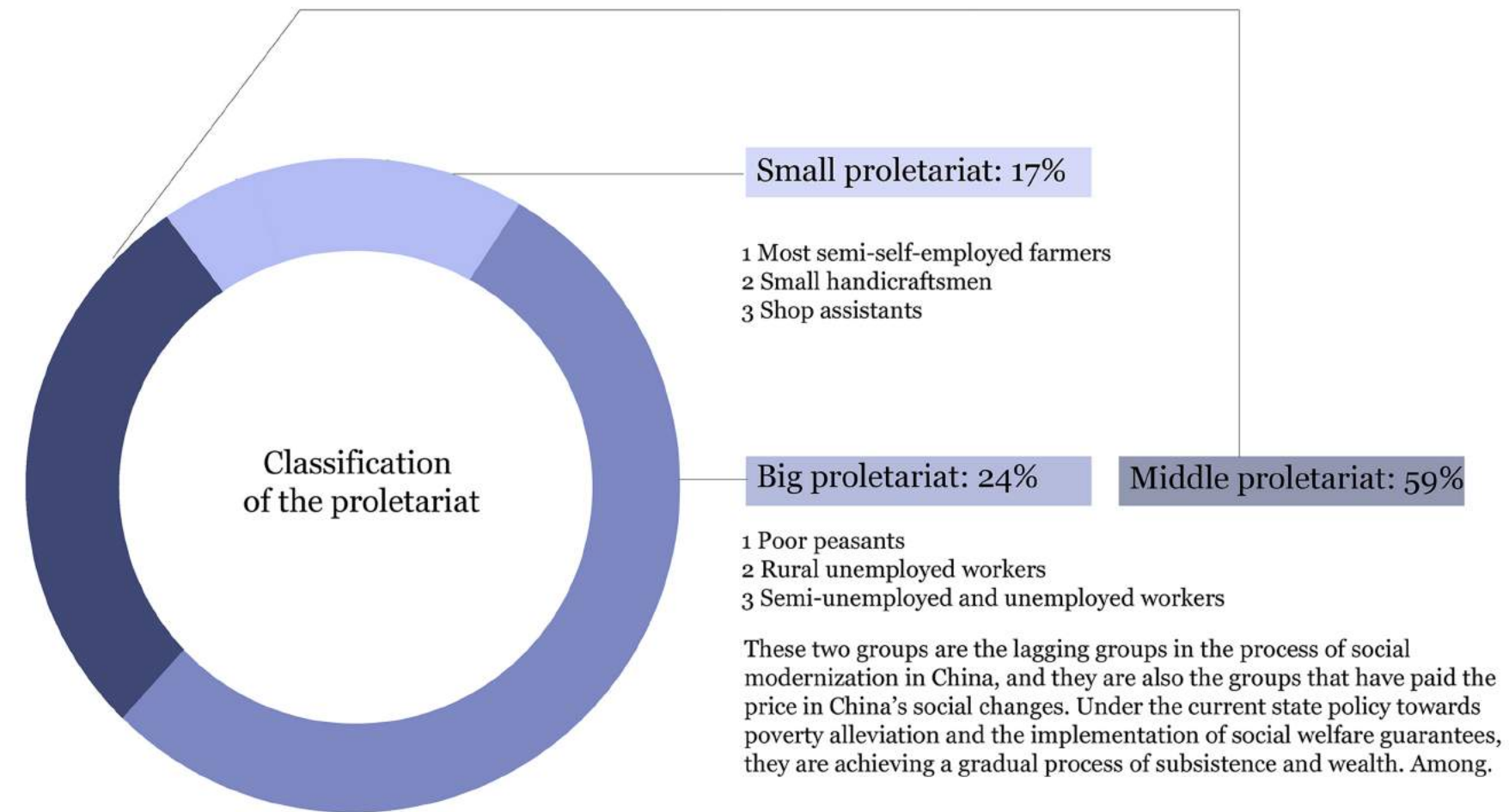
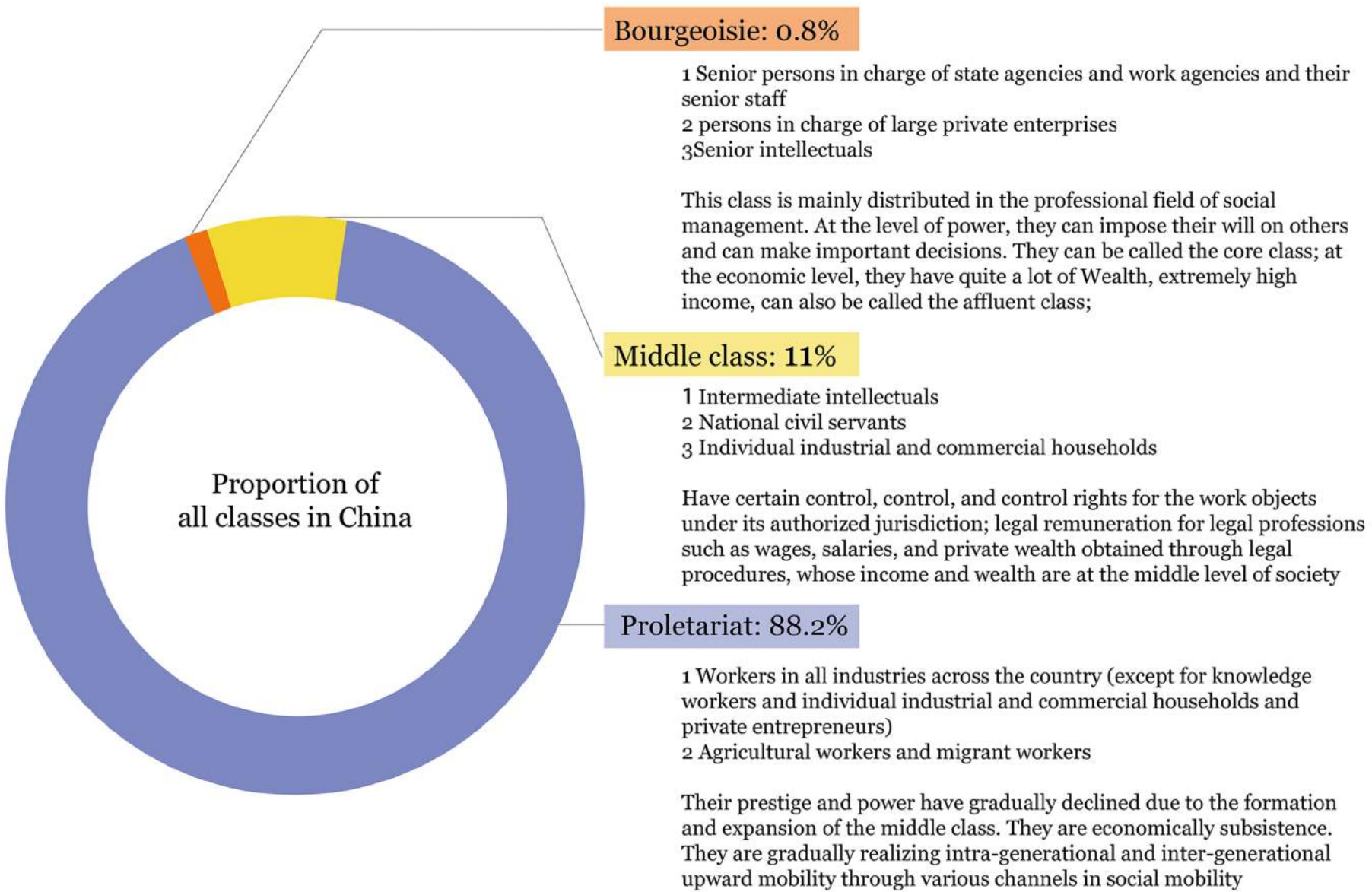


GENDER INEQUALITY

is the social process by which men and women are not treated as equals. The treatment may arise from distinctions regarding biology, psychology, or cultural norms.



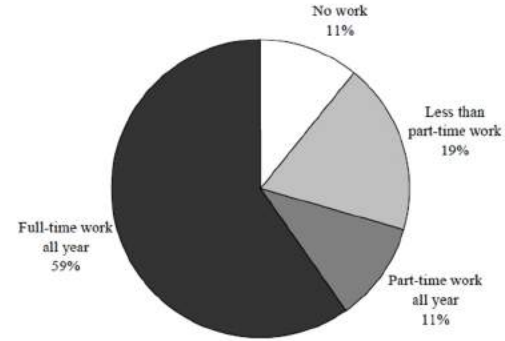
C H I N A ' S C L A S S S I T U A T I O N



CURRENT STATUS OF LOW-INCOME PEOPLE

LOW-INCOME WORKING FAMILIES: FACTS AND FIGURES -- THE URBAN INSTITUTE

Figure 1. Work Effort of Low-Income Families with Children in 2001



Source: 2002 National Survey of America's Families.
Note: Weighted using the person-level weight of the head of the family.

Figure 2. Employer-Sponsored Benefits for High- and Moderate-Work, Low-Income Families and High-Work, Middle-Income Families

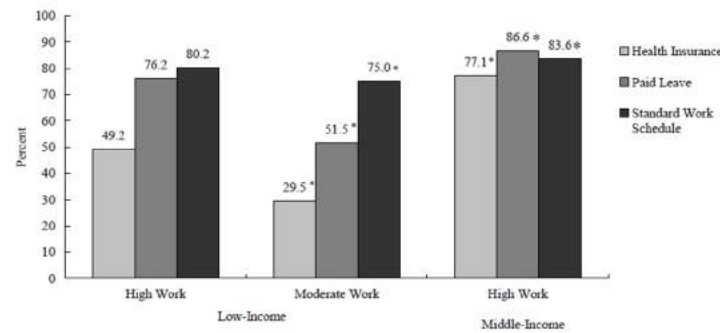


Figure 3. Health-Related Hardships among High- and Moderate-Work, Low-Income Families and High-Work, Middle-Income Families

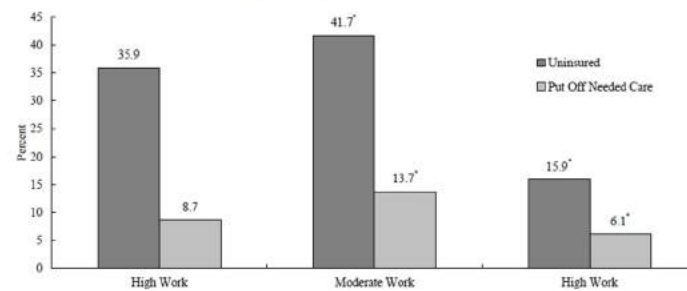
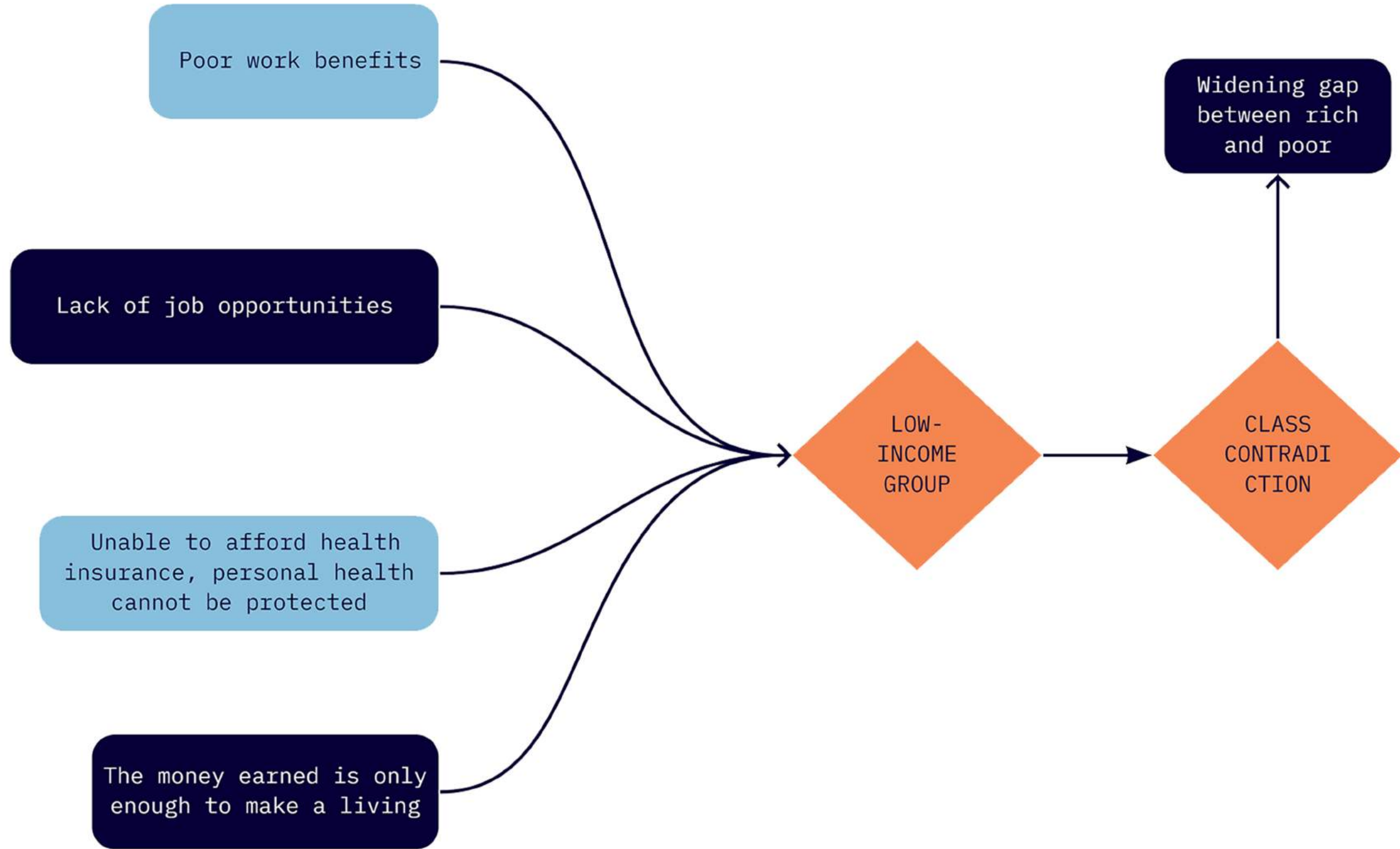
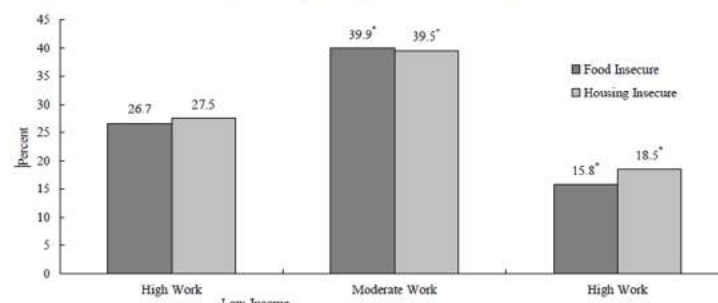


Figure 4. Food and Housing Insecurity among High- and Moderate-Work, Low-Income Families and High-Work, Middle-Income Families



The differences in the level of social and economic development between urban and rural areas and regions have led to huge educational imbalances between urban and rural areas and regions.

The causes of the problem

Characteristics of the starting point of China's education

low starting point

large base

High demand in the development of education

The differences in educational opportunities brought about by different family backgrounds and socioeconomic status. If the class or class difference in the social structure persists, then the inequality of educational opportunities will remain unchanged or even increase.

MIDDLE-LEVEL SOCIAL STRUCTURE AND SOCIAL CLASS

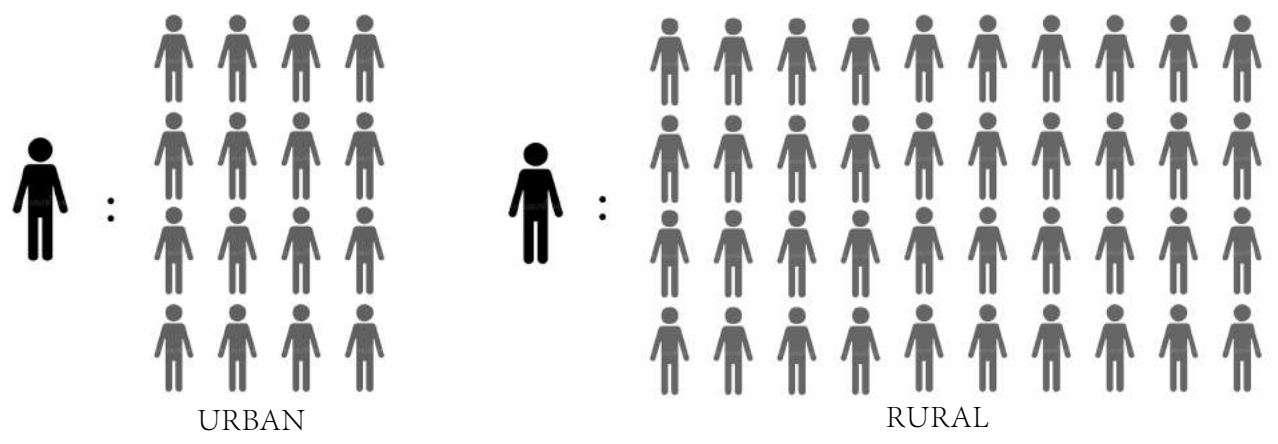
MACRO LEVEL OF THE NATIONAL SYSTEM

MICRO PERSONAL CHARACTERISTICS

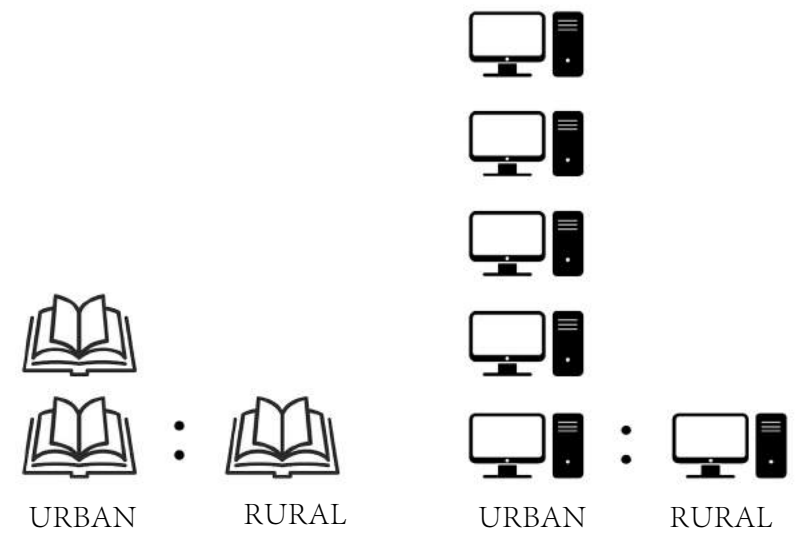
The difference of ability and learning performance to educational opportunities. The difference in the learning level of students brought about by the differences in educational resources of different schools, which in turn affects the acquisition of higher educational opportunities.

UNFAIR DISTRIBUTION OF EDUCATIONAL RESOURCES

Comparison of educational resources between urban and rural areas



In terms of pre-school education, the "student-teacher ratio" in rural areas is abnormally high, indicating a serious imbalance between the number of students in rural pre-school education and the ratio of full-time teachers. The phenomenon of "more students and fewer full-time teachers" is particularly prominent in rural areas



In terms of books and digital resources, the disadvantages of the countryside are very obvious.

HOPE PRIMARY SCHOOL



Ou Yi, Photos of hope primary school



Ou Yi, Photos of hope primary school

Hope Primary School Hope Primary School is a kind of public welfare activity in the society. The purpose is to help underdeveloped provinces, counties, cities, towns and other places build schools, connect with poor students, or provide long-term comprehensive education and teaching through meaningful activities such as aid funds and materials. Help to improve, so as to bring hope and dream to a place. The Hope Project is a social welfare undertaking initiated and organized by the China Youth Development Foundation . Its purpose is to subsidize out-of-school children in poverty-stricken areas to return to school, build Hope Primary Schools, and improve rural school conditions. Since the implementation of the Hope Project in October 1989, it has received a total of more than 2.2 billion yuan in donations from home and abroad in the 15 years to 2004, subsidized more than 2.5 million poor students to go to school, and assisted in the construction of 9,508 Hope Primary Schools

SOLUTION
S

ONLINE COURSES



Photos of homework assistant app's logo

联合国教科文组织	国际互联网教育研究院	职业教育主打B端业务体系
法国德莫斯职业教育集团	国际互联网教育联盟 执行主席单位	政府机构
新加坡VR实训平台	国际大学创新联盟 执行理事长单位	企业 院校

(1) 顶级国际资源

2016年，伟东云教育并购欧洲第二大职业教育培训集团Demos(德莫斯)。Demos创建于1972年，专注于金融、制造、医疗、互联网等21个领域的职业教育培训，在全球拥有超过8000人的师资队伍，及800多位世界顶尖行业专家，每年培训超过35万名企业中高层职位，全球线上课程累计用户超过200万，在为企业及院校提供优质培训服务的同时，也为欧盟委员会、法国政府、美国政府、中国政府及330余家世界五百强企业提供高品质教育培训与咨询。



Photos of homework assistant app

Many educational institutions have been exploring AI+ education. Take the homework assistant app as an example. At present, when students choose online courses, the homework assistant app can already grasp the students' mid- and long-term learning situation through artificial intelligence analysis, and can assign students with similar learning abilities and learning habits together. This not only increases the pertinence of the course and guarantees the teaching effect, but also stimulates discussion among students and enhances their interest in learning.

Analysis of the Current Situation of Education in China

NATURAL EDUCATION

Nature education is an education that focuses on the establishment and improvement of the relationship between man and nature, the relationship between man and others,

Nature education is based on nature observation and nature experience, to experience the life relationship between nature. This is a more comprehensive education method that can simultaneously improve personal abilities and knowledge. Personal ability includes life independence, correct values, etc. Natural education makes up for the lack of personal ability training in current examination-oriented education in China..

05

1 The relationship between man and others.

2 The relationship between man and nature.



CONFUCIUS' EDUCATIONAL THOUGHTS

Teach students in accordance with their aptitude, and learn from their own strengths. He adopted different educational methods according to the specific conditions of each student.

04



THE MOVIE "SOUL"

The movie is about how to cultivate personality. The way people find their own "spark" or interest is to live in the moment and enjoy every moment in life. This is what exam-oriented education lacks.

03

DISADVANTAGES OF TEST-ORIENTED EDUCATION

- 1 Contempt for sports, art and other education, resulting in one-sided development of students.
- 2 Hinder the development of students' personality
- 3 Increasing the burden of students' schoolwork and reducing their interest in learning.
- 4 Focusing on the development of a small number of students and neglecting the development of the majority of students, resulting in inequality in school development and student education

02

EXAM-ORIENTED EDUCATION

An education system whose main purpose is to improve students' ability to take exams and attaches great importance to examination results, recitation and problem-solving

01



The connection between man and man, man and nature



Stimulate students' interest in learning (Learn how to learn)



Group learning



The study area can be seen everywhere, the table can be flexibly split and combined

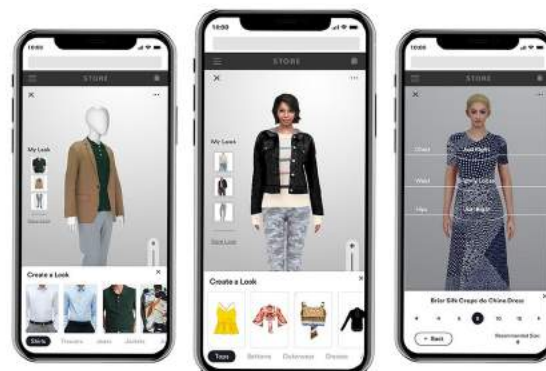


Demonstrate personalization



Personalized school uniform

AR technology



There must be abundant moving lines in the interior, using a lot of curves



Natural playground

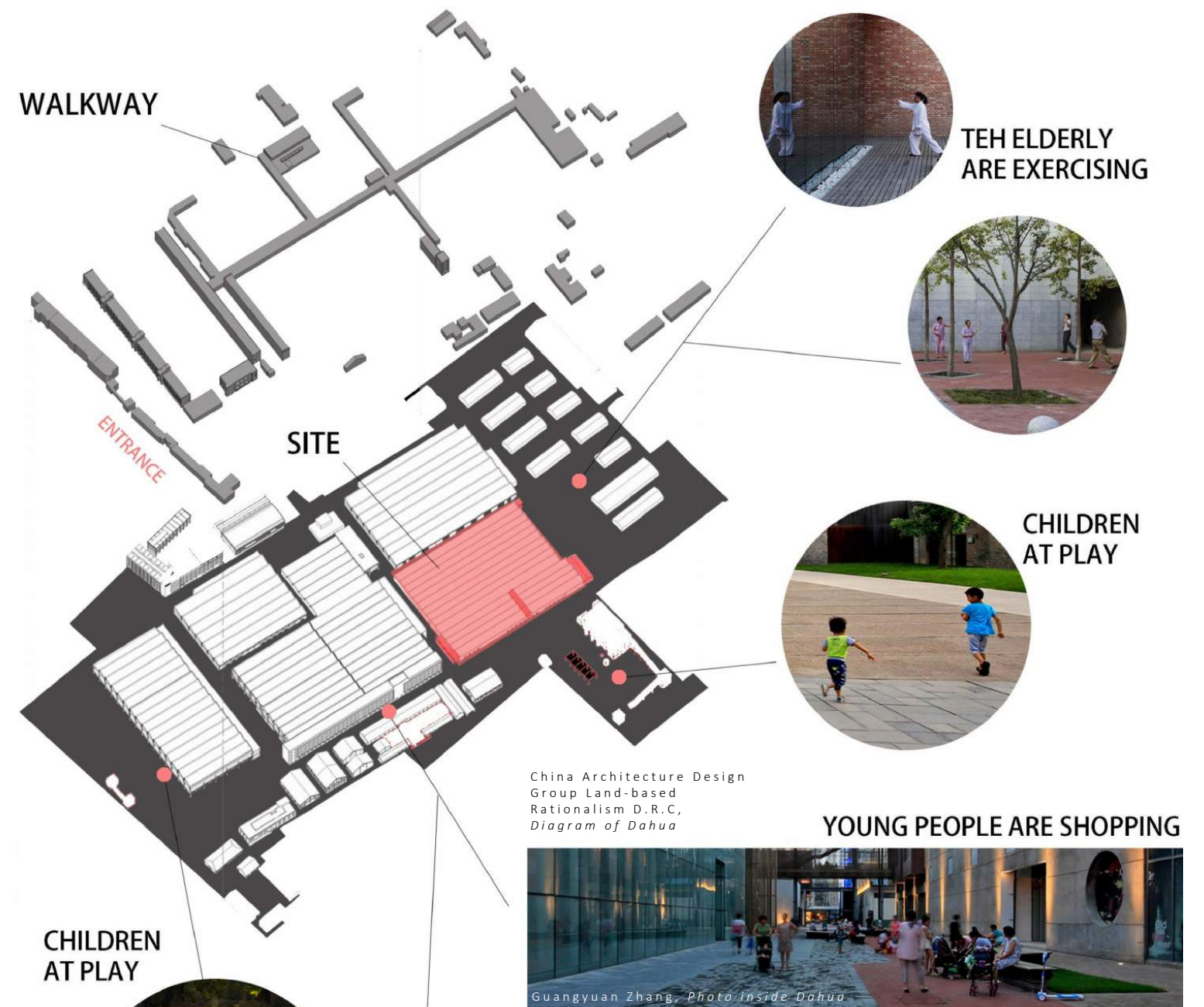
Rippled structure

Greenhouse in the classroom

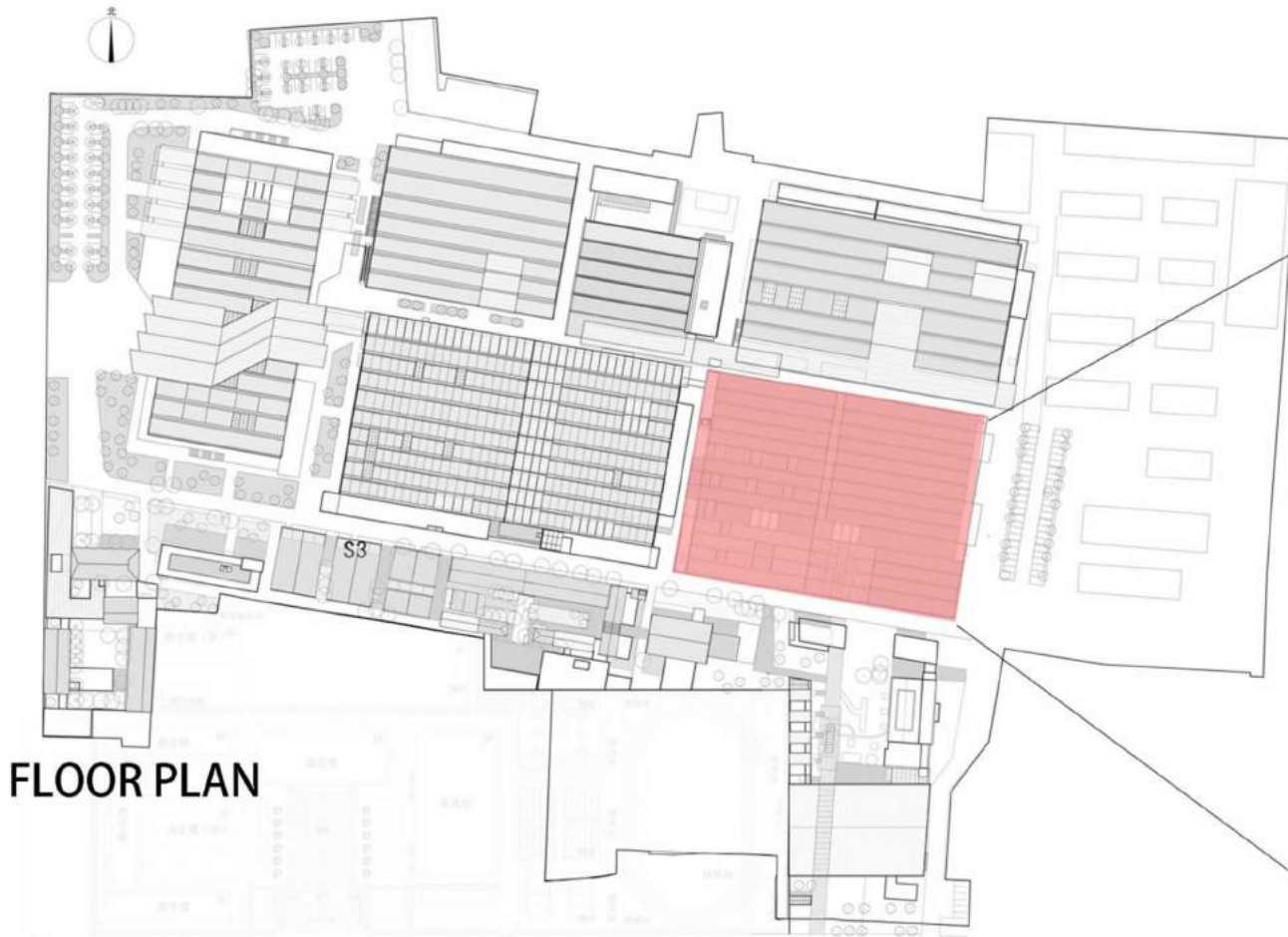


Site Information

Dahua Cotton Mill, located in the XI'AN city China, has been abandoned, so existing resources can be reused. Moreover, it is located at the junction of the city and the countryside and there are two schools nearby, which not only facilitates the students from the countryside to come here more conveniently, but also benefits the teachers in the city to come here.

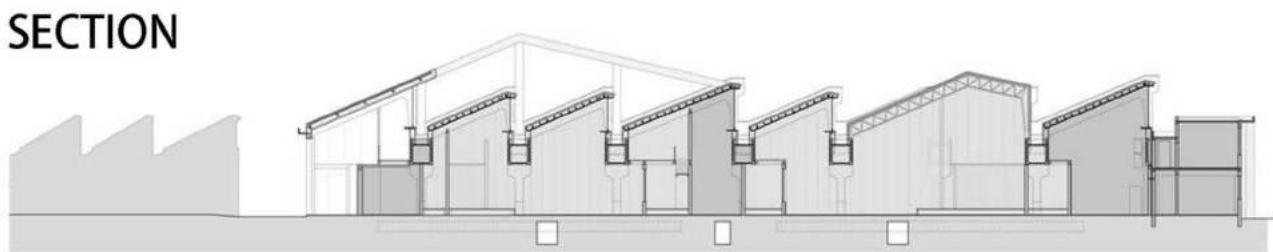


The former part has been transformed into a shopping mall, the latter part is still abandoned, so it can be used to transform into a school



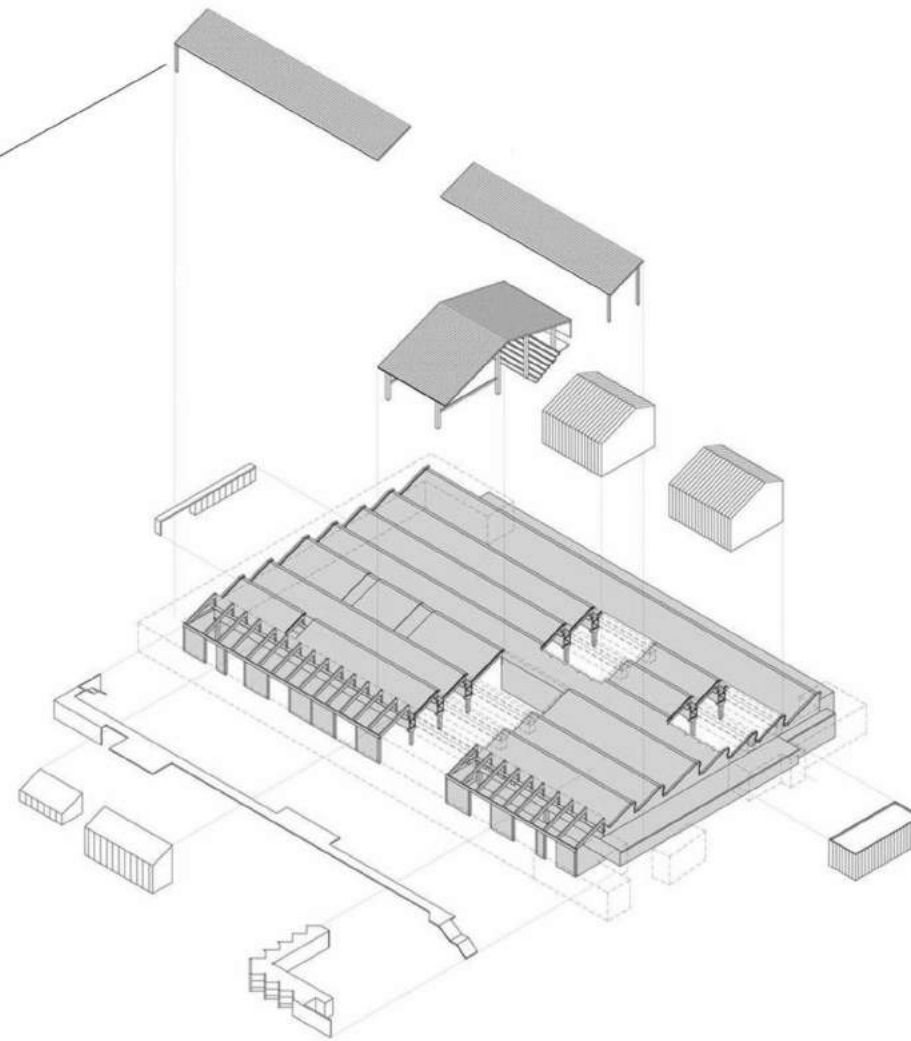
FLOOR PLAN

China Architecture Design Group Land-based Rationalism D.R.C, floor plan of Dahua

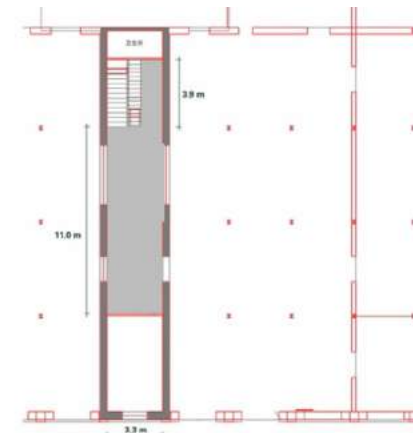


SECTION

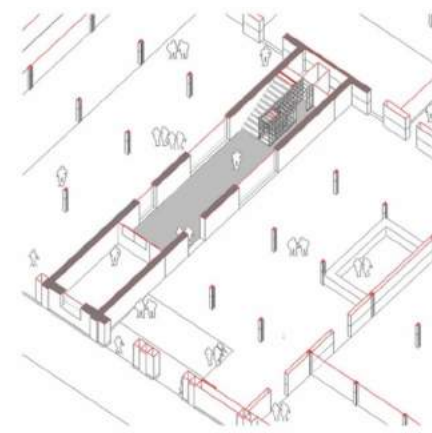
China Architecture Design Group Land-based Rationalism D.R.C, section of Dahua



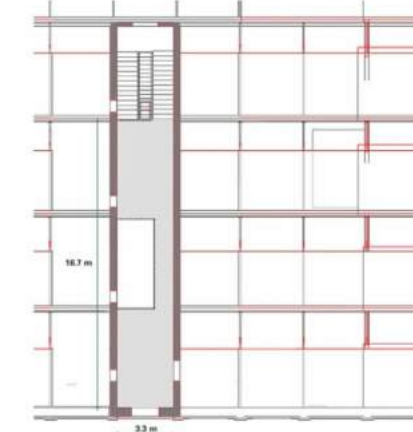
China Architecture Design Group Land-based Rationalism D.R.C, axonometric of Dahua



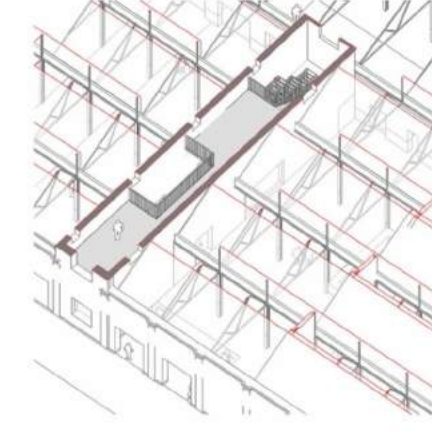
Partial floor plan of Dahua



Second Floor



Partial floor plan of Dahua



Aerial image of Dahua

INTERIOR PICTURES



Photo inside Dahua



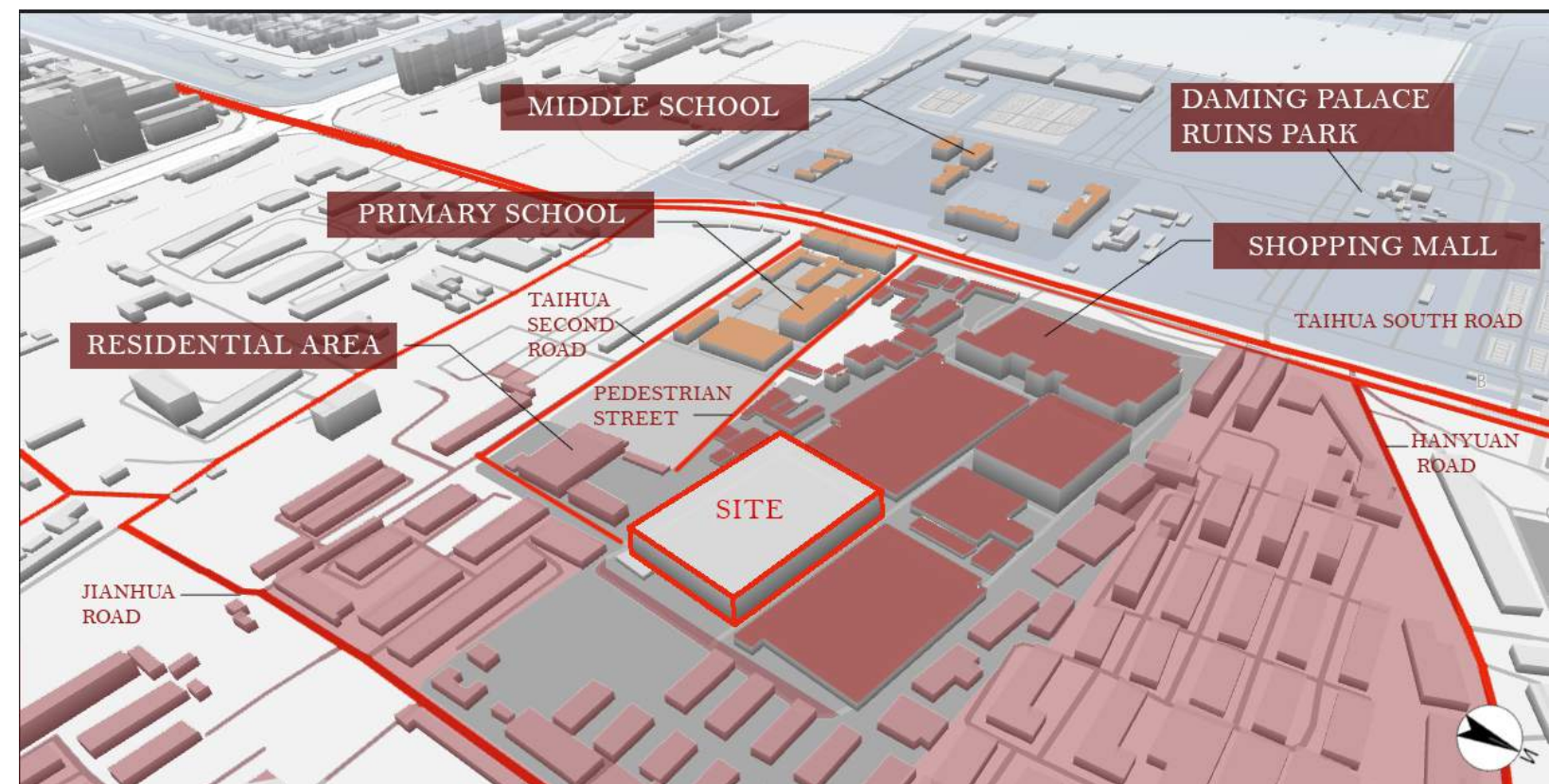
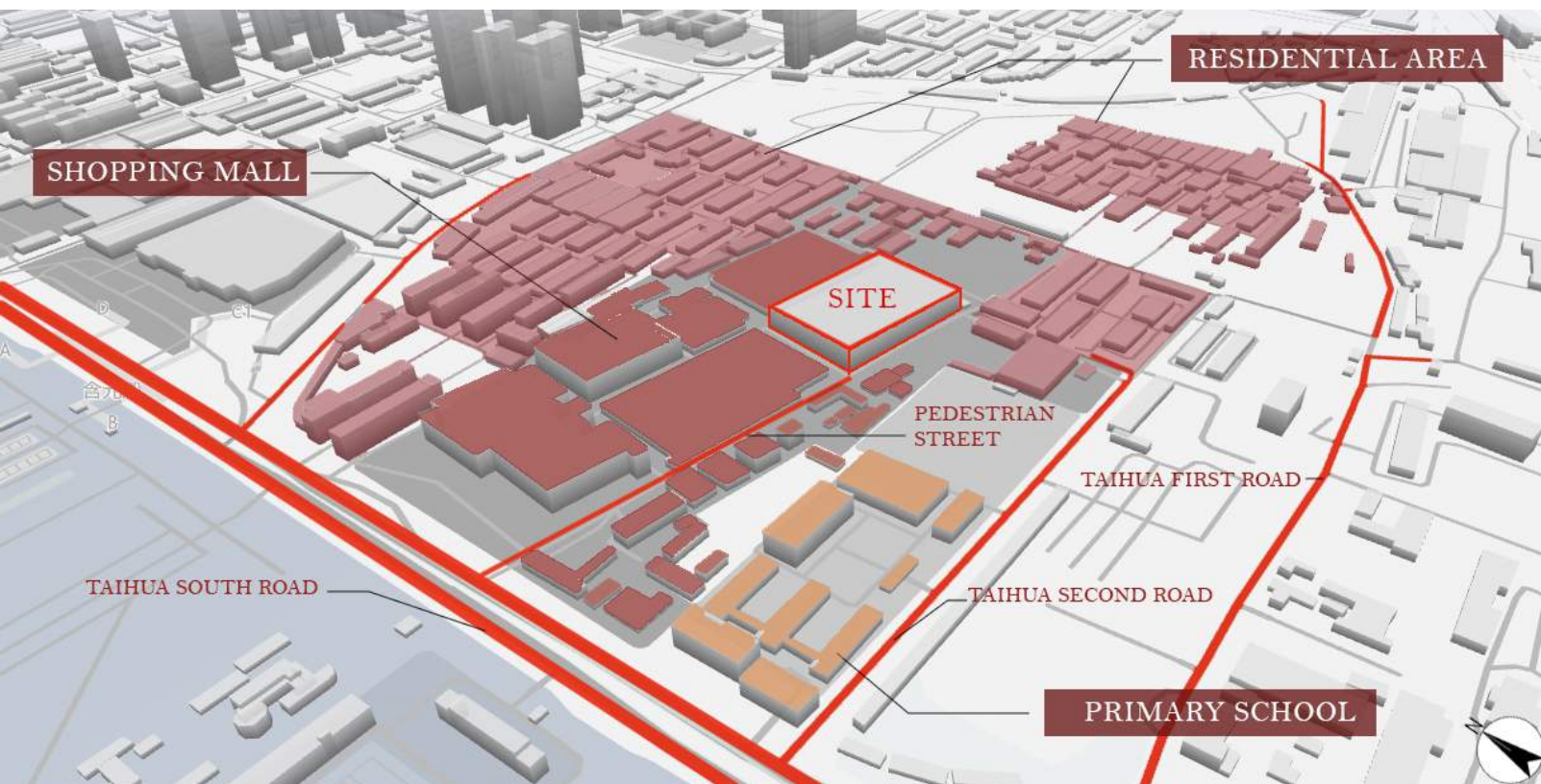
Photo inside Dahua



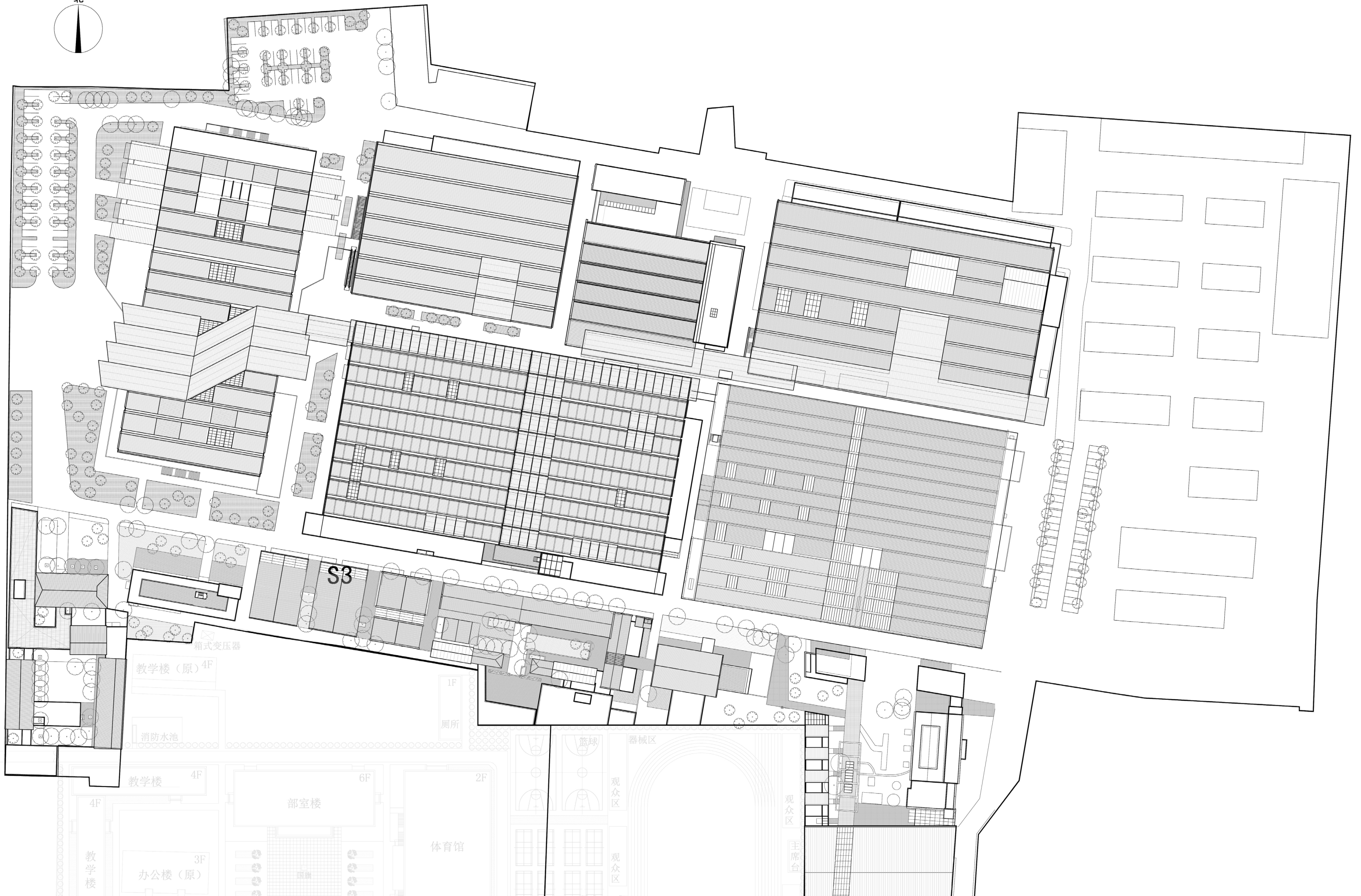
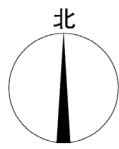
Photo inside Dahua

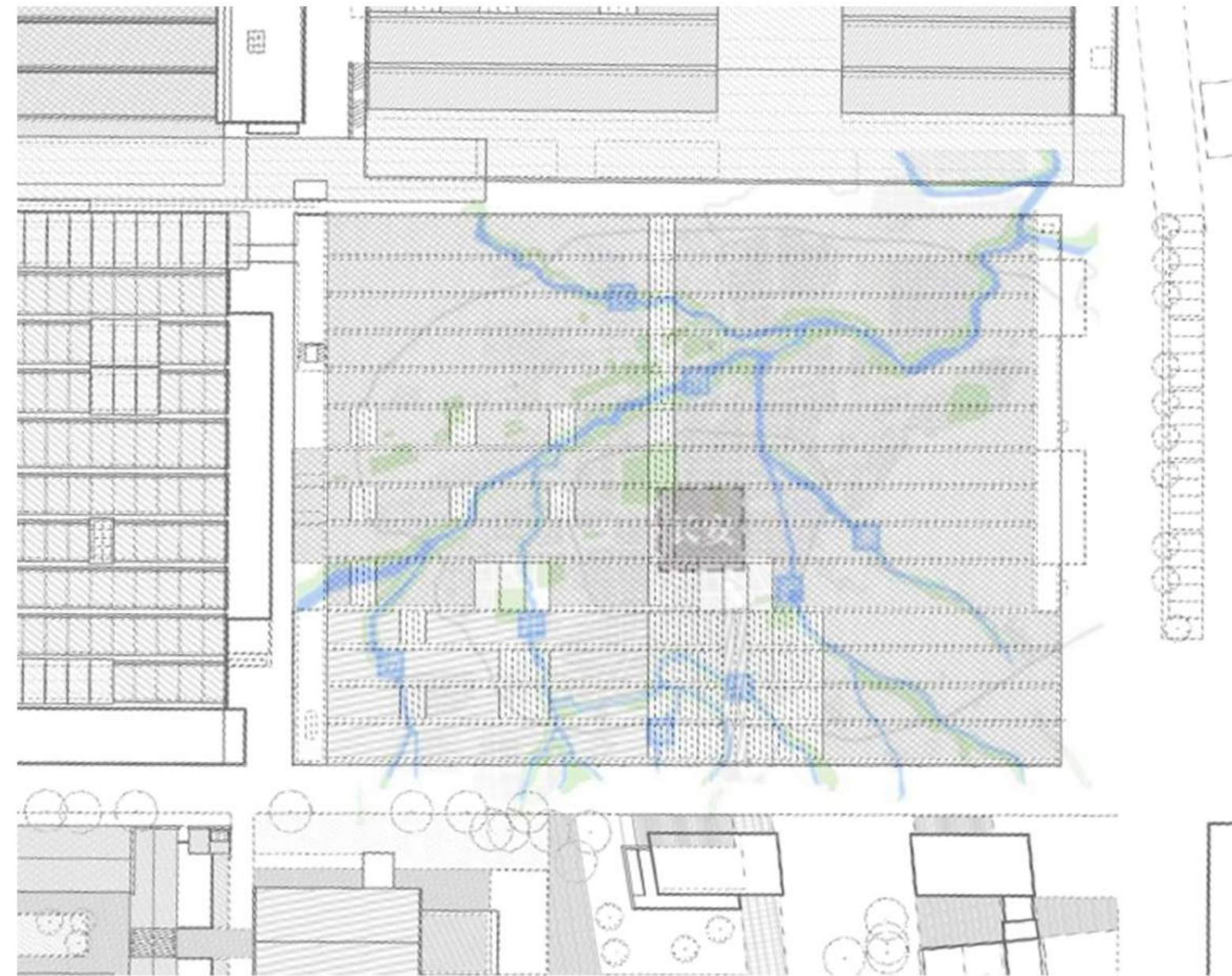
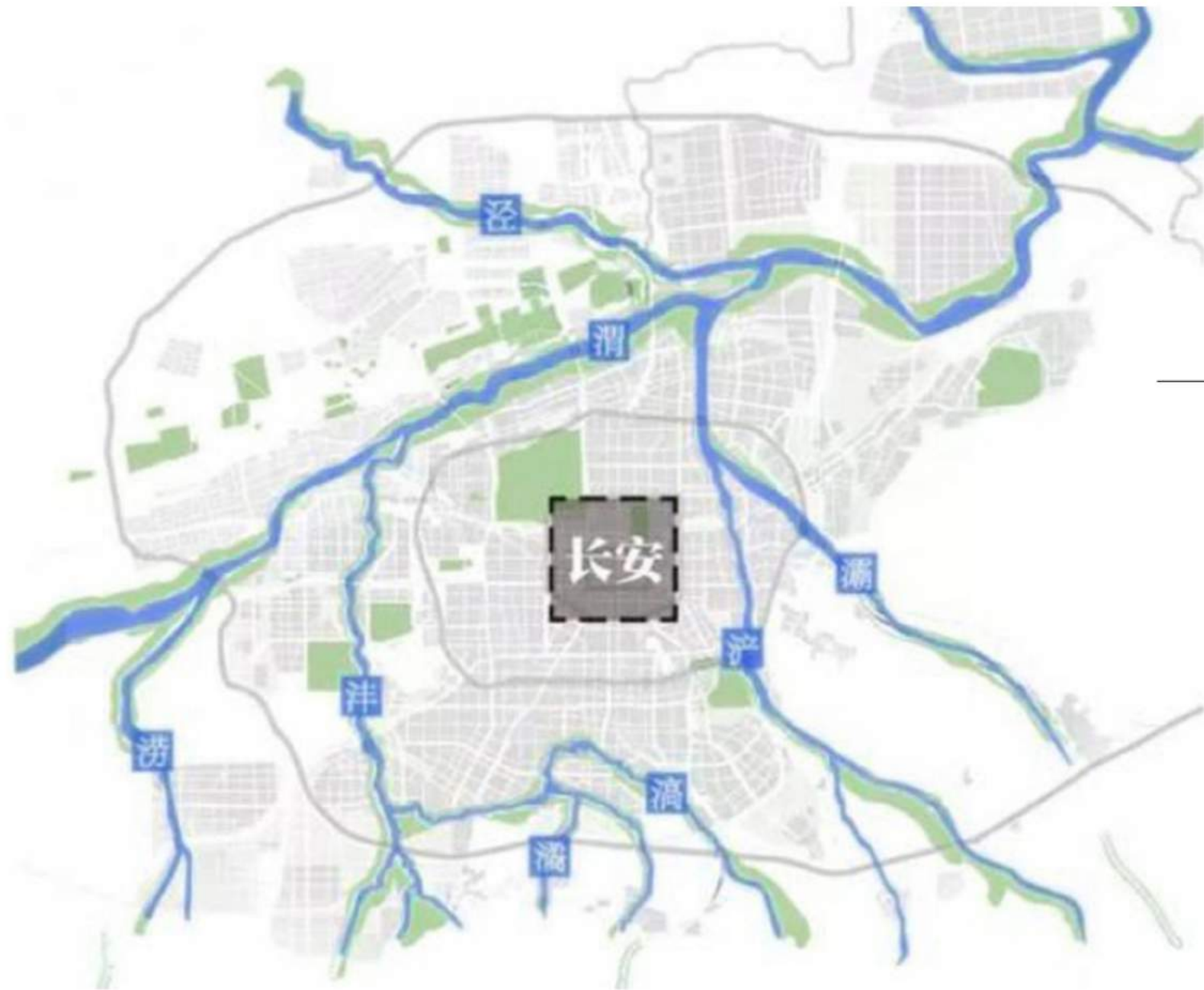
Surroundings

There are two schools nearby, a center and an elementary school, and there are 3 residential areas. This makes it easy to cooperate with school teachers and invite qualified retired seniors from residential areas to come to the school.



Existing Floor Plan



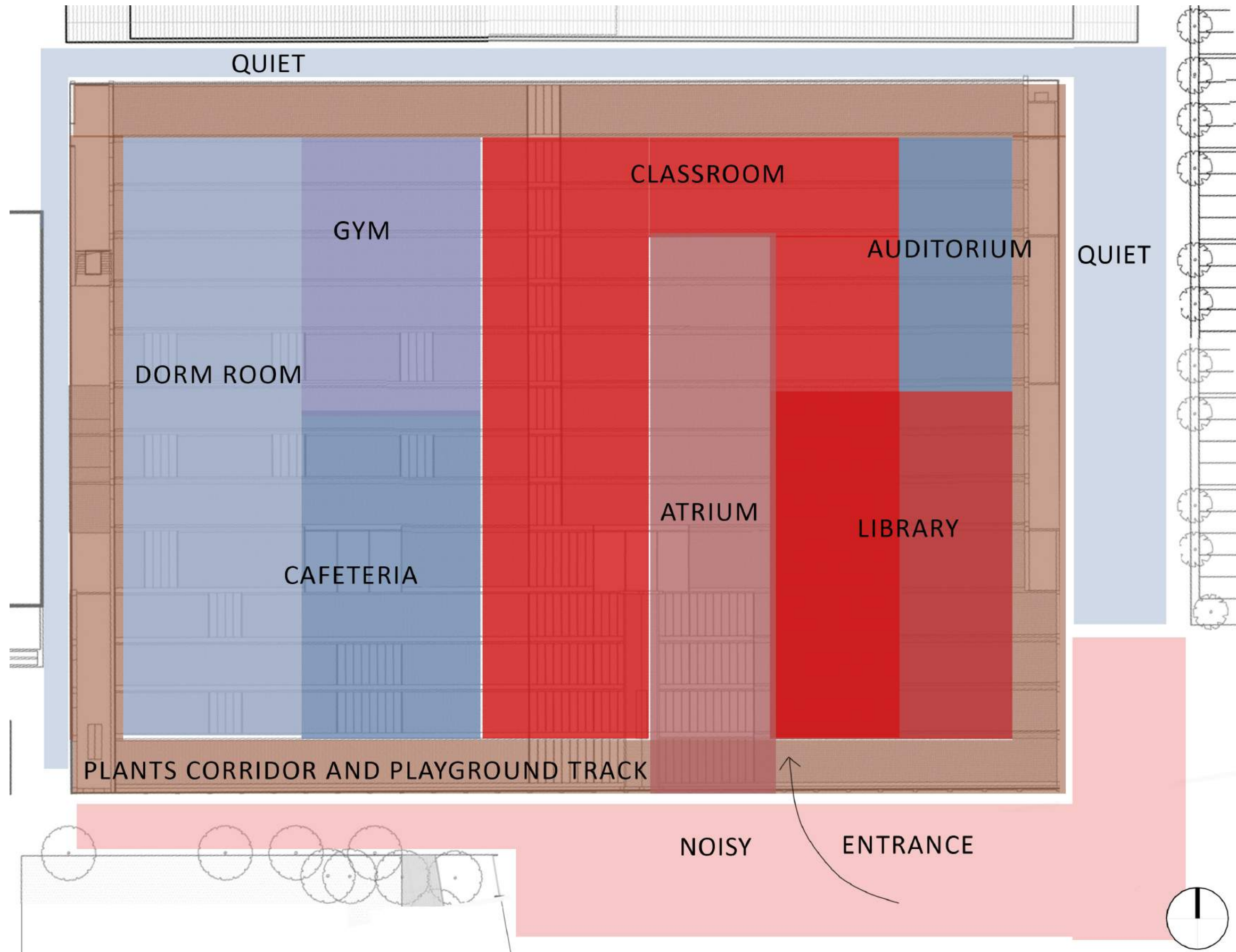


What the I Ching explains is the relationship between man and the universe, and Feng Shui is a small branch of the I Ching. Feng Shui is about the impact of natural elements, like the mountain and the river, on the layout of buildings.

In history, Xi'an has been the capital of ancient China for more than 1,000 years and has experienced 13 dynasties. As for why so many emperors choose to settle in Xi'an, it is because Xi'an has a very good Feng Shui. Mountains and water represent positive influences. There are not only mountains near the city of Xi'an, there are also 8 rivers surrounding the city, and the 8 rivers converge to form a larger river, connecting Xi'an with other surrounding cities or The countryside is connected together, which promotes the development of the city and brings abundant resources.

Most of the students who come to this school come from the countryside near the 8 rivers.

Block Diagram



BIG CONCEPT, Open and cooperative learning concept, nature education

Precedent Study

The Saunalahti School in Finland,

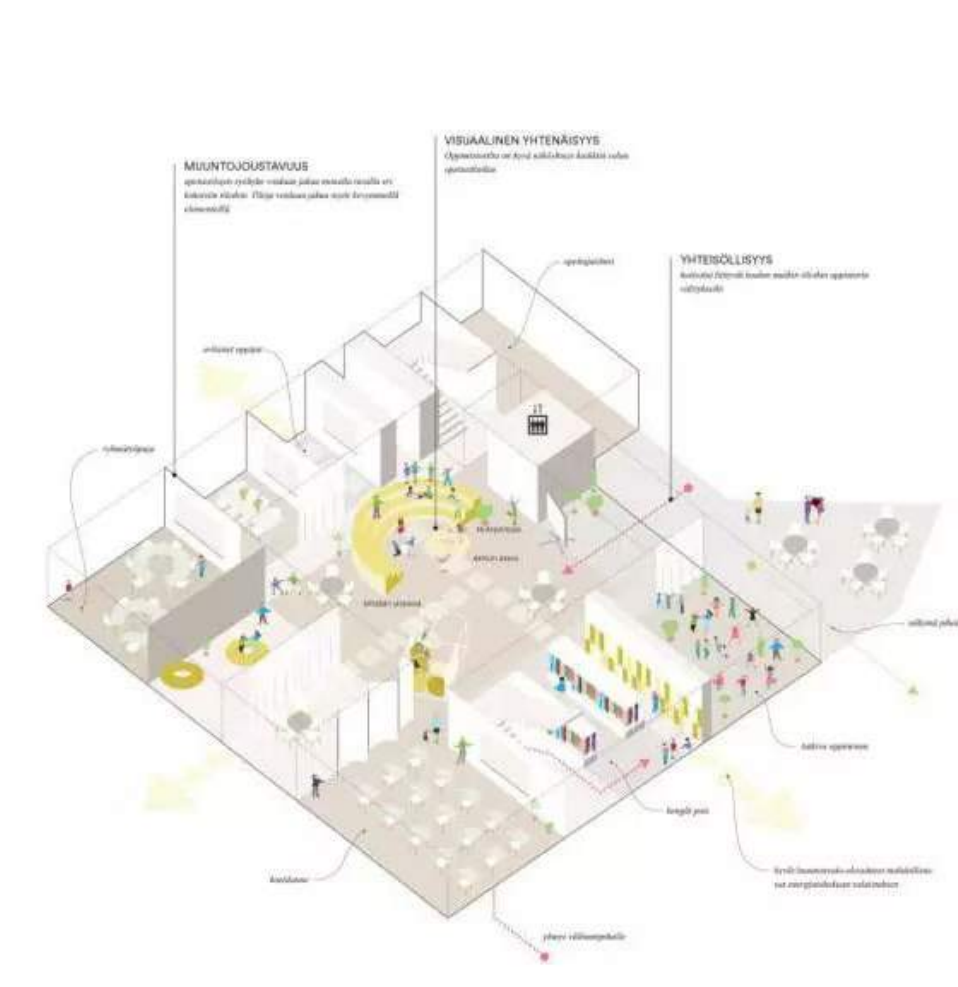
The Finnish classrooms have the following characteristics:
learning inclination,
humanization,
modernity and technology,
flexibility and openness.

1 The school aims to encourage non-traditional classroom settings and various group learning.

2 The school is more supportive of students learning outside the classroom

3 The classroom and the classroom can be combined together.

4 Teachers have a lot of free space in the layout and design of the classroom, and they can dress up the classroom in accordance with their own educational concepts and teaching needs.





朱锛 | Zhu Pei

Founder, Studio Zhu-Pei
Dean of Central Academy of Fine Arts, School
of Architecture
Adjunct Professor, Harvard University,
Columbia University

The relationship between human and nature

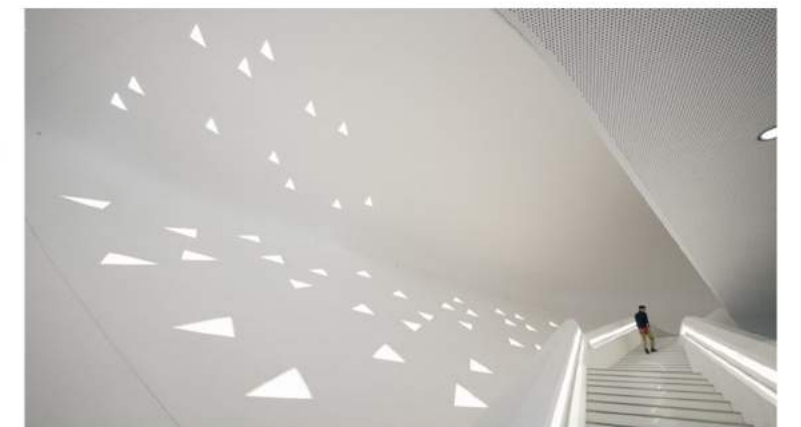
Architecture is very specific. Architecture is built for a specific person, place, culture and climate. A specific natural environment must shape a special building.

Architecture should have two basic attributes-root and creation. I think we need to combine creation and root.

Buildings should be like sponges, not entities, and there should be many uncertain spaces and possibilities.

OCT Design Museum

The Oct Design Museum is mainly used for automobile exhibitions. The interior design is attached to a continuous white surface with no projection and thickness. Thus formed a surreal borderless space, which seems to be eternal. The building has become a minimalist and pure background, with only a few randomly scattered triangular windows jumping on it, like flying birds with spread wings. An ordinary cognitive car looks very heavy, but in this infinite space it becomes without quality, which promotes curves, light and shadow, and strong colors to become the focus of display.



Yang Liping Performing Arts Center

The project site is located in the center of this landscape, beside the high mountain fault lake between the Cangshan Mountains and Erhai Lake. The design of the center is inspired by the reflection of Cangshan Mountain in the Erhai Lake, making the theater blend into nature. Convert the space into an indoor and outdoor performance area. The blurring between indoor/outdoor and landscape/stage aims to eliminate the sense of distance between the performer and the audience.



Jingdezhen Imperial Kiln Museum

Taking porcelain kilns as inspiration, brick kilns are not only the origin of Jingdezhen city, but also the living and social space for people to survive. It "preserves the memory temperature that is inseparable from the life of this city"



PROGRAM COLLAGE





MEDIUM, connections between programs,

Precedent Study

Landscape of Xi'an Leaders Primary School

The design of the project aims to **bring nature into the campus**. The design not only creates an outdoor environment full of green vegetation, but also brings more natural close-up experience and natural texture contact to the campus landscape environment for the primary school students.

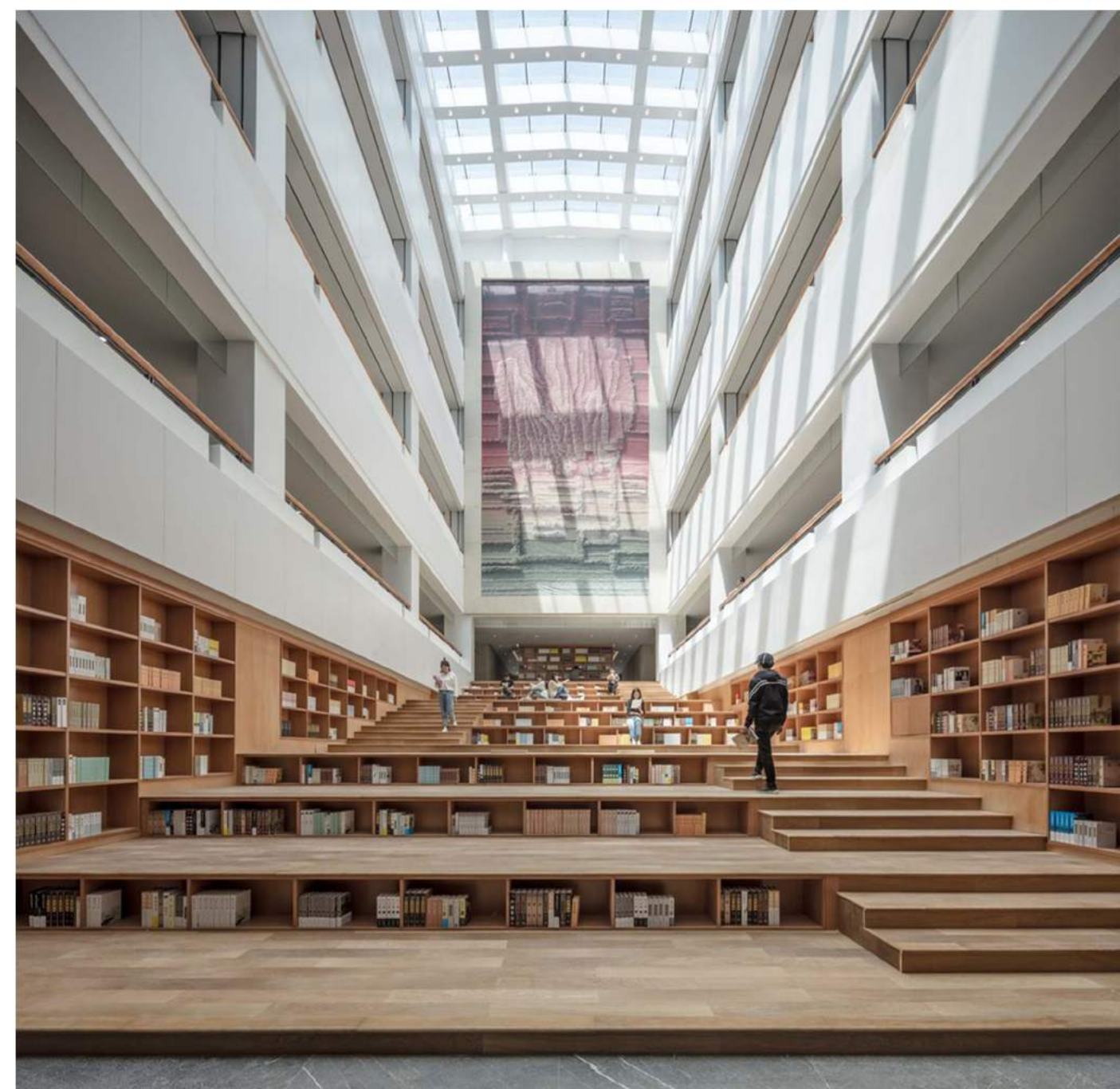
There are green plants, stairs and slides between the classroom and the playground

Different kinds of plants can be planted to allow students to learn biological knowledge.

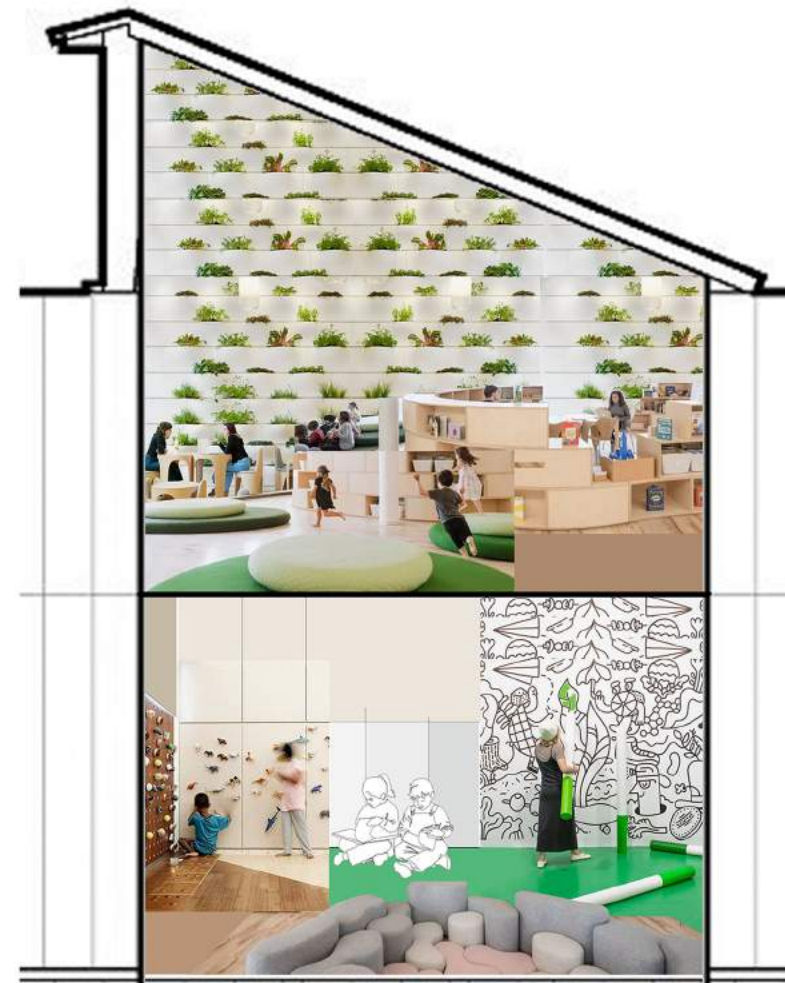
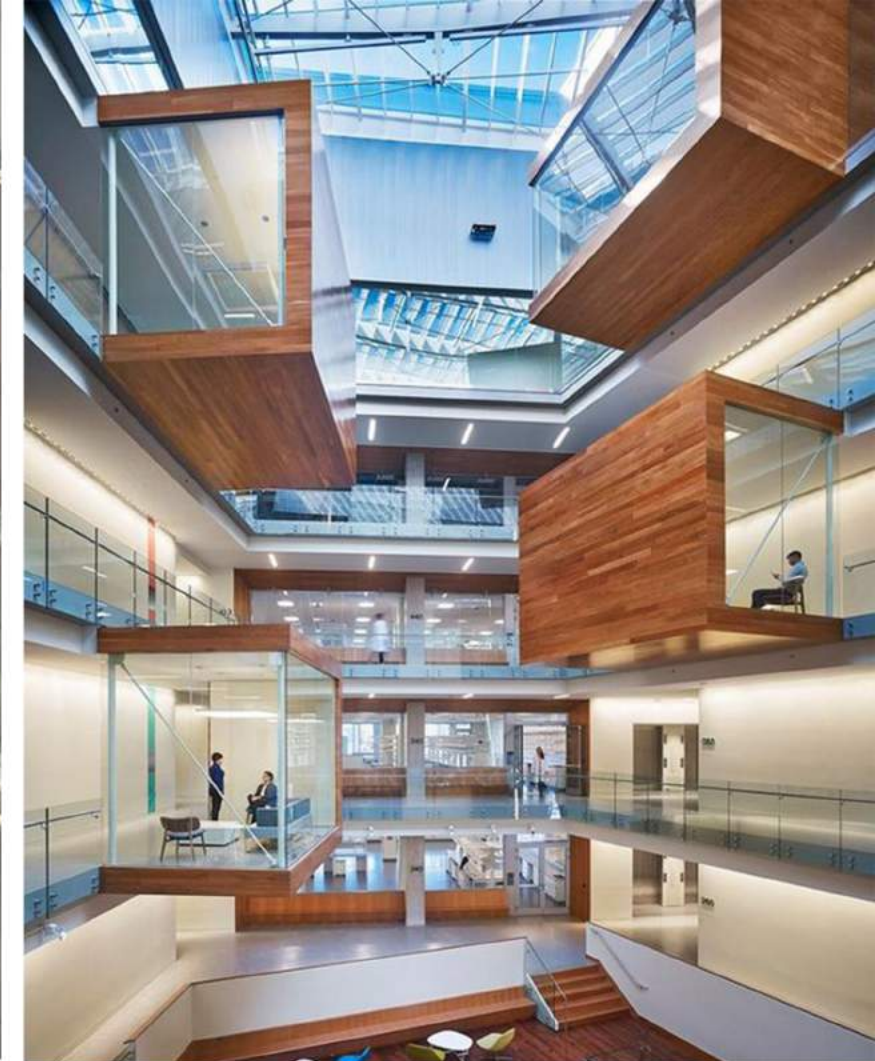
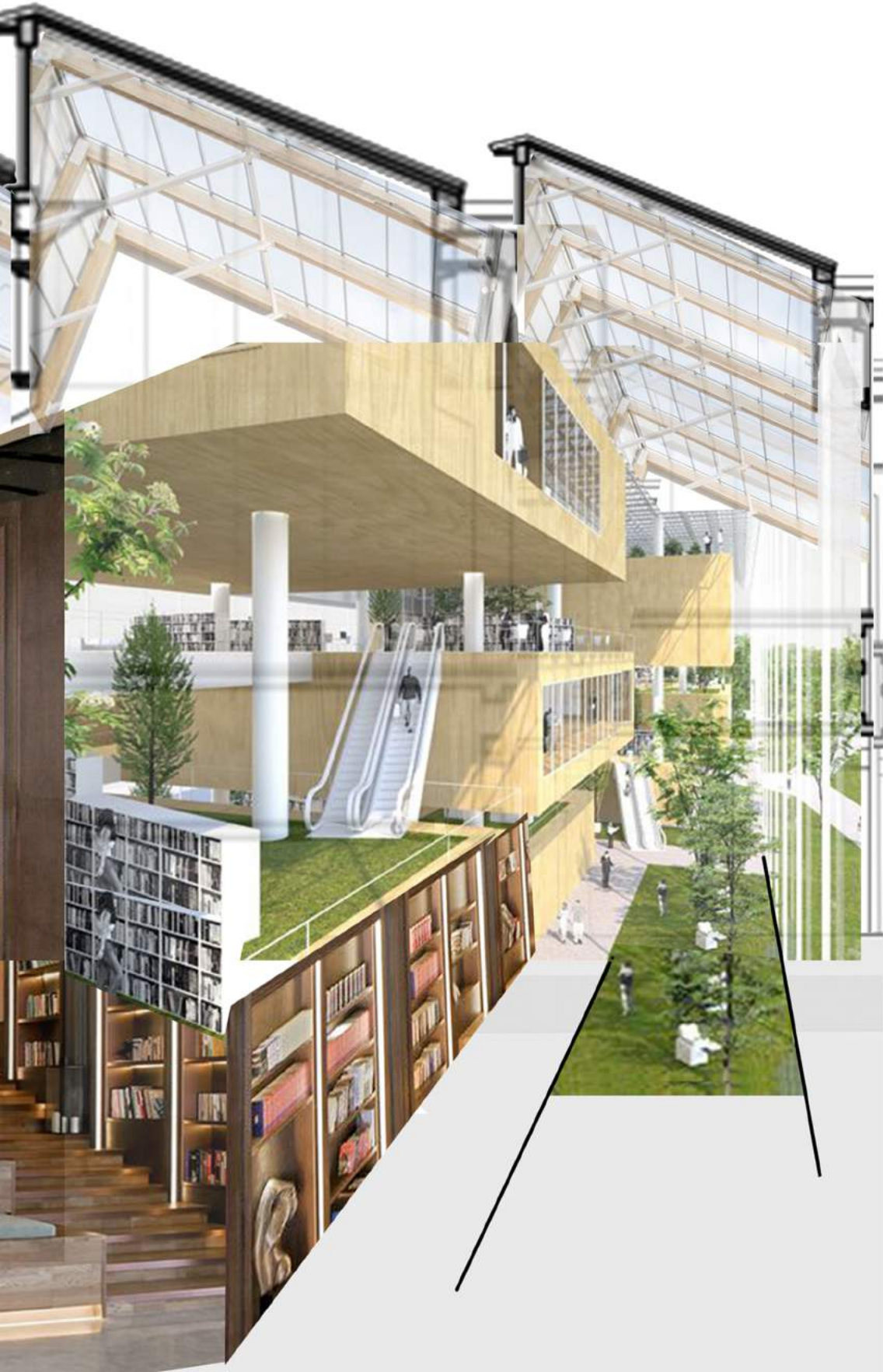




The atrium is a place where students gather, allowing a lot of sunlight to enter the room. Adequate sunlight is good for students to read and rest, so a large staircase with a resting place is designed and there are bookshelves on both sides of the stairs.



There will be gaps or protruding parts between different classrooms, and these spaces can be used to grow plants. Increase the utilization rate of space, and can create some additional programs such as lounge or printing room.



DETAIL, program design & body fixture

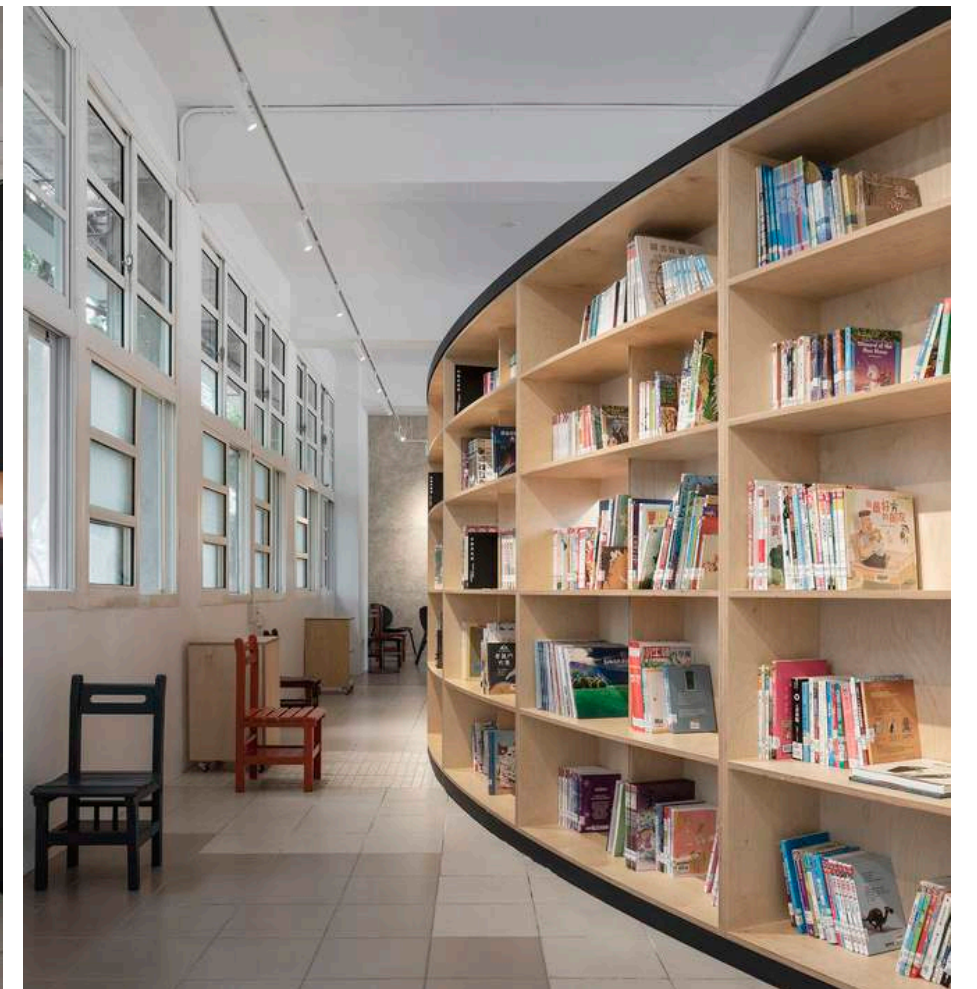
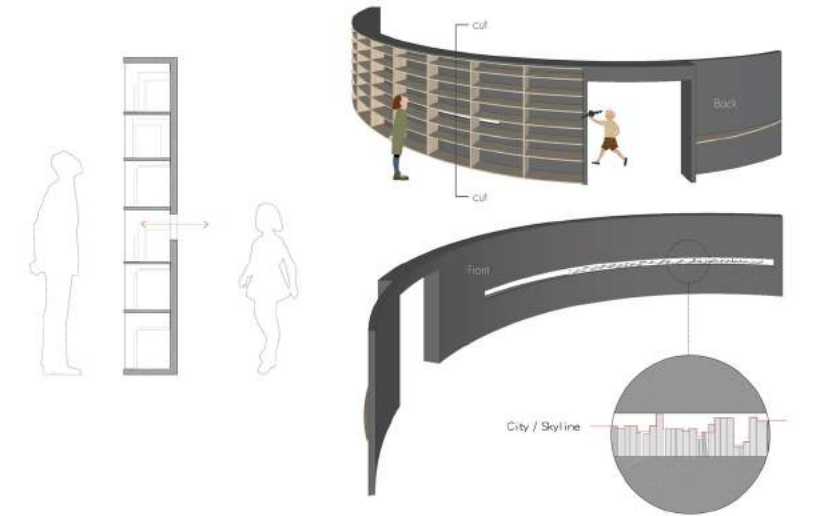
Precedent Study

Lan-Tian Elementary School

With limited resources, the school moved the library, which was originally located far from the classrooms, to a place near the classrooms. Two idle classrooms were combined and renovated into a new reading space.

Multifunctional structure, one side is a blackboard, the other side can be used as a bookshelf.

Flexibility of space





ROOM

The second floor is the classroom for middle school students. Bring more natural elements into the room, simulating the natural environment of the countryside. Design a plant wall to make good use of the natural light on the top.



There are graffiti walls and toy walls for elementary school students to create freely on the first floor.

The detachable furniture can meet different needs, facilitate group activities and enhance communication between students



BODY FIXTURE - The relationship between human and others



The sleeves can be folded 3 inches, and the waist can be folded 1.5 inches inside

The whole clothes are stretchable, and there are folds on the sleeves, shoulders and waist, which can be unfolded when they grow up



The clothes are divided into functions. Because the students live on campus and often have outdoor activities, a vest is added to the ordinary shirt to hold various items, such as water cups, notebooks and pens.



I want to design a customizable school uniform so that students can have a place to show their individuality. Students can make personal creations on school uniforms, and realize a variety of personalized information on school uniforms by combining AR technology. Such uniforms can also promote interaction between students.



Meaningful photos



Diary

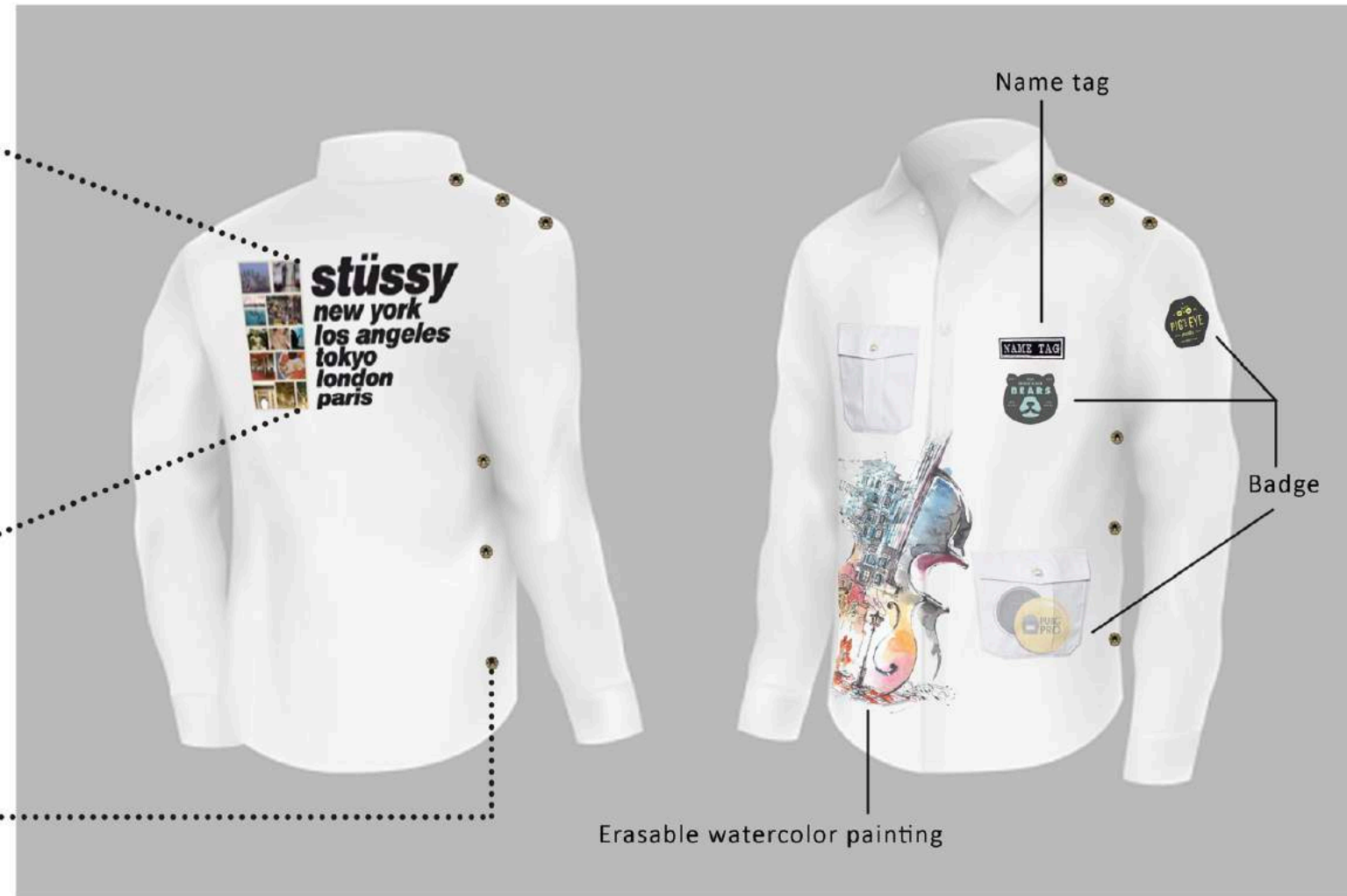


Newspaper



Stroke

The school will give every new student a pure white uniform. At the end of each semester, students can choose to print two or three of their favorite photos on their clothes, or they can also print a paragraph. The school will help them design. In this way, every school uniform is unique, and students' experience will be recorded on the uniform and this also gives the uniform more meaning.



The attached vest and shirt are connected by buttons, which makes it easier for students to wear and take off. Students can personalize the shirts inside. For example, they can print a picture of an AR video about themselves on their clothes, so that when they want to share their experiences with others, people can scan the patterns on the clothes through their mobile phones to watch the AR videos. (What needs to be added is to protect personal privacy. Everyone's AR video has a password, and the video can only be watched with the consent of the video.)

FIRST FLOOR PLAN



SECOND FLOOR PLAN



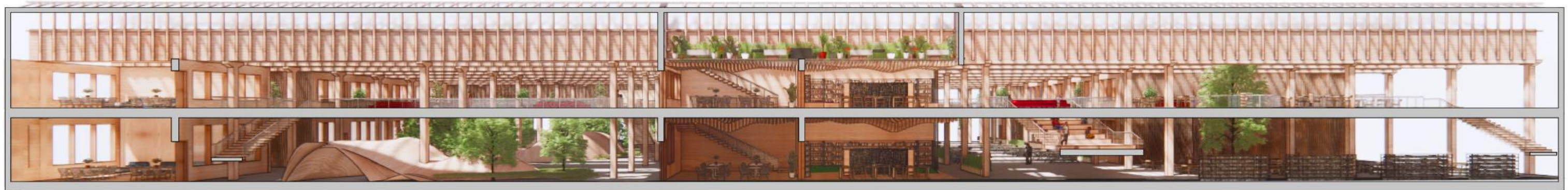
MEZZANINE FLOOR PLAN



LONGITUDINAL SECTION



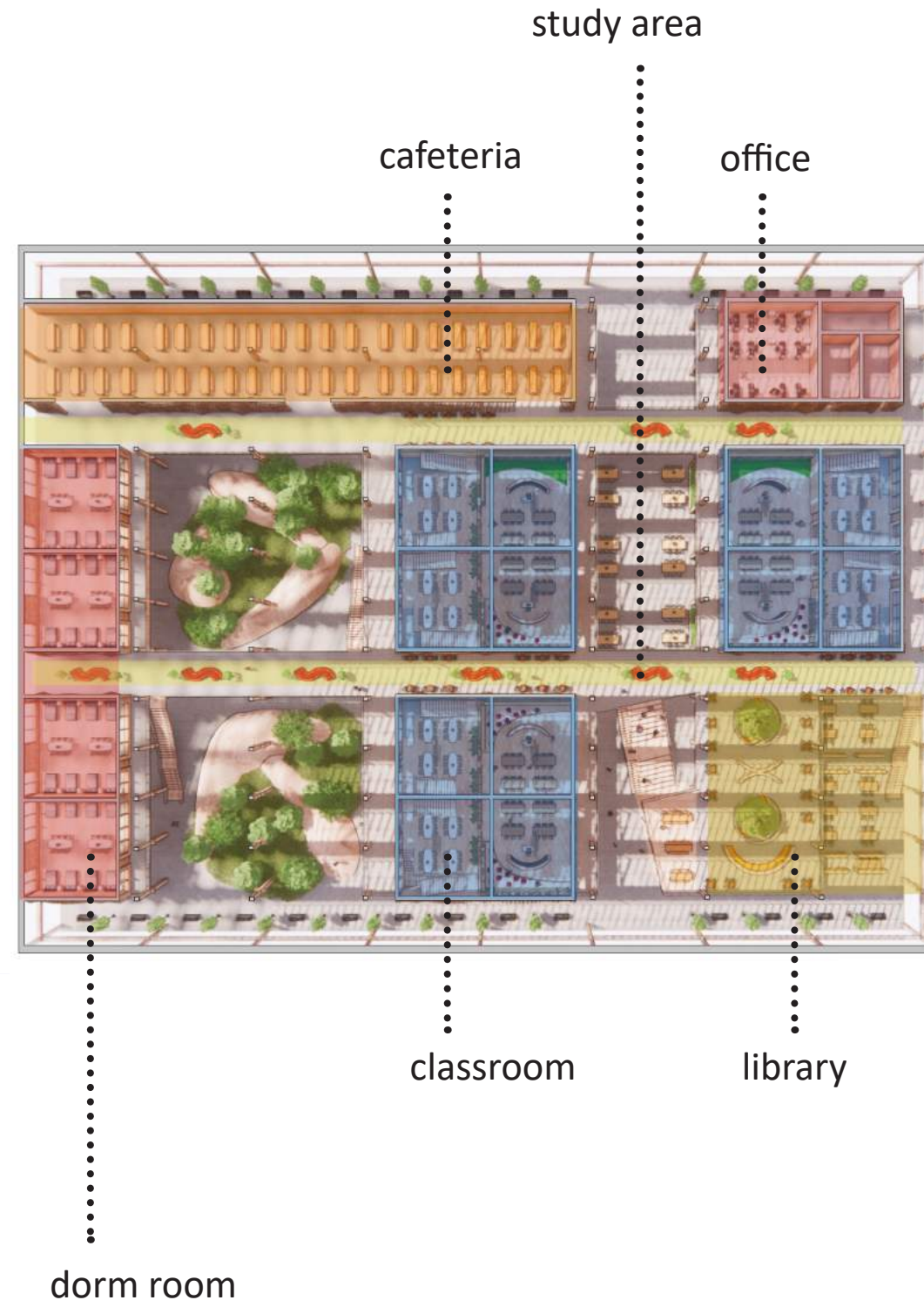
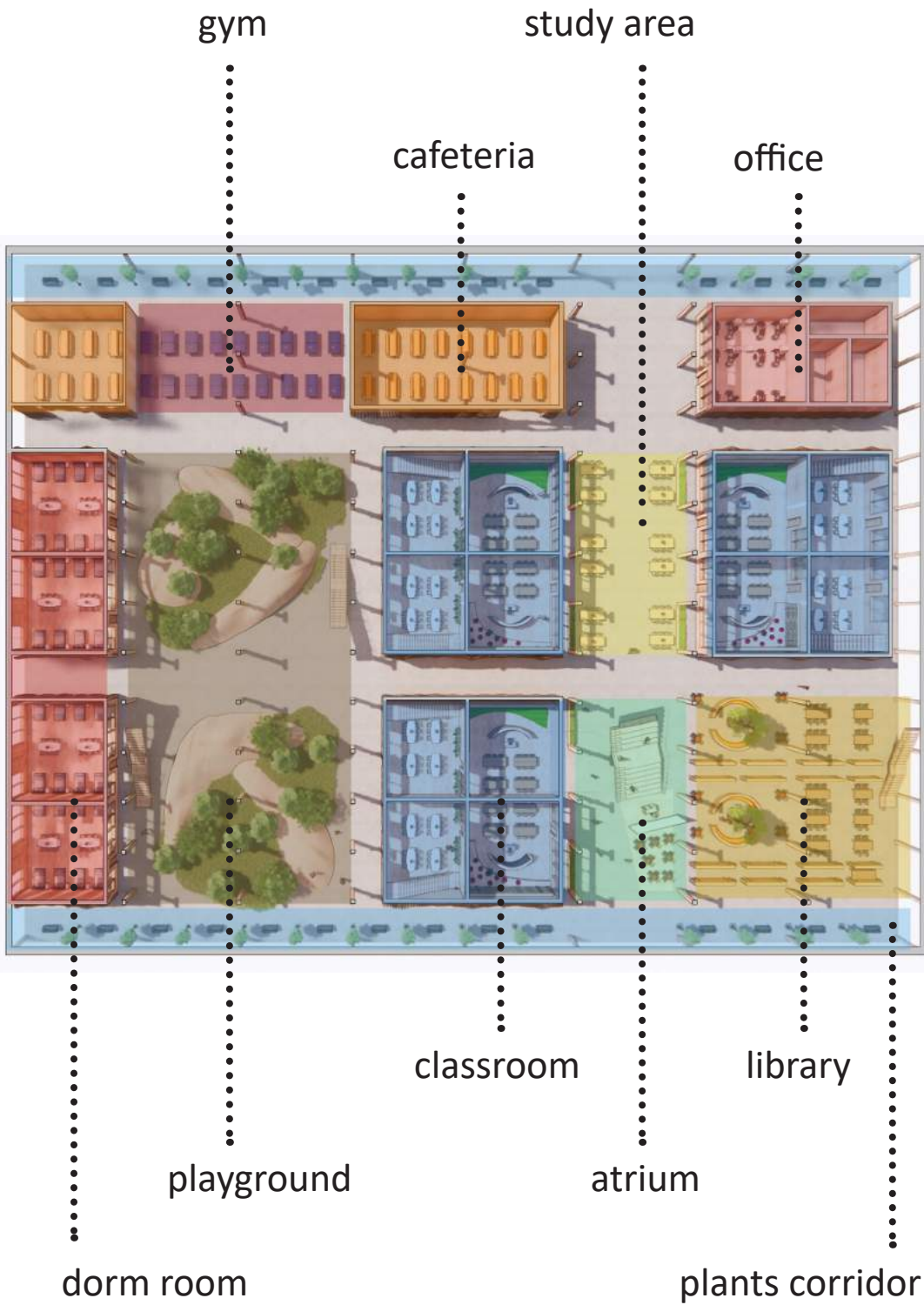
TRANSVERSE SECTION



FIRST FLOOR PLAN

SECOND FLOOR PLAN

MEZZANINE FLOOR PLAN



CLASSROOM DESIGN



lab & study area



greenhouse



senior student's reading area



classroom

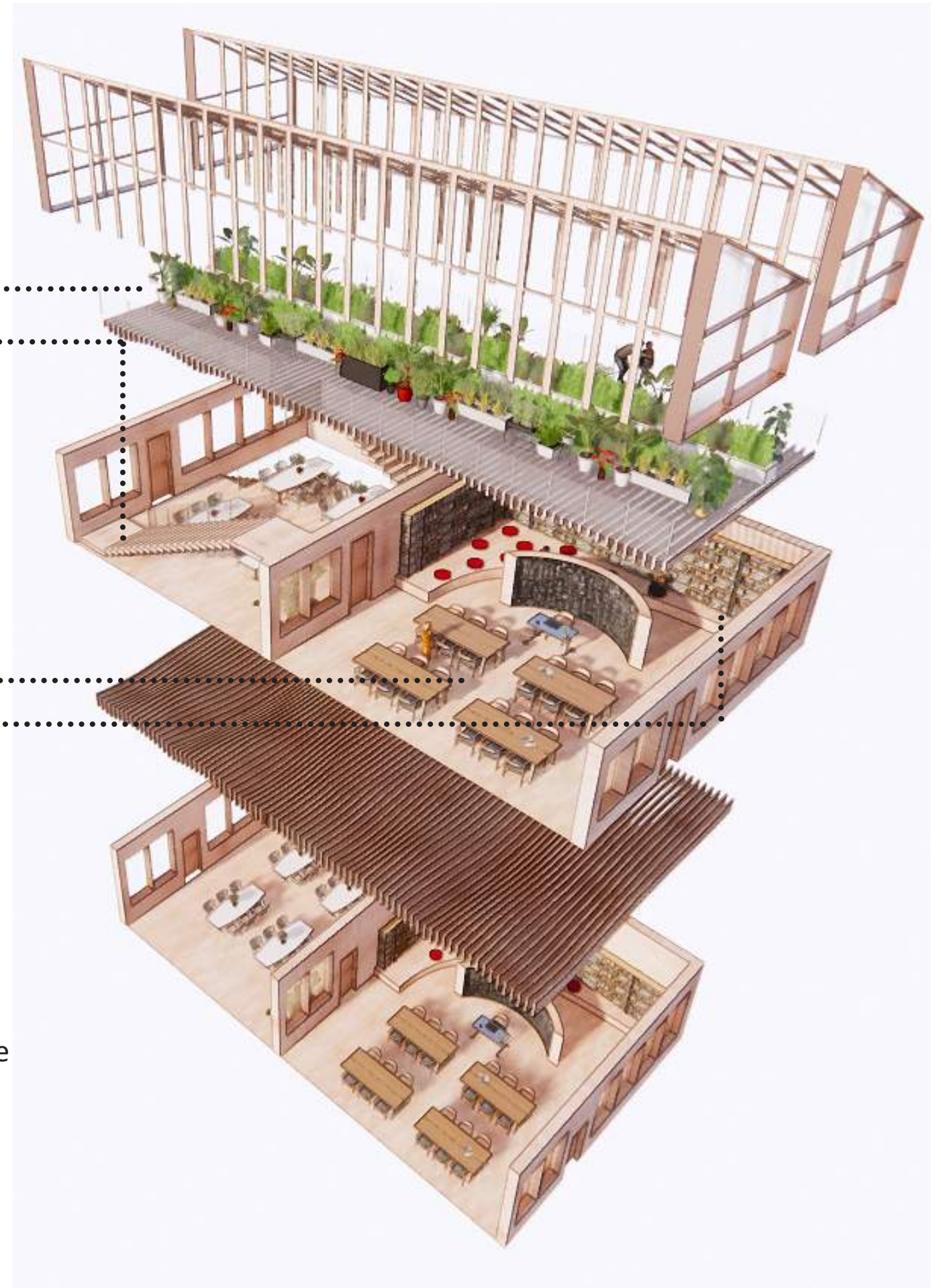


junior student's reading area

The furniture in the classroom facilitates group discussions.

Different classrooms are connected by flexible partitions, and teachers can change the size of the classroom space according to their needs.

The roof of the classroom is connected to the greenhouse, so that plants can purify the air



ATRIUM FIRST FLOOR



ATRIUM-RIGHT FIRST FLOOR



ATRIUM-LEFT FIRST FLOOR



ON STAIR SECOND FLOOR



HALLWAY SECOND FLOOR



HALLWAY SECOND FLOOR



HALLWAY-BACK SECOND FLOOR



LIBRARY SECOND FLOOR



LIBRARY SECOND FLOOR



READING AREA SECOND FLOOR



LIBRARY-STAIR SECOND FLOOR



LIBRARY FIRST FLOOR



SENIOR CLASSROOM FIRST FLOOR



SENIOR CLASSROOM FIRST FLOOR



LOWER GRADE CLASSROOM FIRST FLOOR



LOWER GRADE CLASSROOM FIRST FLOOR



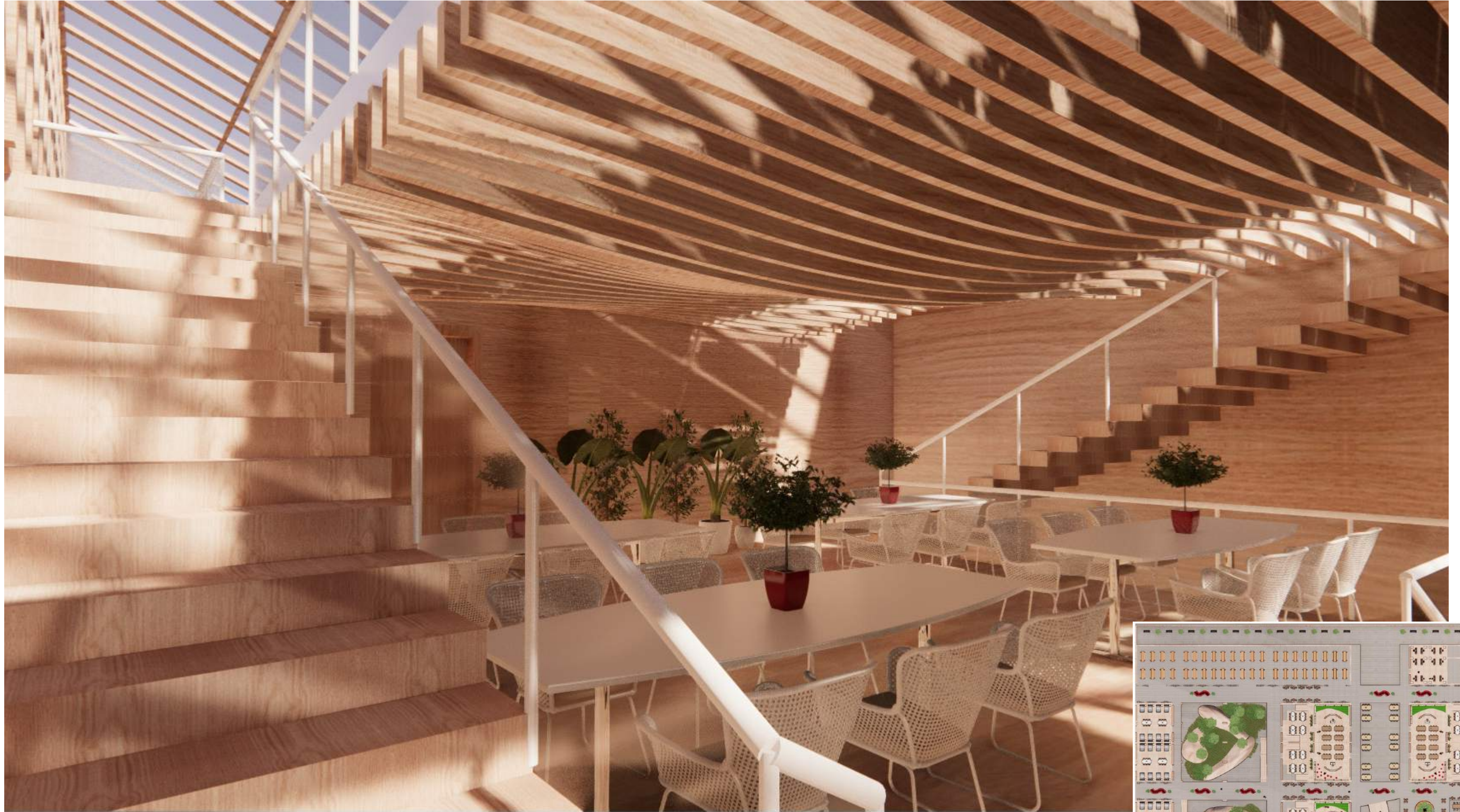
STUDY ROOM FIRST FLOOR



STUDY ROOM FIRST FLOOR



LAB/STUDY ROOM SECOND FLOOR



LAB MEZZANINE FLOOR



LAB MEZZANINE FLOOR



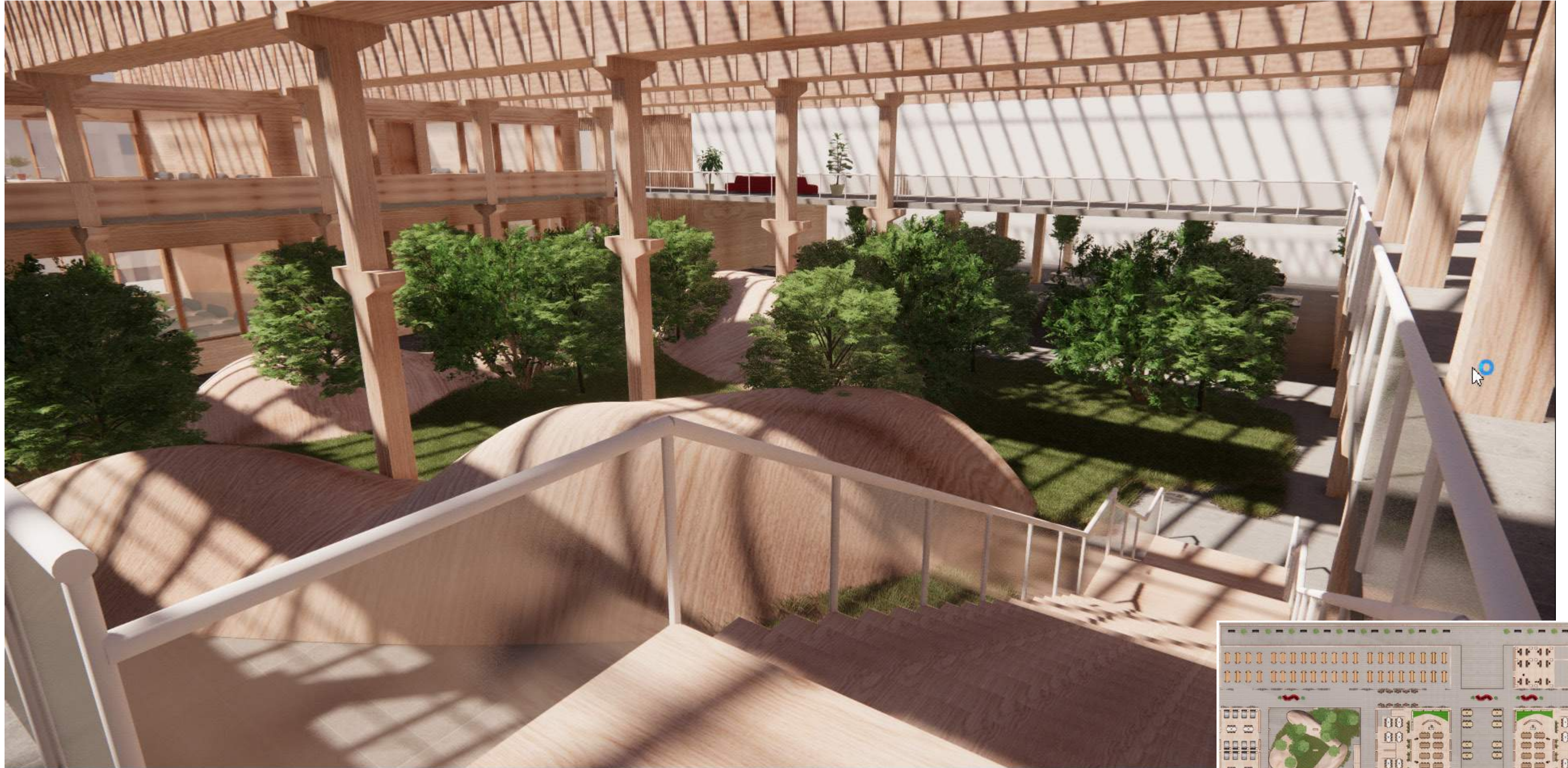
HALLWAY SECOND FLOOR



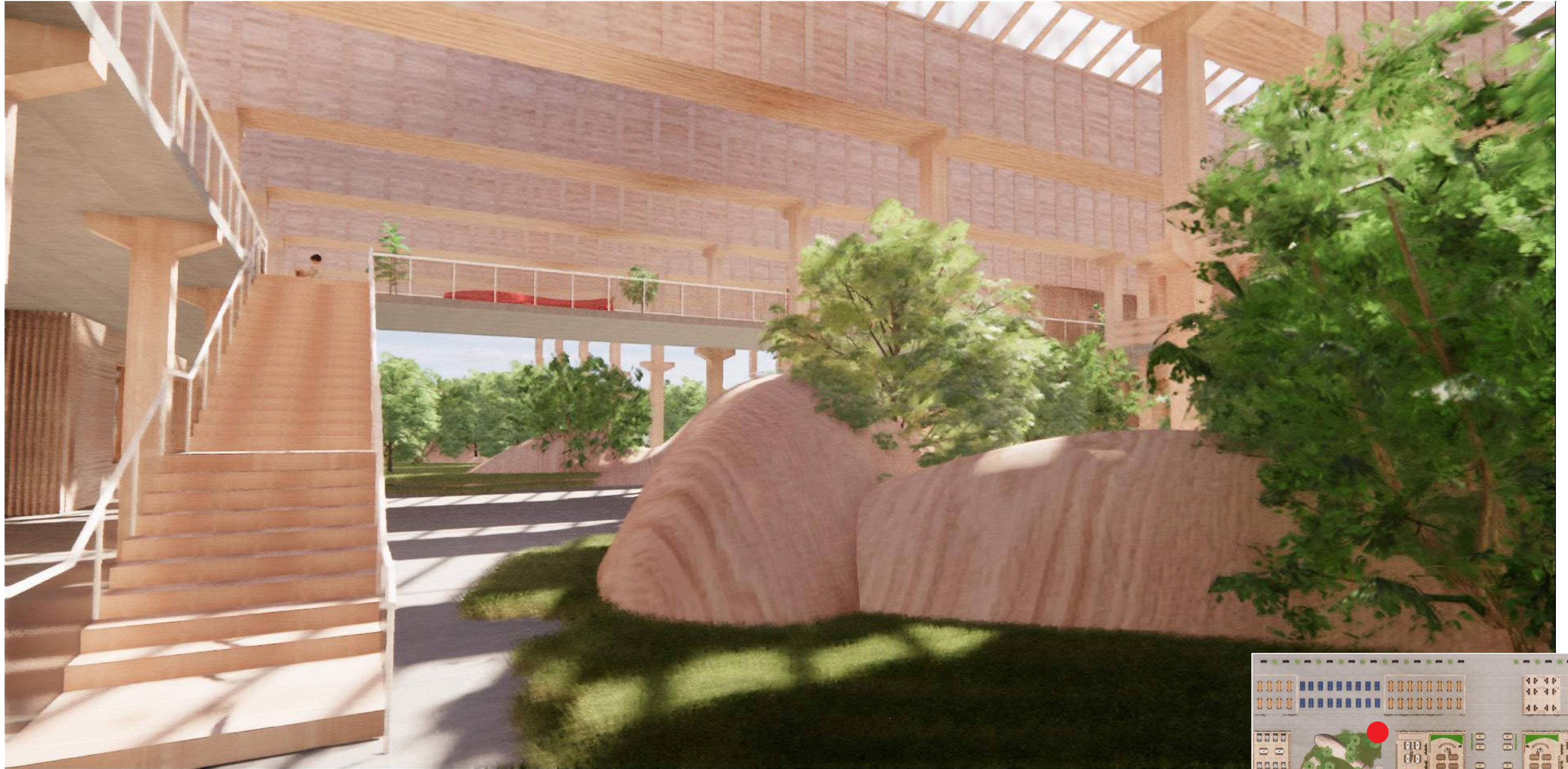
HALLWAY SECOND FLOOR



HALLWAY SECOND FLOOR



PLAY AREA FIRST FLOOR



SPORTS AREA FIRST FLOOR



PLAY AREA FIRST FLOOR



PLAY AREA FIRST FLOOR



PLAY AREA FIRST FLOOR





HALLWAY SECOND FLOOR



OFFICE SECOND FLOOR



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