

# AN ENVIRONMENTAL ASSESSMENT OF PUBLIC PRIMARY SCHOOLS OF ISLAMABAD AND PROPOSED REMODELING FOR ONE SELECTED SCHOOL

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## ABSTRACT

Current research interest in sustainable built environment is compelling architects, engineers and designers to re-visit the existing buildings to evaluate them on environmental criteria and to assess if the building is conducive to accommodate the user needs. Such type of research, focusing on school buildings, has demonstrated that environmental features including thermal comfort, lighting, indoor air quality, acoustic and provision of open spaces, impact the performance of students and teaching staff both physically and psychologically. The paper discusses the state of government school buildings in Islamabad. Post occupancy evaluation technique has been adopted to evaluate the school buildings. Extensive case studies are carried out on five school buildings drawn from the existing Federal Government (FG) Schools (one each from the five sectors) on account of said environmental features conducive to student learning. The research is carried out in two phases; first phase comprises data collection through questionnaire surveys and observation sheets from students and teachers about their perception and satisfaction for various environmental features. In second phase the environmental meters had been used to record the temperature, lighting and acoustic levels in the selected schools. Findings from research have been compared with international and national standards, and directed to identify the inadequacies and design draw backs. The study has revealed that space standards are much below the international standards and existing classes are very cramped in most cases. There are also design flaws in lighting, thermal comfort and acoustics and essential facilities are either missing or are substandard in most cases. Finally, an attempt is made to remodel one of the five schools studied and identified as lowest in meeting the environmental features. The research concludes with recommendations applicable for remodeling of existing schools or for the construction of new primary school buildings.

**Keywords:** User-friendly architectural design, Sustainable building design, Environmental quality of school buildings, Conducive environment, Post Occupancy Evaluation.