

# Reflecting, Researching, and Reimagining the Classroom Space Design

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**Abstract:** Today's classroom space has seen little change from 1900s while business and industry, as well as the society have witnessed a major transformation. There is a need for innovative classroom space suited for the current and future societal needs and competencies required for its members. The classroom spaces specifically designed for teacher-centered, exam-focused educational goals have been static since the emergence of modern education in early 1900s in Korea. While alternatives educational approaches such as student-centered learning, collaborative learning, and project-based learning have been introduced and attempted at schools, the classroom spaces largely remain the same. This study aims to shed light on the importance of classroom space design and suggest new educational spaces. This poster presentation will address the following questions: How has the educational space changed with the changing times? What can be suggested with the new educational space design?

**Keywords:** Classroom change, Educational space design, Future schools

## INTRODUCTION

What is an educational space? First, in the broadest sense, we can take Mother Nature as a macrocosm. Everything that happens in the home, school, and social life can be an educational space. For example, for Socrates, the Agora Plaza or the Mayor meeting the people was an educational space, and For Wonhyo, the crowd who sing 'mooae' songs were education spaces, and For Silla Hwarang, nature were education spaces. The second is physical education. The facilities of the school and the physical space that are based on the buildings are different from time to time and have structures and facilities that are differentiated by classification. The third is an existential space that tells the educational phenomenon, the experiences and thoughts with people in it, and the relationship between them, beyond the physical education facility called school. Bollnow said, "The space we think about education should not be an abstract or homogeneous space that mathematicians and physicists think of. Fourth, we can see ourselves as an educational space. This is possible when we go beyond dividing education into educators and educators and put autonomous and personal introspective activities within the human mind into the education category.

According to Lefebvre, space is a social product and a place where it contains various social relationships

and cultural forms. Education is not only about education, but also about life and life. But what we're going to think of right now is a solid concrete building, a tight timetable, teachers and students who trade knowledge frantically in it. Foucault space discourse also describes school as a space dominated by systematic surveillance, regulation, and training, just like an army or jail. Students are considered prison inmates, and teachers and administrators take the place of guards. When expressing an equivalent relationship of "power-known," education is the most regulated power over the two.

We took a historical look at the education space in Korea, and studied the current classroom scene, and what kind of educational space should be changed now.

## 1. EDUCATIONAL SPACE BY AGE

- Three Kingdoms Period

The educational space of the Three Kingdoms era has continued up to the Joseon era centering on mountain water, nature. It was the time when we were studying familiar, that is, not studying centered on books in the library but pilgrims in various mountains or studying the places of life while looking around. Especially, in the case of Hwarangdo education of Silla, rather than the relationship between teacher and student, we continued learning by teaching each other and learning each other.

Table 1. Three Kingdoms Period

Three Kingdoms Period	Goguryeo	Baekje	Silla
Educational institution	Taehak, Gyeongdang	There is no exact record	Gukhak→ Taehakgam →Gukhak



Figure 1. Goguryeo Gyeongdang.

- The Koryo Dynasty Period

School education in the Goryeo Dynasty served as a function of training management. There were Gukjagam, Dongseo School, and Sahak Sibido, which are related to capital city, and Hyanggyo and Seodang in the provincial areas. Munmyeongdang and Myeongryeondang are installed in Hyanggyo, suggesting that the functions of ancestral rites and education were combined. The two functions were inherited by the Confucian schools of the Joseon Dynasty.

Table 2. The Koryo Dynasty Period

The Koryo Dynasty Period	Kwanhak			Sahak	
Educational institution	Gukjagam	Hyanggyo	Hakdang (school)	Sibido	Seodang

- The Joseon Dynasty Period

In the Joseon Dynasty, Taejo promoted school education and tried to build a Confucian-centered society. In order to do this, a systematic nationwide education system had to be established. This was the Sungkyunkwan, Obu Hakdang of Hanyang, and Hyanggyo of the local affection. Gwanhak contributed greatly to the spreading of Confucian culture to the small towns of Joseon province. In the Joseon Dynasty school, there is a separate space for Saint. In other words, two spaces of education and a sacrificial rite met and became a true school. The school architecture of this age was deeply involved in various theories such as the theory of divination based on topography and religious thought. So, the school

was located in a quiet place where it coincided with the nature, and it had to be located mostly in the remote area. Looking directly at Seowon, Seodang, or Hyanggyo, you can see how old people regarded the environmental factors surrounding school as important.

Table 3. The Joseon Dynasty Period

The Joseon Dynasty Period	Kwan-hak	Sa-hak
Educational institution	Sungkyunkwan, Sahak, Hyanggyo, Jonghak, Japhak	Seowon, Seodang



Figure 2. Seodang.



Figure 3. Seowon.

- Modern Times

Today, the first school to be reminded of a modern educational space is probably a square-shaped flat-shaped building with a square window. This is because most people first think of the elementary school buildings they were studying when they were younger than hanok buildings such as Hyanggyo, Seowon, and Seodang, which are traditional educational spaces of Korea, as a modern educational space. If you take a look at the traditional school of modern times, you can easily find the shape of a hanok building. However, the architecture gradually changed to Western architecture and therefore became authoritative and daunting. In other words, the structure of a building has gradually become an authoritative and daunting form of space to enhance the effectiveness of training and teaching. This shows, in relation to discipline, that the modern educational space was created by policy convenience and intention. Especially, the old elementary school buildings which have similar appearance to the places of Korea are built by the standard design, and the

feelings are similar. There was a revision of the standard design. However, after the liberation, the education authorities, who had to promote elementary education facilities in haste to increase the school - age population and mandate public education, had to give more priority to the efficiency of the educational space to accommodate many students at less cost than the beauty of the building. Students were troubled with the limitations of the era that forced them to emphasize only the effectiveness and economics of management and supervision in school space. A little wider, this phenomenon was not just a matter of educational space. At that time, people in various parts of society looked to promote the development of the entire society, as individual sacrifices were taken for granted.

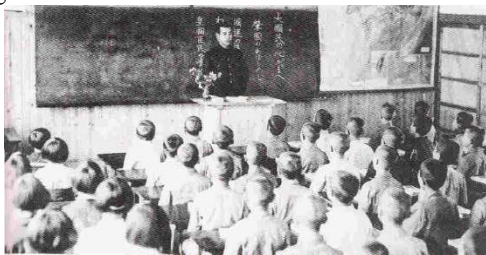


Figure 4. Japanese Occupation of the Classroom

- Today

When we compare our society 100 years ago, many things have changed. Transportation, communication, residential space, cultural life space, etc., but the classroom did not. It is also a dispute that the educational space is still playing a role as a mechanism to oppress students. So what is the shape of the educational space that should be in this era now?

## 2. NEW EDUCATIONAL SPACE DESIGN

The educational space called 'school', which is the space of students' lives, is an important place for happiness. " We build buildings, but they also build us, " Winston Churchill says. We should look back on the poor school environment before blaming children's tendency to become aggressive and violent on only human beings and family education. What changes will be needed to make students clean, comfortable, and pleasant to have a fun school day? The whole start begins with questions and worries to the students involved in the use of space. Students want a place where they can rest and have their own time away from supervision.

- Classroom

1) Polygon desk

Instead of squares with clear boundaries in a monotonous listing, polygon desks can fit each other's

desks in various shapes and increase cooperation and concentration. Either way, it can create a flexible atmosphere to focus not only on the teacher but also on the students who are presenting.

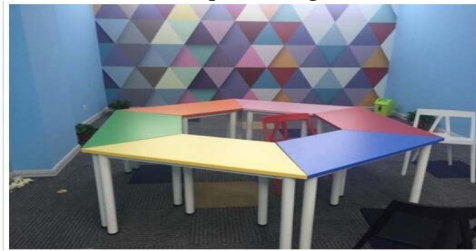


Figure 5. The Polygon Desk

2) Ondol Hanji room

When desks and chairs that make us depend on our bodies are gone, we can hit each other and connect them closer. Hanji is a comfortable place where you can experience traditional Korean traditional beauty and break down the barriers of mind between teachers and students. When there is no class, it can be used as a place to sit comfortably, roll around and communicate freely.



Figure 6. Hanji Room in Yangji Middle School.

- Restroom

The restroom is the second most popular place to use for children after the classroom, and it is as important as the classroom. According to U.S. psychologist Maslow, it is also difficult to realize the high growth drive of learning if these low physiological desires are not met properly. In the case of Daewang Middle School, ' the students ' opinions were reflected, giving the bathroom a subtle fragrance and relaxing music. He also created a large mirror and powder room to become an emotional cultural space. " Beautiful people stay in beautiful places, too! " The students acted according to the changed space and the atmosphere changed greatly.

A man can have his own time in the bathroom, watching a private matter. The man can come up with many ideas and read books. The toilet, which affects not only the physiological needs but also emotional aspects, is not only a refuge for the body but also for the mind. For the sake of this healthy quality of life, improving the toilet is not an option but a necessity.



Figure 7. Restroom in Daewang Middle School.



Figure 10. Library in Shinsung Elementary School.

#### - Corridor

The flat-type corridor is designed to allow one person to control as many people and manage as many people as possible simultaneously. This uniform structure is neither unique nor unique, and is dull and does not stimulate children's imagination. At this time, we can use color to make changes in many schools that are already built. The rigid space can be made into a bright space through color, exhibit works made by students on the walls, or place a comfortable sofa to create a comfortable communication space.



Figure 8. Colorful Corridor in Dongho Elementary School.



Figure 9. Art Gallery in Yangji Middle School

#### - Library

At the school, which is a field of learning, a library is a useful place for children to be closest to, but many students do not read a book for a year, let alone visit the library. Busan Shinsung Elementary School has made it a soft chair or a place to read books on one's back so that students and books can naturally become familiar. It simply makes the library a playground and rest area to play with books. The most attractive element for children was the ability to occupy their own space by dividing the floors with low stairs.

Lastly, the phrase left by the French writer Saint-Exupery clearly illustrates the direction we should be headed.

"If you want to build a boat, do not order people to move timber from place to place or distribute work. Instead, develop a longing for the wide endless sea. "

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