POST-OCCUPANCY EVALUATIONS IN ARCHITECTURAL PROGRAMMING PROCESS: A CASE STUDY OF EDUCATIONAL BUILDINGS

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Introduction

The purpose of this research is to discuss general practices of Post-Occupancy Evaluations (POE) in school building design cycle process. It has generally been assumed that programming just provides architectural designers with information about identification of client goals, user needs and space requirements.1This information is utilized in the process of architectural design decision-making. That is, architectural programming is mostly regarded as it starts at the pre-design stage, includes design, and construction phases. Post-construction phases, and finishes with the feedback of post-occupancy evaluations of school buildings have generally been neglected.

School buildings in Turkey are mostly built as large educational complex, educational levels of which ranges from nursery school to High school. Additionally, contemporary school buildings comprise of several facilities such as gymnasium, conference hall, foyer, indoor swimming pool and other sorts of spaces supporting extracurricular activities. Spatial organization schemas of school buildings may vary distinctively according to several parameters including construction rights of the site, climatic and topographical features, clients and users demands. Classroom patterns of each education level and their relation with the location of the above mentioned facilities are very crucial in design process of school buildings.

Motivation & Methodology

POE provides the designer a useful opportunity to assess whether the building has met the requirements satisfactorily or not.

The study began with a literature survey of existing documents on design process of educational buildings and programming issues. Specifically, currently active different programming approaches, their theoretical basis and the contemporary role of POE are examined in detail.

Some of the most basic materials used in architectural programming are as follows: interviews, questionnaires, checklists, photos, (showing the problems and necessities), drawings, diagrams.

It is not in the scope of this research to discuss purposes and benefits of programming in design process. Rather post occupancy evaluation phase of the design cycle is focused on in detail. Conceptions of POE models are analyzed and compared with each other.

In the final part of this research, existing research methods and materials generally used in POE models are studied comparatively in three different school complex from Turkey in order to exemplify post-occupancy evaluations. POE surveys are conducted to different sort of users such as students, teachers, and administrative staffs.

Post-Occupancy Evaluations Models

Contemporary Architectural literature often divides modern design practice into four molar processes[1]: Programming, Design, Construction, and Post Occupancy Evaluation. Although POE is paid more attention in the recent years, there should be more studies on this issue in order to utilize experiential information for the next projects.

POE studies are generally used as the continuity of architectural programming issues. In order to understand the role of POE in design process, programming needs to be clarified first.

Contemporary definitions of programming goes beyond of conventional methods and try to benefit of users experiences by means of adopting POE.

The history of the architectural programming, which means the list of space requirements for the users of the building, goes back to the antiquity. [2] Of all the definitions of programming, specifically Palmer's following phrase is very clear to understand what it really is: "Programming is an organized collection of the specific information about the client's requirements which the architect needs in order to design a particular facility" [2]

J. Christopher Jones Studies on the industrial design methods for the purpose of understanding why new data on ergonomic researches was not incorporated into industrial design process became the birth of the design methods movements. [3]

While Duerk [4] define it as "the gathering, organizing, analyzing, interpreting, and presenting of the information relevant to a design"; Hershberger [5] put an emphasis on values by writing as follows: (it is) "a document in which the identified values, goals, facts and needs are presented."

Hershberger brings a new concept to architectural programming as 'quality architecture,' which goes beyond mere functionalism and claims poetic approach. He proposes designer should also be the programmer. Contemporary definition of programming is more close to the real conditions by going far beyond providing basic technical data necessary for design process.

POE studies can be based on several types of analyses and assessment situations, such as client's perspective [6], facilities management [7], building performance [8], users' point of view [9]. POE surveys conducted at this research specifically base on conceptual framework for architects.

'Guide to Post Occupancy Evaluation' [10] and 'Post Occupancy Evaluation Survey Report' [11] are among the most important and useful publications available on the topic, which exemplifies POE survey questionnaires.

Case Studies:

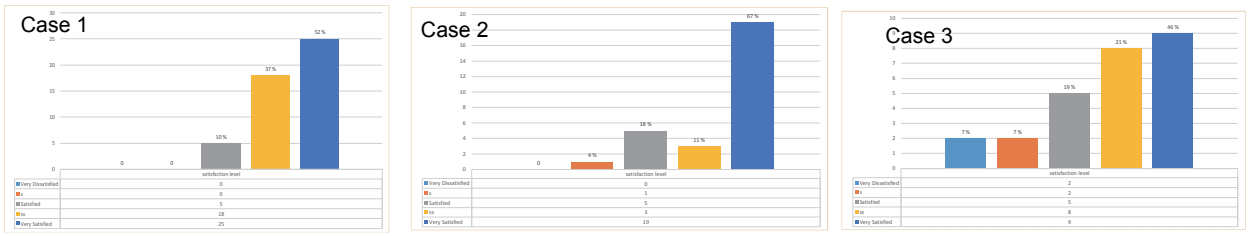
Although there are various concerns that can be discussed after collecting data from the POE surveys, it has just been limited to deal with the spatial issues that are mainly dealt with architects in design process of school buildings as follows: Relation between different educational levels, Location of the Nursery School in the school settlement, Spatial organization chart of the classrooms, Spatial relation in between classroom and wet areas, Satisfaction level from the size of the classrooms, Satisfaction level from the size of the indoor activity area. In addition to personal observations on the site, surveys of POE consist of interviews, questionnaires and checklists.

DISCUSSIONS & CONCLUSIONS

This research dealt with spatial compositional issues of designing school buildings by means of utilizing POE surveys conducted in three different school buildings in Turkey, in the cities of Manisa, Bodrum and Burdur. It is hoped that the results of the POE surveys will contribute to improve the quality of school facilities for the following design works in design cycle. After literature survey on the programming and POE in the first chapter, it has been focused on the answers of the following basic questions: How satisfied are users with the architectural features of the facilities in terms of location, size, proportion, relationship among the facilities etc.

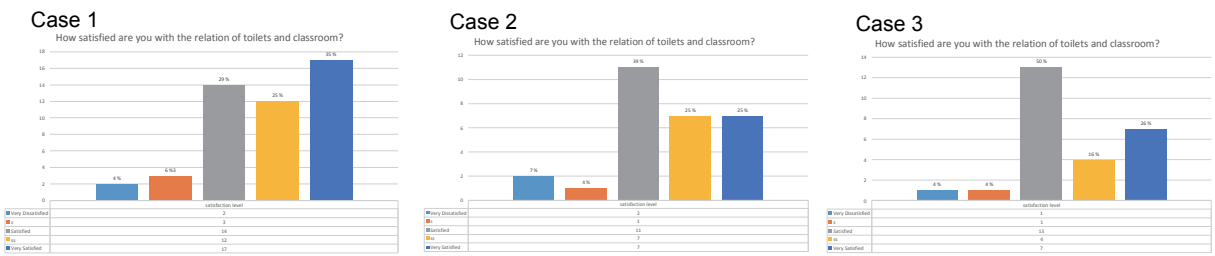
The location of the nursery school in the school complex is one of the primary concerns that needs to be decided in the preliminary phase of design process. Surveys related to the pre-design phase in order to create brief and expectations of clients and users show that having a separate building for pre-primary class students is mostly preferred. But the POE studies prove that satisfaction levels do not much differ between the different sorts of the buildings as integrated or independent unit.

Table 1: Satisfaction levels from the location of Nursery School in the complex



The relation between classrooms and wet areas is also very critical in design process of nursery schools. Since children of these ages need to use WC very often, the location of WC should be easily accessed by children. POE surveys showed the following satisfaction levels for different planning solutions.

Table 2: Satisfaction levels from the relation between wet areas and classrooms



In conclusion, POE surveys of three different school campuses, each one of which has a distinct spatial schema in terms of critical issues related to school design, are conducted and the results are compared with each other to create useful information for the future design works of school buildings.

Notes

1. For more information on this issue please see the references. [12] [13] [14]

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