

Rujipun Gosongarn 2010: Evaluation and Design of Environmental Conditions in Classroom. A Case Study of Faculty of Engineering, Kasetsart University, Bangkhen Campus. Master of Engineering (Safety Engineering), Major Field: Safety Engineering, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Sansanee Supapa, M.S. 209 pages.

The objective of this research was to improve the environment of the classroom in the Faculty of Engineering, Kasetsart university, bang khen Campus based on the Engineering Institute of Thailand standards. The classrooms were classified into 3 types, small, medium and large size at the capacity of 20 – 40 , 60 – 80 and 80 – 120 persons respectively. The environmental conditions in the four factors were investigated as following : illuminant which is the reflection of light from outdoor , sound condition which related to the echo from the acoustic system , the quality of air condition and the smell. From the result of the questionnaire which were evaluated by the student who used those classroom , it was found that the four factors affected to the learning condition for three size classroom are 70%, 89%, 67% ,69% ,80%,65%, 84% and 91% for small size , 60%, 80%, 73%, 76%, 84%, 51%, 80% and 88%for medium size and 64%,85%, 73% , 90%, 88%, 67%, 73% and 82% for large size respectively

The environmental conditions of the classrooms were measured. The computer software was used to simulate the light scenarios and the light fixture in the classroom. The light fixture were cleaned and the illuminant was increased to comply with the standard. For the reflection of light problem, the appropriate curtain was recommend. The layout of classrooms were design at available area of at least 1.3 m^2 per person accord to standard.

Student's signature

Thesis Advisor's signature