

Involvement of People in the Design of Community Building in Developing Countries

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Abstract:

Although public participation concept or technique to enhance and /or influence decision making is a fact of life in many governments nowadays and has been used by many industries to improve their products and increase end-users satisfaction, it is still new to the Architectural, Engineering and Construction (AEC) industry. The extent to which participation should occur and the role that it plays still remains uncertain in the AEC industry. Participation has been the predominant conception for many years by many researchers. In practice, this has meant that public participation often has occurred late in the planning process. This research will focus on the involvement of people in the design process of community buildings in developing countries. During the last five decade, many community buildings were built and many of these buildings did not performed well as planned. Many of these problems in were related to design, hence the choice of architectural design of these buildings for this research. If the end-users of these buildings were involved in the planning and design stages, many of these problems would not occur. Thus, the aim of this research is to develop a conceptual framework to involve the public in the design of community buildings in developing countries. A thorough review of pervious work related to the public participation in the design of community buildings has been conducted as part of this research. The review revealed most of these works in this area were done on developed countries and no research works were conducted on developing countries so far.

Keywords: Buildings, Community, Design, Involvement, People, Participation

Introduction

Rachel (2008) defines involvement as a way of genuinely and actively engaging people in the decision making of public bodies. Participation has been the predominant conception for many years with many researchers (Smith, 1982; Guijt, 2007). However, the direct involvement of end-users affected by proposals, especially through the use of public hearings, has been the main emphasis. In practice, this has meant that public participation has often occurred late in the planning process as well as most public participation occurring at the operational level of planning (Smith, 1982).

Damodaran (1996) stated that effective user involvement in system design does indeed 'inevitably bring in wider elements of working life'. This phenomenon occurs because many decisions, which apparently focused upon purely technical issues, are in fact socio-technical in nature.

A hierarchy of planning involves normative, strategic and operational elements. Involvement is a means of participation or engaging people in the decision making of public bodies. Its purpose is to permit public authorities to meet with people to make decisions. In addition, the purpose of involvement is to collect views and experiences from people so that these are included in consideration during the design stages. Therefore, the designer should be open-minded to both old and new ideas in order to achieve a good blend of ideas (Woolner et al, 2005).

In developing countries, community buildings have major problems; some of these can be related to the design of these buildings and the lack of considering the needs of the public in the design. In Libya, for instance, during the last five decades community buildings have been built, including hospitals and schools that suffer from many problems. Amongst these are lack facilities for disabled people, due to the fact that the authorities did not listen to people's views on the design process, even in line with the requirements (Hirschheim, 1983). This research will focus on the involvement of people in the design process of community buildings in developing countries. Furthermore, there are several problems in proper design, hence the choice of the site for the design of community building. Therefore, the involvement of people in designing community buildings in developing countries is very important

Since schools are prevalent in Libya, this paper will focus on the design of secondary schools and show how end-user involvement can be part of the design process stage to take advantage of knowledge about this topic and propose radical solutions appropriate for children.

This paper presents a research project that is investigating public participation in the design of community buildings in developed countries to understand how end-users of community buildings are involved in these buildings especially secondary schools. The paper is divided into four main parts: the aim and objectives of the research; the methodology; the involvement of end-users in the design process stage and identify some of the problems; and the previous work carried out in this area and identify some of the problems that have not been reviewed. The last section includes the conclusions and future work.

Aim and Objectives

Academic research has drawn great attention to involving the general public in the design process in many industries and many fields. However, public participation in designing community buildings has not been fully discussed yet in regard to the Libyan context. The question of how to involve the public in the design process is still under investigation by the academic researchers. Many problems in existing community buildings are strongly related to the lack of considerations of public needs in the design stage. Furthermore, previous research paid little attention to the increased involvement of the general public in the design of community (secondary schools) buildings in developing countries. This new research aims to develop a conceptual framework for involving the general public in the design of community buildings in developing countries. To achieve this aim, the following objectives are formulated:

- To critically review the extant of literature concerning the evolution of the architectural design process in the last five decades in developing countries and especially in Libya.
- To investigate existing design problems in community buildings (secondary schools)
- To critically review and discuss existing approaches and frameworks of end-user involvement in the design of community buildings
- To determine the requirements of a new conceptual framework that designers will use to involve end-users in the design process

- To develop a conceptual framework for involving people in the design of community buildings in developing countries
- To test and evaluate the proposed conceptual framework

Research methodology approach

The main objective of this research is to involve end-users in the design stage to fulfil their needs, especially in community buildings, therefore the research method adapted is:

- Literature survey of previous related works on involvement of people and end-users of community buildings in the design stage
- Questionnaire survey, to investigate and identify the problems in the design of community buildings (e.g. psychological, social, cultural, aesthetic performance; efficiency and work flow performance, accessibility, privacy, etc.)
- Interview survey will be conducted with designers and decision makers involved in the design of community buildings to review existing use of frameworks and models of end-user involvement in community buildings design and any problems with their use if there is any use. If no, why there was no adoption of such frameworks or models for involvement of people in the design of community buildings in the county of study.
- IDEF0 (a functional modelling method) to developing a conceptual framework for involving people in the design of community building in developing countries and evaluating the evolution of the architectural design process to date for developing countries and validation
- Focus group research method will be used to test and evaluate the proposed conceptual framework.

Public Participation in Decision Making

The public participation concept or technique, to enhance and /or influence decision making is a fact of life in many governments today and has been used by many industries, but it is still new to the Architectural, Engineering and Construction (AEC) industry. The extent to which participation should occur and the role that it plays still remains uncertain in the AEC industry (Campbell and Mattila 2003).

There is ample evidence to suggest that end-users need to be well informed and to have real understanding of the principles underlying the processes in which their active involvement is sought (Damodaran, 1996). Mechanistic following of prescribed procedures without an understanding of the intended goals of the whole process (users) is likely to prove futile at best and probably expensive and wasteful as well (*ibid*). The strategy must also include a clear allocation of responsibilities to key stakeholders and clarity regarding the respective roles of the different players in the design of community buildings.

The wider participation of end-users in the design process ensures that designers have access to user knowledge and experience; but their participation should also set up close relationships between end-users and designers providing the collaboration is long enough and valued sufficiently. This reasoning has underpinned the development of participatory planning.

Design of Schools

Many writers have argued that during the nineteenth century's influx of school buildings, architects were more concerned with society's general aims and ideals for mass education than with specifics of teaching or educational practice (e.g. Dudek, 2000 and Woolner 2009). This gave students a sense of satisfaction because the design of the schools was so pleasant and attractive to the students that it made their experience with educational system more satisfying. Seaborne and Lowe (1977:4) supports this idea, stating that "the view was widely held, although less often articulated, that the school building should contribute to the aesthetic sensibility of the child by showing him standards beyond those of his home". However, Robson (1911) argued that architects usually see schools as one of the easy buildings to plan and design, and much difficulty arises from the fact that architects will not take the trouble to understand the educational side of the case. Robson and many others during the twentieth century were more concerned with the detail of the relationship of their buildings to the educational activities that took place within the building they had designed and built. Yet this relationship between educational ideas and practice was overall not conceived as involving engagement with the teachers and learners themselves. For example, during the 1930s, the award-winning school architect Denis Clarke Hall based school designs on observations of school users but did not really seem to have taken into consideration their interpretations or understandings of the processes they were involved in (Maclure, 1985).

End-users Participation in the Design in Developed Countries

In the beginning of the 1960s, architecture started to get more momentum and became more influential in Europe and the USA. Some of the architects working in these fields have specifically argued that differences between lay and expert opinions about architecture mean that it is necessary to involve ordinary users in any design process (Flutter, 2006). For example, within the past few years the architectural education system in the UK has shown great enthusiasm for democratisation, in particular through more active involvement of learners. This is a clear example that shows how the participation of end-users is practically evidenced in UK schools at both local and national level, and is the key element to current theorising and research about education (Clark, 2004). Researchers working with community building users, such as students, see school design as another area where students should be involved in making decisions about their school environment (Frost and Holden, 2008). The following quote supports this idea: “Issues about the environment are also a relatively comfortable topic for teachers to explore with students whereas inviting students to comment on teaching can be difficult for both teachers and students, where within design and architecture, it seems self-evident that planners and architects designing and building would benefit from considering in some detail, the purpose and intended use of the space. This leads to the idea that some involvement of the potential users in the design process should lead to more appropriate, closer fitting premises” (Flutter, 2006:183-194).

The UK government endeavours to refurbish, develop and enhance every secondary school in England and Wales over the next ten to fifteen years. The development and enhancement of these schools requires proper design and will be achieved by continuous end-users involvement. A very important part of the BSF scheme was “proper consultation with the staff and pupils of the school and the wider community” (DfES, 2002: 63). But recent research suggests that there is no ideal educational environment. Research also suggests that whether a refurbishment or a rebuild will be successful depends heavily and critically on the level of adequacy of the old premises (Woolner et al., 2007a; PricewaterhouseCoopers, 2007: 16). So it is important to fit the building to the needs of the users and to develop a sense of ownership, both of which may be achieved through a hands-on design process.

During the post-second world war period of school-building, collaborations between architects and educationalists really developed well, taking off during the 1940s and 1950s, becoming properly embedded by the 1960s school-building boom. Partnerships between

designers and end-users during these times produced innovative schools, including the first open-plan primary schools, within tight physical constraints, which seemed to satisfy both pedagogic needs and aesthetic ideals (Saint, 1987; Maclure, 1985). Architects usually tended to concentrate on the educational understanding of advisors and head teachers. The experience of ordinary teachers and other staff, together with the ideas of students and parents, was overlooked, making it more difficult for the designer to appreciate the school's learning environment. Designers and architects can come to appreciate the range of views held within the school community by teachers, students and other members of staff; this would definitely increase the chances of satisfying more people's needs. However, there is a danger that this kind of attention to the perceptions of a school community, which is only familiar with their current situation, might lead to the diluting of ideals and possibly a failure to understand the potential for change. However, it still seems reasonable to conclude that when designers and architects become familiar with the range of views held across a school community, it is more likely that the resulting environment will be fit for all the purposes anticipated or desired. That is the ultimate aim of all designers and builders.

Benefits of User Involvement

User involvement is a widely accepted principle in the development of community buildings (Kujala, 2003). However, it is a vague concept covering many approaches. This study focuses on the nature of user involvement and its expected benefits, and secondly, reviews three streams of research. The study then goes on to evaluate the benefits and problems of varied user involvement approaches in practice. The particular focus of this study is on the early activities in the development process. In reviewing this literature, a suggestion that user involvement has generally positive effects, especially on user satisfaction, is clear. There is also some evidence to suggest that taking users as a primary information source is an effective means of requirements capture. However, the role of users must be carefully considered and more cost-efficient practices are needed for gathering users' implicit needs and requirements in real product development contexts. (Kujala, 2003).

For this study, "community building" means a building which is managed or run for a public benefit and that plays host to the activities of a range of users; hotels, hospitals, mosques and schools would fit into this category.

Several studies (e.g. Robey and Farrow, 1982) show that effective involvement of end-users in the design process will benefit the community by:

1. Improving quality of the design arising from more accurate user requirements.
2. Avoiding costly design features that the user did not want or cannot use.
3. Improving levels of acceptance of the design.
4. Greater understanding of the design by the user, (resulting in more effective use).
5. Increasing participation in decision making in the organization.

Conclusion and Future work

From the literature review carried out so far, little work has been undertaken in Libya regarding the involvement of people in the design of community buildings - especially school design. This subject will be very important in future for Libya, because it is one that has not been scrutinised before. This research proposal, therefore, will be the first of its kind and will inform future policies of the Libyan government on aspects of user involvement in the design of community building. The methodology applied in this study would benefit similar studies in countries where user involvement in design of community buildings hasn't yet been considered.

One of the most important expected outcomes that will likely be generated from conducting this research is a novel framework that can be used in the design process. This framework comes from collecting data from variety of sources, i.e. literature survey, interviews and questionnaires. This framework will benefit the end-users, designers and decision makers of community buildings in Libya. First it will benefit architects who design school buildings to achieve better reliable and friendly environments for students. Second it will benefit the end-users themselves; namely students, parents, teachers, visitors, etc. Third it will benefit the government on cutting costs on failed projects.

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