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Approach to School Design  
in Korea

Sun-Young Rieh,  
Jin-Wook Kim,  
Woong-Sang Yu

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# User participation: a new approach to school design in Korea

By Sun-Young Rieh, University of Seoul; Jin-Wook Kim, Seoul National University of Science and Technology; and Woong-Sang Yu, Korean Educational Development Institute

*The Korean Educational Development Institute (KEDI) has recently initiated a pilot project to develop a new prototype school, involving users in the design phase. This is the first time in Korea that users have been consulted on issues relating to school design.*

## THE GOAL OF THE PROJECT

One of KEDI's objectives is to integrate specific elements into school design such as green and community issues. This constitutes a meaningful challenge for the school design industry, which has adapted relatively slowly to today's fast-moving society.

The concept of designing a multiple-school complex is not rare in Korea. An efficient framework called Build-Transfer-Lease (BTL) is in place and steers new school design and delivery projects; however, it lacks user participation in the design process. In response, KEDI has launched a pilot project to address this problem. This article discusses the results of Phase 1 of the project.

The idea underpinning this project was to influence school design in the numerous new cities that are currently being built. Chungbuk Innovation City, where the project is based, is one such city: by 2020 the educational needs of 8 000 relocated workers and some 25 000 – 50 000 families must be met: ten new schools will therefore need to be built.

School projects generally have tight timelines. Also, given that it is difficult to identify administrative and teacher groups, not to mention future students, the concept of user participation has not been seriously considered in the past. When the design process was opened up it was therefore a challenge to identify the future users of the site. However, once this was done, the project set about to reconcile potentially conflicting and diverging user wish-lists; these would ultimately impact on the quality of the school design.

Consultative groups composed of teachers, parents and students were drawn up; one group represented teachers' views in relation to subject-specific teaching needs while a volunteer group of students and parents voiced environmental concerns.

KEDI selected two school sites in Chungbuk: one for a primary school and another for a secondary school, both located in a high-to-medium density residential area. The pilot project used two approaches, each one taking account of the schools' different needs. As a result, while the design approach for the primary school chose a passive image-and-scenario method, due to the pupils' age bracket, the approach for the secondary school was more pro-active and met the practical and behavioural needs of students and teachers alike. It was also more focused on the fact that the school should be designed with future users in mind.

## PRIMARY SCHOOL

Three workshops were organised. There were two groups of teachers (each with 11 participants) and another with parents and students (22 participants). Despite the range of users within these groups, an end goal for the school design was identified by listing keywords chosen from the groups' wish lists. However, achieving this goal is a very different matter, as the architect then had to reconcile diverging opinions and aspirations into one, common design. To complicate matters, architects can choose between different design strategies which ultimately all lead to a specific end design.

As this was a pilot project, the architect decided to use a "design game" that involved selecting images of spaces and customising them. Both steps were dependent upon the participants' imagination and aspirations.

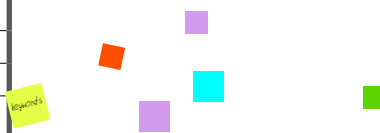
The workshop proceeded as follows:

- Participants compiled a collective wish list and its contents were summarised.
- Keywords were sifted out of the wish list and a goal was identified.
- Participants chose their favourite image from the architect's workbook; they suggested scenarios for the use of that particular space.
- Participants proposed designs for a given space according to their priorities.
- The architect designed a conceptual scheme for the school based on the agreed end goal and the most popular images.
- A provisional scheme was presented to parents and students; they gave feedback in the form of posted comments.
- The architect developed a refined version of the scheme, taking into account these comments.
- A semi-final scheme was presented to the teachers, who provided more feedback.

The fact that the architect had prepared a workbook of images was key because many participants were not familiar with this procedure. The groups were then invited to imagine possible scenarios within the spaces in question. Once all the spaces were categorised into areas such as classroom cluster, corridor, stairs, leisure and open area, entrance and outdoor space, the architect was able to propose a variety of possible school environments.

Selected keywords from the wish list:

Selected keywords	Teachers	Parents	Students
Green (ecology/energy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety/security	<input type="radio"/>	<input type="radio"/>	
Social/communication	<input type="radio"/>	<input type="radio"/>	
Well-being		<input type="radio"/>	<input type="radio"/>
Universal	<input type="radio"/>		
Efficient	<input type="radio"/>		<input type="radio"/>
Fun			<input type="radio"/>



In their respective workshops, parents and students were asked to focus on the community use of the school facilities (gymnasium and multi-purpose room, a library, cafeteria, day-care centre, health clinic and Internet café). The design game they played was particularly productive, and even provided a solution for the surveillance of the premises. The students were then asked to focus on the design of the outdoor spaces, the classroom cluster and circulation areas which the teacher group had initially explored.

Category	Priority 1	Priority 2	Priority 3
Classroom cluster	Subspace	Movable partition	Separate rug area
Interior: open space	Stepped lounge	Separate lounge	Digital lounge
Corridor and stair	Corridor with benches	Informal area with seating	Amphitheater style grand staircase
Lounge	Atrium with green plants	Extendable atrium	
Deck space	Continuous deck accessible from classroom	Independent structure which can serve as an outdoor classroom	
Entrance	Waiting space for parents	Obvious entrance	
Outdoor space	Roof garden	Covered walkway	Open-air playground

The parent/student group was very enthusiastic about the initial designs drawn up by the architect for the main building, and the whole group posted comments in order to further refine the conceptual design. The architect then integrated the ideas from the parent-student group into her plans, which were in turn presented at the teachers' workshop. The teachers then gave their feedback on the design, and these comments were integrated into the final plans.

Drawing: C.Y. Lee



A student's drawing of an ideal school

Photo: Sun-Young Rieh



Teachers reviewing the second design project

Photo: Sun-Young Rieh



Comments posted by the teachers

## SECONDARY SCHOOL

The secondary school opted for a more active mode of participation than the primary school. This took the form of debates and discussions focused on keywords, which was to inform the design and planning of the classroom cluster. The most important issue to arise in these discussions was the subject-based classroom system. Since 2007, Korea has committed to transform school planning so as to include subject-specific classroom design; this pilot project proved to be particularly valuable in this respect. The group also discussed the design of public spaces to be used by students during recess. All of these issues were followed closely by the architect, who wanted to ensure that the needs of future students and teachers were integrated into the school plans.

As for the primary school, there were three workshops in all. The process began with a briefing on recent ideas on educational facilities, design trends and the concept of user participation in school design.

In the first teachers' workshop (17 participants), the participants brainstormed ideas in order to identify a series of keywords. Then two groups were formed: one group designed a prototype classroom cluster, teachers' office and a common area, while the other group examined several site plan layouts. The classroom cluster design included a public area, a communal area and an office for teachers: it was thought that this proximity would enhance student-teacher relationships. An important consideration was the orientation of the buildings themselves. Due to the long Korean winter, their orientation plays a critical role with regard to energy efficiency and making the most of natural light.

The parent-student workshop (24 participants) used a workbook which was created specifically for this purpose. It included variations of favourite spatial layouts, guidance on how to identify problems in school design and how certain layouts can satisfy student needs. The workbook enabled participants to design a prototype classroom cluster which included classrooms, a lab, locker space, offices and common spaces for the teachers. Students presented different propositions for these spaces; these were discussed and compared.

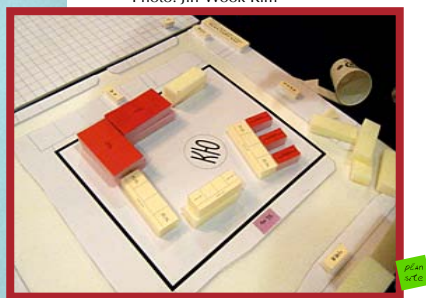
In the second teachers' workshop, feedback was given on the design development stage which reflected the needs of parents and students.

Conventional school design in Korea has led students to spend most of their day inside the classroom. Communal areas are rare, aside from auditoriums or gymnasiums. However, the way schools function is beginning to change, and these spaces – which encourage students to gather and work together – are now recognised as extremely beneficial in that they encourage teamwork and provide rest areas. The student group totally supported this idea, stressing the need for spaces which were comfortable and where they felt at ease. Consequently, they designed small gathering spaces within learning areas, as well as a main building for larger gatherings and a space for large group activities. It was felt that a variety of gathering spaces would nurture a culture unique to the school, encouraging collaboration between students as well as between students and staff, whilst also providing a dynamic learning environment.

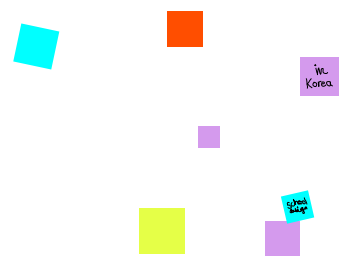


Students proposed a classroom cluster design

Photo: Jin-Wook Kim



A proposed site plan



## CONCLUSION

This project served as a valuable testing ground for including users in the school design process, despite the fact that the participating groups were not necessarily the future users of the school buildings concerned. Furthermore, the feedback from the participants was so positive that the design team is considering extending user participation via social networks.

The architects of the primary and the secondary schools are now in the process of developing Phase 2 of the project. They are integrating the ideas put forward by the teachers' groups into the design, namely in relation to the teaching and learning spaces. Overall, the results of this pilot project were highly encouraging and all participants showed a keen interest in continuing their involvement with it. User participation has proven its worth.

*For more information, contact:*

*Ms. Sun-Young Rieh, Arch.D (corresponding author)*

*Professor, Department of Architecture*

*University of Seoul*

*90 Cheonnong-dong, Dongdaemun-gu*

*Seoul, Korea*

*E-mail: syrieh@uos.ac.kr*

*Mr. Jin-Wook Kim*

*Professor, Department of Architecture*

*Seoul National University of Science and Technology*

*172 Gongreung 2-dong, Nowon-gu*

*Seoul, Korea*

*E-mail: jinwook@snut.ac.kr*

*Mr. Woong-Sang Yu*

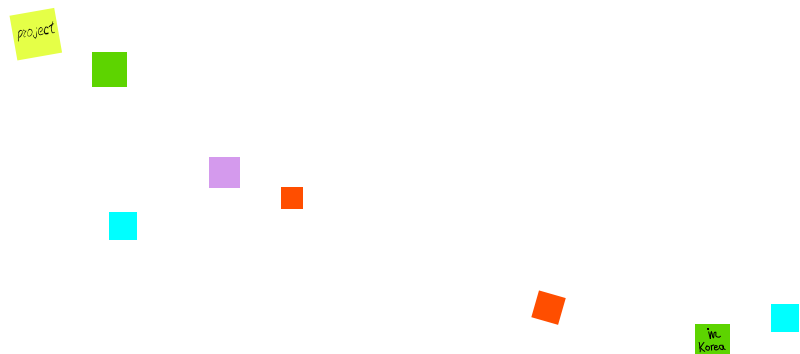
*Director, Educational Facilities Research and Management Center*

*Korean Educational Development Institute*

*35 Baumbero 1gil, Seocho-gu*

*Seoul, Korea*

*E-mail: ywsang@kedi.re.kr*



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