Value and Impact

History of School Design in Hong Kong

[Student notes]
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Major teaching areas

Design and Applied Technology

Strand 3 — Value and Impact
- Values in technology and design
- Historical and cultural influences
- Entrepreneurship and enterprise

Related teaching areas

Design and Applied Technology

Strand 1 — Design and Innovation
- Design in practice
- Design considerations
- Design and communication

Strand 2 — Technological Principles
- Nature of technology

Interdisciplinary teaching areas

Liberal Studies
- Module 2 Hong Kong Today

Visual Arts
- Visual Arts Appreciation and Criticism in context

Learning objectives

- To understand various factors to be considered in the design of schools, a building typology that should be familiar to students
- To analyse how design responds to ever-changing social needs by looking at the history of school design in Hong Kong

Learning plan

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| Lesson 1 History of School Design in Hong Kong | • 1.1-1.8 Quick overview on the history of school design in Hong Kong  
• Understanding how various school designs have fulfilled ever-changing social needs in history |
What is the building type of your school? Is it one of the standard designs or a unique design? When we speak of a school, we immediately think of a standalone building, but this is not always the case. The school typology has undergone continuous transformation as social conditions change constantly in Hong Kong.

In the following, we will look at the different school prototypes in Hong Kong and understand the relationship between social conditions and design.

1.1 1950s — Public Schools

In the post-war days of the 1950s, Hong Kong experienced rapid population growth due to baby boom and influx of mainland immigrants, and the number of students requiring education rose to more than 100,000.

In 1951, the Government proposed to build new primary schools in every district in the Fisher Report.

- Public schools were usually designed in an L-shape with a basketball court and an assembly hall on the ground floor.
- The school also included 24 standard classrooms and rooms for cookery, carpentry, music and medical studies.

These schools were fully funded and run by the Government.
1.2 1950s — Rooftop Schools

In the 1950s, Reverend Verent John Russell Mills suggested to the Government that
- primary schools could be accommodated on the rooftops of slab type public housing blocks (‘slab blocks’), thus the era of ‘rooftop primary schools’ began.

![Typical floor plan of a 7-storey resettlement block in the mid-1950s.](image)
© Hong Kong Housing Authority

![The roofs of the now-demolished Shek Kip Mei Estate were once the locations of rooftop primary schools.](image)
© Public Records Office, Government Records Service

**Slab Block**

‘Slab blocks’ were a common residential building typology in the 1950s.
- The form of the building extends horizontally, with the width of the building much greater than the depth.
- It appears like a big slab placed at the site. Horizontal floor slabs are the most dominant elements in this typology.

Rooftop schools were situated on the top floor of the ‘slab block’.

![Slab Block](image)

**Discussion**

1. What do you think of rooftop schools? What problems can you see with this kind of school?
1.3 1960s – Annex Schools
Annex schools were a practical approach to solve functional and spatial requirements. From the 1960s onwards,

- 5-storey school annexes with 24 classrooms were built and literally attached to public housing blocks.
- Classrooms were arranged on the two sides of a central corridor which was isolated from natural ventilation and sunlight (double-loaded corridor).
- Students used the public sports courts nearby for PE lessons due to the lack of facilities.

Annex
An annex is an additional or extension of a main building.

Annex schools were based on a single rectangular block attached to a housing block which was part of the main housing estate.

© Karen Tsui

Double-loaded corridor
Double-loaded corridors are a practical approach to the issue of accessibility, with rooms arranged on both sides. The corridor is therefore isolated from natural ventilation and sunlight.

© Karen Tsui

1.4 1970s – ‘Matchbox’ Schools
In the 1970s, schools were designed as buildings independent from public housing estates.

- Due to the rigid rectangular form, they were called ‘matchboxes’.
- As in annex schools, classrooms were placed on the two sides of a central corridor (double-loaded corridor).
- New additions included a basketball court on the ground floor and an extra assembly hall on the 6th floor.

Matchbox
Refers to building blocks with the form of a matchbox. Each building is an independent block that is self-contained. It is not connected to the surrounding buildings.

© Karen Tsui

[Discussion]
1. Compare the design of rooftop schools and annex schools. What problems and merits do you find with the annex design?

[Discussion]
1. What problems and merits do you find in the ‘matchbox’ schools?
1.5 1980s – Standard Design Schools

In the 1980s, the Government developed the standard design for schools. Compared to previous designs,

- A standard school was bigger and better furnished.
- The gloomy central corridor was gone. On every floor, 6 classrooms were lined in a row on one side of the building and accessed via single-loaded corridor.
- The assembly hall was placed on the 2nd floor and doubled as a gymnasium, a facility that was not provided in older designs.
- The number of students in each class was also reduced from 45 to 30-40.

[Discussion]

1. How was the school environment improved in the standard design?

1.6 1980s - Interlocking Schools

In 1978, the Government began to implement the 9-year compulsory education. There was an increase in the number of students and more secondary schools had to be built.

- Due to the limited supply of land, sometimes two schools were built in an interlocking style and shared a common hall building for efficiency.
- Each school had 24 classrooms, 12 special rooms, a library, a covered playground and a basketball court on the ground floor.

[Discussion]

1. What problems or merits do you see in the interlocking school design?
1.7 2000s – Millennium Schools

- Following rapid economic development in the 1980s, existing schools were revamped and upgraded in the 1990s to meet changing educational needs.
- The primary and secondary ‘millennium’ schools were L-shaped and U-shaped respectively.
- The schools had 24 or 30 standard classrooms, a basketball court, a library, language rooms, special rooms, networked computers and multimedia facilities.
- Staff rooms and rest areas were expanded to improve the working environment for teachers.
- In terms of spatial arrangement, the millennium school was comprised of 3 blocks which could be arranged according to specific site conditions.

Millennium school design

Schools in the millennium era adopted a site-specific design. Schools were built to conform to the site context, restraints, and topography.

Model of a ‘school village’ - a group of millennium schools sharing common facilities such as a sports ground. Note the L-shaped and U-shaped configurations.

[Discussion]

1. What problems or merits do you find in the millennium school design?

Floor plans and model of L-shaped millennium primary © Karen Tsui

Floor plans and model of U-shaped millennium secondary schools © Karen Tsui

Source: ‘Hong Kong Planning Standards and Guidelines’, Planning Department
1.8 2000s – Post-millennium Schools

In 2005, the Government began to adopt non-standard designs for future school buildings. Again, the school stakeholders were able to participate in the design process. For the first time, schools could really be tailor made to:

- site conditions; and
- the particular educational goals of the schools.
Summary

1. In Hong Kong, school design has evolved since the 1950s due to the changing needs of the population and limited land and financial resources. Innovation is shown in the development of school designs to improve teaching and learning environments and to suit different learning requirements.

Key words

Rooftop school
Government school
Annex school
Matchbox school
Standard design
Interlocking school
Millennium school

Further reading


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