IASDR07
INTERNATIONAL ASSOCIATION OF SOCIETIES OF DESIGN RESEARCH THE HONG KONG POLYTECHNIC UNIVERSITY 12TH TO 15TH NOVEMBER 2007

ON THE GENERATION AND UTILIZATION OF USER RELATED INFORMATION IN DESIGN STUDIO SETTING: TOWARDS A FRAMEWORK AND A MODEL

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ABSTRACT:

The main aim of the present paper is to propose a conceptual framework and a rough outline of a model for the generation of user-related information, and application and utilization of this information in the creation of architectural works within the context of architectural design studio. Emphasizing the critical role of designer's conception of user and the relationship between design and knowledge in searching, obtaining, and utilizing user related information, the principle objective of the model is to provide students an effective “re-structuring” of design problem with the placement of user at the center of design studio education. Focusing on the placement and formation of the user-design student interaction process as user research with design activity, present

study tries to argue the relevancy of Donald Schön's notions of "displacement of concepts" and "generative metaphor" to define the characteristics of the situation and required tools.

keywords: concept of user, actual user interaction, prestructuring, design studio education

1. INTRODUCTION

The issue of “user” and user-related information has always been one of the primary concerns in design studies and design research. However, the conception of “user” and its place in design process, the character, scope, limits, sufficiency and relevancy of user-related information, generation of this information and utilization and integration of it in decision making process and consequently in the production of an architectural work remain as addressed but still unresolved major problems. In educational context, design studio setting presents no less problems in addition to these: typically studio settings rely on an abstract conception of “user,” user-related information is provided by the studio critics as a short-cut bypassing a valuable potential interaction with the user and a potential for development of important user-related skills, and the information provided is often distilled, clean, atomized, and hygienic.

With this perspective, problems can be summarized as difficulty in embracing present day's diversity of user needs with existing methods, lack of tacit, experiential knowledge of user, what user make in his/her relation with environment, and the limited integration of user related information into design knowledge. Mainly all these problems seem to indicate the limited user representation in design process, in practice and also in design education, referring to the perception of the “quality of knowledge” which is basically guided by the conception of user, to the relationship between “design” and “knowledge” which is strongly associated with the design model, and to the design studio education. And it is not wrong to say that providing relevant educational setting to improve more comprehensive concept of user and skills to effective integration of this user conception to design process may allow learning broader and effective representation of user in design process, and concurrently development of more inclusive conception of design. The main focus of this paper is on the improvement in conception of user and its place in architectural design studio.

2. CONCEPT OF USER AND PRESTRUCTURING OF DESIGN PROBLEM

As a plain definition, "concept" can be defined as something conceived in mind, though, notion, or an abstract or generic idea generalized from particular instances, idea (Merriam Webster's Collegiate Dictionary 2000). In his book *Displacement of Concepts*, Donald Schön (1963) points out that "there are no observations, data, perceptions, objects, independent of concepts. We can not even name things without giving clues to the concepts which make "things" of the situations confronting us." User is also one of these concepts which reflects architect's understanding and assumptions, directly or indirectly affects his/her conceiving architecture and guides his/her actions in design process. According to Peter Stringer (1980), in the field of architectural psychology, this set of assumptions constitutes our "models of Man, which may lead to quite different views of architecture for people." He represents two housing schemes in Milton Keynes, which reflect designers' different assumptions about their users, leading different spatial results and also reflect users' descriptions about their environments. His research results reveal the significant influence of designer's concept of user on direction of design activity and design solutions and the necessity of designer's awareness about the models that the users belong to in order to understand their expectations.

On this account, we can assume that first, designer's conception of user, implicitly or explicitly, regulate architectural theories and determine architect's practical actions, from understanding of design problem, gathering information to solving problems, while designing, and second, meeting various dimensions of user to a more satisfying environments, requires multi-dimensional concept of user, including an integrated awareness about his/her unique social, psychological and physical context.

On the other hand, in the field of design, while systematic approaches try to eliminate the role of subjective factors in design, on behalf of more objective design process, the important role of designer's preconceptions and the structuring of design problem with these preconceptions are underlined by descriptive approaches, with the influence of the developments in philosophy of science, such as Popper's and Kuhn's works, and of

protocol studies that focused on designer's actual design activity. For Hillier et al. (1972), at the beginning of the design process, design problem needs to be prestructured by the designer in order to be understood and solved. This process is strongly connected to the designer's pre-existing cognitive capability. Hillier et al. categorize chief elements that constitute designer's pre-existing cognitive field, which triggers his/her prestructuring, as knowledge of instrumental sets, knowledge of solution types, and informal codes. Instrumental set represents the knowledge of technological means. Solution types provides the knowledge of past solutions of similar problems. Informal codes, on the other hand, linking abstract functional requirements and instrumental sets constitute a theory-like role and provide route for prestructuring of designer. User conception of designer is also part of these sources of prestructuring and works like informal codes, due to its naming, directing characteristics, linking user needs to solution types and instrumental sets, and constitutes a user related framework as part of prestructuring process and effects, guides conjectures for design solutions in terms of user and creates need for user related information.

On this basis, taking account of the idea that design inevitably depends on the designer’s perspective, interpretation, actually prestructuring of the design problem to be solved, it seems possible to propose that the development of more conscious and multi-dimensional conception of user and its being part of designer's prestructuring process are essential for transformation of user related information into design knowledge.

3. DISPLACEMENT OF CONCEPTS AND RESTRUCTURING OF DESIGN PROBLEM

Architectural design studio, due to its important role to develop established design attitudes, has a central position to discuss stated user related problems in relation to development of more conscious and multi-dimensional concept of user as part of prestructuring process.

Proposed improvement for the existing concept of user can be conceived as the formation of a new concept of user, new is taken here as a change in old concept, and subject to learning in educational context (Fig.1).

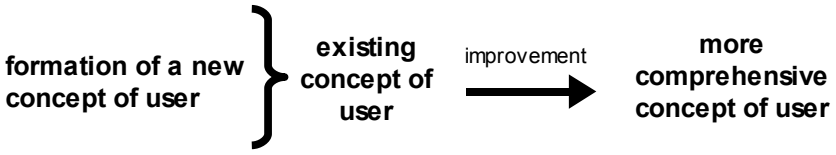

Figure 1: Proposed improvement in student's conception of user.

For the development of new concepts and theories in any field, Schön (1963), underlines the central notion of "displacement of concepts" in which we basically use the familiar to understand the unfamiliar, in this way new concepts is yielded while the old ones are retained as much as possible. It is also defined as reframing of old in new situation, which is called the process of "generative metaphor" by Schön (1998), as a process to serve reframing of the situation by transferring frames and perspectives from one domain to another. Through this similar processes, old concept has been extended and made to include a new kind of instance. Therefore, we observe a process of carrying over an old theory to a new situation, from "user as a passive component in design process" to "user as an active, changing agent in design process." And for him, this displacement process is central to the formation of new concepts (Fig.2).

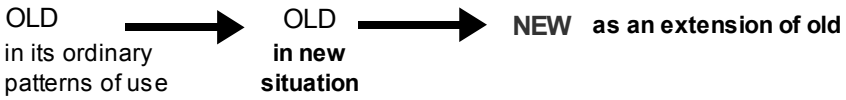

Figure 2: Schön's projective model of old.

We can see the formation of new concept of user in a similar way and propose that learning through shifting existing conception of user in a new situation seems to provide development of a new understanding of user as an extension.

What striking and critical for learning in this projective model is the new situation's triggering character which requires and affects the old concept. We can assume that explained displacement from existing concept to demanded one, or in other words, the

process of projection of the old in new situation requires special kind of situation which may provide a base for cultivation of new concept. Schön (1963) also underlines basic characteristics of triggering new situation as new, puzzling, problematic in a sense, or speculative and playful, comparing the old one. In educational context, we can say that, new demanded concept which is expected to learn, needs a strong definition in terms of educational objectives. And also new situation must be defined in terms of this demanded concept and provided students by educational setting to motivate displacement.

If intended improvement of student's concept of user from stereotypical, static understanding to continuous, multidimensional, open conception of user is seen as a kind of displacement of concepts, we can assume that it needs projection of old in a new situation, and requires definition of intended conception and providing new situation in terms of this definition. A comprehensive, relevant framework for more conscious, multi-dimensional conception of user seems to be offered by Universal Design approach as "an approach that values and celebrates human diversity" (Sandhu 2001). It offers a significant shift from treating user as a dependent, passive receiver of services to a model in which activities and needs of user is treated as highly individual, ever changing and contradictory. This multi-dimensional conception of user requires a less stereotypical understanding of user, and increased level of empathy that motivates involvement.

Universal Design also provides a relevant perspective for the definition of characteristics of this new situation as actual user-design student interaction in education. The plentiful context of real user experience for dispelling stereotypical understandings of user and for learning various dimensions is underlined by Lifchez (1994). According to Morrow (2001), this relationship is most successful when it is a two way learning partnership. Real user experience as part of the design activity creates changes in communication, changes in representation and most importantly, in conception of user.

Referring to the process of "generative metaphor," Schön (1998) explains the stages of this displacement process as; bringing different ways of seeing to the situation, mapping description onto new situation, restructuring initial descriptions, and reorganizing

restructured groups which are able to embed the new description. According to these stages, in this interaction process, we assume that a design student with his/her existing concept of user and with reference to some particular spatial relations, as given design problem, encounters a new situation which reflects diverse, complex dimensions of user in his/her environment. This kind of interaction involves different ways of seeing the same particular situation, which may not simply compatible with each other. Student's formal understanding of design problem with existing user conception and user's informal situation with his/her environment illustrate these different seeing the situation, which needs student's reframing, reorganizing their existing conception with the qualities of new situation.

Therefore, it is hoped that expectations and dimensions of actual user-design student interaction situation which is new for student, motivating student to project existing conception of user to this new situation as a projective model, activate design student's adaptation and learning process and initiate formation of an extension in existing concept including new situation.

Schön's notion of "displacement of concepts" and "generative metaphor" process, providing new understanding of the phenomena seems relevant for the formation of improved conception of user from abstract, passive manner towards conscious, active one as a learning process in design studio. But, as stated before, this improvement is not enough by itself for a meaningful integration of user related information to design knowledge, it needs essentially being an integrated part of prestructuring process of design student. On the other hand, educational context requires the reexamination of the relevancy of prestructuring with this user concept in early levels of education. Because in early studio levels, at the beginning of the design process, students have not enough knowledge about design and user to perform intended prestructuring, integrating comprehensive conception of user. Instead, students prestructure the design problem with his/her existing knowledge, which is also a valuable learning process, but not intended one yet.

Considering the main process of conjecture-analysis model of design which composed of spiral continuity of structuring cycles, beginning with prestructuring and keep going restructurings of design problem with new information or research supply (Hillier et al.

1972; Zeisel 1985), it can be suggested that, in educational context, intended comprehensive conception of user development as an integrated part of design understanding may occur in "restructuring" cycle of the design process, with the support of actual user experience on prestructuring process. Experince with real user and user related research support on prestructuring affects, in Hillier et al.'s terms (1972), theory base of prestructuring whose critical part is informal codes which links knowledge of instrumental sets and knowledge of solution types and creates a theory-like structure, including concept of user. This improved theory base provides problem definition with the contribution of improved perspective of user. We can call this learning process as "restructuring of design problem with user in mind (Fig.3).

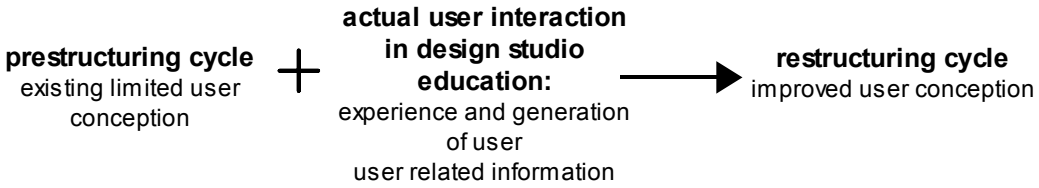

Figure 3: Proposed restructuring process with the development of comprehensive conception of user.

4. CONCLUDING REMARKS

Through this integrated restructuring process of design problem with user conception, it is hoped to provide students a more user inclusive design conception and related skills to be used with their future relations with user whether he/she exists in design process, or not, and to be used with their prestructuring of design problem.

Acknowledgments: This study is a part of my doctoral studies at the Middle East Technical University, Department of Architecture under the supervision of Assoc. Prof. Dr. Mualla Bayar Erkılıç.

REFERENCES:

Hillier, Musgrove, and O'Sullivan (1972) Knowledge and Design, EDRA 3: Proceedings of the Third Annual Conference. ed. William Mitchell, Stroudsbourg, Dowden, Hutchinson and Ross, pp. 69-83.

Lifchez 1(987) ed. Rethinking Architecture: Design Students and Physically Disabled People, London, University of California Press.

Morrow (2001) Universal Design as a critical tool in design education, Universal Design Handbook. eds. Wolfgang F. E. Preiser and Elaine Ostroff, New York, Mc Graw-Hill, pp. 54.1-54.16.

Sandhu (2001) An integrated approach to Universal Design: toward the inclusion of all ages, cultures, and diversity, Universal Design Handbook. eds. Wolfgang F. E. Preiser and Elaine Ostroff, New York, Mc Graw-Hill, pp. 3.1- 3.14.

Schön (1963) Displacement of Concepts, London, Tavistock Publishing.

Schön (1998) Generative metaphor: A perspective on problem-setting in social policy, Metaphor and Thought. ed. Andrew Ortony, Cambridge, Cambridge University Press, pp. 137-163.

Stringer (1980) Models of man in Casterbridge and Milton Keynes, Architecture for People. ed. Byron Mikellides, New York, Holt, Rinehart and Winston, pp. 176-186.

Zeisel, (1981) Inquiry by Design: tools for environment-behavior research, Cambridge, Cambridge University Press.