

Abstract

A Study on Evaluation Model Development of School Facilities' Crime Prevention Design

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Crimes that occur in the school vary from the violence among students to the crimes by outside intruders. Moreover, there is a growing trend of increase in crimes. Among the various institutional and administrative efforts amid social interests to prevent crime, this study was conducted to find ways to prevent crimes in terms of school facilities. Although Studies and guidelines on crime prevention through environmental design ('CPTED') of school facilities have been presented recently, most of them are reflected to the new buildings, and most of existing schools are with facilities and environment vulnerable to CPTED and haven't been reaping substantial effect comparing cost investment by merely depending on CCTV, private security companies, school guards, and school sheriff.

Therefore, this study was aimed to develop practical evaluation model that can help existing schools to self-diagnose their facilities and environmental territory that are vulnerable to crime, and prescribe future improvement measures.

First, in literature and international case studies, we redefined school crime in order to match various opinions about the crime that occurs in the school. Based on definitions or

scopes in various literatures, we defined school crime “as the crime such as robbery, destruction, violence, theft, rape, or arson that occurs in the school facilities (around the school, boundaries, school lot, and indoor/outdoor facilities) committed by students, teachers, and external intruders.” Also, we explored CPTED-related previous studies, CPTED guidelines home and abroad, and particularly UK’s SBD and SE cases. Through these we extracted previous studies results, guidelines, and practices that can be introduced in our country’s existing schools and drafted evaluation index which is assessment tool, based on discussions and experiences of our research team. We extracted evaluation index by setting evaluation item according to evaluation scope of the main category, and by putting evaluation standard of sub-category into checklist format.

Primary Delphi survey was conducted by the group consisting of experts of school facilities and CPTED. The system, content, and adequacy of above extracted evaluation index draft were investigated and reflected. As a result, overall modification and supplementation was made to the checklist while maintaining evaluation index system. And on-site preliminary investigation was conducted on elementary, middle, and high school level on the basis of primarily-modified evaluation index. And fact-finding and teacher interviews were paralleled to pre-review the applicability of evaluation index on school site. And, evaluation method and grading points were assigned to the evaluation index that had been secondary modified through on-site preliminary investigation.

In order to develop it as a tool that anyone can easily use at school site in the future, we derived methods of point distribution and evaluation methods under the following five principles.

First, we assigned the code for efficient classification. For example, we expressed in the form such as ‘A-a-01’; the scope for uppercase alphabet, item for lowercase alphabet, and checklist in two-digit number.

Second, we assigned weighted value between checklists. We assigned weighted scores from 1 to 5, depending on the school crime prevention effect, expected effect on

investment, and the importance of it.

Third, we sorted by default and selection. However, there are limits to apply same evaluation index to all schools. Therefore, we sorted by default and selection (▲mark), so that checklists not applicable depending on the circumstances such as school level and location of the school can be excluded.

Fourth, we set the evaluation method. The evaluation methods are broadly classified into two types. We sorted and set grading method (A) that grades depending on whether or not to simply apply checklists; grading method (B) that grades according to the evaluator's subjective judgment on the level of satisfying checklists.

Fifth, we set the evaluation method and suggested a way to prove the assessment by checklists such as inspections, interviews, and evidence.

Above point distribution and evaluation methods by evaluation index proposed by the researchers obtained adequacy and feasibility through secondary Delphi survey, and as a result, total of 84 checklists were drawn through final modification and supplementation.

Through the review and consultative processes with frontline school life teachers (or student directors) by utilizing final evaluation index (plan) to built evaluation model of this study's purpose, we ensured the adequacy of introducing evaluation index on-site. Through a series of these steps, the final evaluation index was developed as follows: a total of five areas, 24 items, and 84 checklists. As per the grading of weighted value: 18 points for the school surroundings environment (A); 42 points for lot boundary(B); 68 points for external space in the school(C); 87 points for internal space in school (D); 85 points for operating and management (E); and is composed of a total of 300 points.

In order to make it easy to evaluate by anyone at schools utilizing evaluation index developed by this study, we built evaluation model in the form of cards to evaluate by evaluation criteria and guidelines by checklists. Checklists in the evaluation model are systemized with the following: code of evaluation index; evaluation methods; grading; selection (▲mark); evaluation criteria; evaluation guidelines; grading methods; evaluation

methods; and submitted documents.

Naturally, we made the evaluation results through the above evaluation model in each unit school to be easily identified by obtained weighted-scores and radial graphs by areas, items, and checklists. Furthermore, we tried to suggest improvement measures for each area, item, and checklists that clearly showed vulnerable parts in the appendix of this study. Thus, allowing each unit school to diagnose school crime prevention design through this evaluation model and to prescribe and take improvement measures is the great feature of this study.

Finally, in order to reduce school crime by actively utilizing school facilities Crime Prevention through Environmental Design Evaluation Model through this study, we proposed following policy suggestions:

First, practice guidelines of school facilities CPTED should be developed and spread. And there is a need to develop guidelines that can be applied to any type of school, school condition, and school situation based on solid expertise. Also, various guidelines for one element should be provided. Because each school's situation varies by its regional characteristics and school location, various guidelines that can apply the most appropriate elements to the corresponding school should be provided. In addition, guidelines should consist specific and detailed information and easy to understand and apply. Also, the guidelines should be developed and provided easy-to-maintain and highly-effective. Also, efforts should be made to reflect guidelines in KS standards and standards adjustment; so that more enhanced building materials and safety devices could be supplied to school site;

Second, legal basis for school facilities CPTED certification system should be made. There are cases of decreased crime and improved academic achievement caused by SBD certification which is UK's CPTED institution. Likewise, Korea should make school CPTED certification compulsory and prevent school crime beforehand as much as possible. First, CPTED exclusive institution, organization and personnel should be ensured for CPTED certification system to settle stably. And to do this, we need state-level administrative and

financial support, and cultivate CPTED experts. Also, certification procedures should be simplified and convenient, so that schools themselves can diagnose and improve continuously. For this purpose, we have a plan to develop computerized system of school facilities Crime Prevention through Environmental Design Evaluation Model as our future project of this study;

Third, promotion of CPTED is needed to change social awareness. Regular CPTED-related education and training programs for local residents including teachers, students, and parents who are main users of school facilities should be developed. Especially, CPTED program must be included in the job-training programs for school personnel. CPTED education and training is desirable to be proceeded with CPTED experts', local police officers', and fire fighters' visit to school on a regular basis;

Fourth, linkages with CPTED-related organizations should be established for the settlement of CPTED. Establishment of unit school's Crime Prevention through Environmental Design alone cannot guarantee students' safety. It is important to make safe communities from all crime. One of the most important tasks to be carried out in cooperation with relevant organizations is making a crime map in unit area, utilizing programs such as geographic information system (GIS). Also, it is necessary to link unit school's integrated control system and community's integrated control system, because unit school's integrated control system alone has limit to prevent school crime.

Keywords : School Facilities, Crime Prevention Through Environmental Design, CPTED, Evaluation Model