INTEGRATION OF INCLUSIVE DESIGN APPROACH INTO THE ARCHITECTURAL DESIGN STUDIO: ON THE SPOT INQUIRY

Meltem Özten Anay

Department of Architecture and Planning, School for the Handicapped, Anadolu University, Yunusemre Kampusu, Eskisehir, Turkey; mozten@anadolu.edu.tr

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ABSTRACT:

In response to the growing demand for integrating inclusive design approach in design studio education, this paper underlines importance of the way of knowing user as part of design knowing and learning. On this problem field, the potentials of Schön's notion of "on-the-spot inquiry" to develop required user understanding are discussed and proposed as a framework for the organization of integrated user and design learning process in architectural studio education.

1. INTRODUCTION

Considering the growing public demand for accessible architectural environments, we can trace the development of so called universal and inclusive design approaches, which strongly imply equity and social justice by design, since the end of 1980s. The principle aim of universal design approach can be summarized as creating "an open, accessible, and integrated world for the future: a supportive environment of buildings, products, and services that make it possible for everyone to live independent and fulfilling lives, for as long as possible" (Coleman 2001). With this perspective, universal design underlines a unifying understanding in two interrelated levels; by considering user with its diversity, regardless of age, gender, culture, and physical ability, and by conceiving design with this diversity of users included. It provides an embracing perspective about user, with its purposeful emphasis on human diversity and inclusion of all people to the greatest extent possible (Welch 1995; Ostroff 1995). As it is stated by Ostroff, universal design marks a shift in understanding about user from "narrow code compliance to meet the specialized needs of a few to a more

inclusive design process for everyone." To respond to these increasingly diverse users and their needs and to gain knowledge about them, the necessity of grasping their everyday experiences deeply in their wholeness is underlined.

Contrary to the developments in academic level for an expanded understanding about user, common approaches in the architectural design studio cannot reflect similar kind of advancement. In order to teach an inclusive way of design in architectural design education, it is necessary to develop this broad and design related user understanding first.

2. THE PROBLEM OF USER AND USER KNOWLEDGE IN DESIGN STUDIO

Despite valuable attempts to provide necessary improvements in conceiving user, we can detect the continuous effects of self-referential mode and stereotype-based, passive user understanding in the architectural design studio.

The continuous tendency to encourage the isolation of studio and the primacy of individual constitute the main problem field of current discussions. Nicol and Philling (2000) emphasize these issues among the main problem groups of architectural education; "[a]rchitecture in practice is a participative process involving communication with many stakeholders in design: clients, users, other architects, engineers, specialist consultants, construction managers, statutory authorities and so on. However the schools, through both their formal structures and their more informal socialization processes, may not be fully preparing students in the skills needed for participative practice… design studio… still remains primarily geared towards developing individual star architects as unique and gifted designers…"

According to Siu (2003) "many programs still train design students to work in a way that makes them the decision-makers" and "quite a large number of designers still expect and believe that they are able to predict users' ways of operating, predetermine users' likes and dislikes, and then produce appropriate designs."

In a common studio setting, user is generally represented by students and instructors, so, design student's image about user is developed on these limited experiences and knowledge. Morrow (2000) underlines this narrow context as follows; "[t]hose studying and teaching in architecture schools typically share similar backgrounds, social class, aspirations and political affiliations… it is contended that this homogeneity in their background and culture contributes to the failure of architects to take account of the 'otherness.'"

It is observed from the recent discussions that educational settings cannot provide enough support to the development of user concept that embraces diversity of users, values, experiences of user and supports integration with design understanding.

On the formation of prevailing user understanding in design field, dominant epistemologies and design approaches have significant effects, with their emphasis on particular qualities about user and user related knowledge, defined, provided, and utilized in design (Özten Anay, 2010). 1940s illustrate an idealized-universal user concept and self-referential approach of designer with the effects of theory of determinism and functionalism; 1960s refer socio-behavioral dimensions of user, with the contribution of positivist conception of knowledge and systematic model of design; 1970s emphasize opinions of user and demand participation of user to design process with the effect of developments in new liberal humanism and descriptive model of design. These changes in knowledge and design contexts indicate critical shifts in user conception, from an idealized user to objectively observed and defined user and to participatory user concept of designer.

With this perspective, we can say that weaknesses of prevailed user understanding in design studio depends heavily on limitations of common sources of user knowledge, way of knowing user and model of design in design studio (Özten Anay, 2010). Narrow content of self-referential experiences of students and instructors, generalized, prospective character of research knowledge, theoretical way of knowing user and separated nature of design context, which is grounded on analysis-synthesis model's separated parts, limit utilization of user knowledge.

These limitations in the sources of user knowledge and their relation with design model have been underlined as the possible reasons of the existence of narrow-passive user concept in the architectural design studio.

These problems indicate a need for a shift in understanding about user in the architectural design studio. This shift requires critical changes in framing user and user knowledge in architectural design studio. Although there are valuable examples to involve actual users in design studio and develop empathic understanding, and contribute development of inclusive design notion in design studio, they remain as particular examples, and may not provide integrated framework to develop a broad understanding about user as part of design learning, which is critical for teaching inclusive design.

3. ON THE SPOT INQUIRY IN THE ARCHITECTURAL DESIGN STUDIO

Developing a broad and design related way of understanding, or knowing user is basically related to the issue of user knowledge and design relation. The integration problem between user knowledge and design is not a new problem. It has been discussed as part of a more general problem between "knowledge and design" since 1960's. Actually, the problem is generally conceived in terms of translation of knowledge from different domains to design process. One of the core problems is application of behavioral research knowledge to design (Windley and Weisman 1977; Pastalan 1977; Schön 1988). The main constituents of this "applicability gap" between user knowledge and design are searched since then.

This problem field is mainly related to the relevancy of user knowledge defined for design use. This assessment is highly based on the difference between the nature of scientific knowledge that is produced through research and the nature of design knowledge that is used in design process. While, most of the research based user knowledge is descriptive, design is defined as prescriptive.

Addressing Schön's (1988) discussion on teaching scientific knowledge in design studio and his notion of "on the spot inquiry," this part aims to

provide a framework for understanding user as part of design knowing in the architectual design studio.

In his discussion, Schön (1988) underlines the difficulties of teaching scientific knowledge in the design studio, since its form of knowledge and the way of teaching science are not compatible with design teaching. And he argues the significant role of on-the-spot (prospective) inquiry, which has similarities both with designer's design activity and scientist's doing science, for teaching science in design studio. His discussion involves four ideas;

- Science as a method of inquiry,
- Getting a feel for the behavior of the phenomena,
- Canonical examples of before-the-fact science,
- Kinds of thinking peculiar to skilled scientists.

Considering that current design studio practices have problems to develop understanding about actual image of user phenomena as part of design problem and utilizing user knowledge in design teaching effectively, Schön's discussion can be fruitful to provide a framework for developing a design related understanding about user, although his argument is not directly related the integration of user knowledge to design.

3. 1. ACTUAL SEARCH FOR USER IN DESIGN STUDIO: FEELING THE USER PHENOMENA

In the first two ideas, Schön underlines the difficulty of providing scientific knowledge as a body of facts, theories, or research results, which are objective, distant, and retrospective in nature, for utilizing in design activity, which requires on-the-spot, situated knowledge. He indicates importance of "getting a feel for the behavior of phenomena" and the potentials of introducing research to design studio not in the form of research results but as knowledge of research process (the logic and the way of doing research), in order to integrate knowledge to design. He explains this research-practice integration, which is necessary for design by stating that "… research is an activity of practitioners. It is triggered by features of the practice situation, undertaken on the spot, and immediately linked to action. There is no question of an 'exchange' between research and practice or of the

'implementation' of research results, when the frame-or theory- testing experiments of the practitioner at the same time transform the practice situation" (1983).

Similarly, one of the sources of user knowledge in design studio is the research data provided in studio setting. Prevalent form of research-based user related knowledge in the design studio is often provided under the influence of positivist conception of knowledge and by empirical methods. Despite its value for the design process, user knowledge as empirical research results has limitations to represent contextuality of the user, to provide specificities of the situation and to meet user requirements. It cannot reflect diversity and actual character of user (Luck 2001). It is commonly observed that design student's conception of user is sustained on self-models of their own or representative models from immediate environment, such as instructor's or other students', and the theories about user. However, it is clear that student's interaction with few representative users in a defined, prepared, and carefully bounded design problem context cannot provide enough insight and experience about the real user phenomena and cannot include reference to diversity of users. Cuff (1991) defines design school's emphasis on the representation of design activity as purified from its errors, difficulties, problems and as isolated activity. She states that "an architect-teacher provides student with guidance on design problems far removed from the untidy, awkward problems… Schools highlight the importance of pure design by removing from its study key aspects of professional practice… Problems are composed for didactic reasons, so complex problems are simplified, variables are isolated for study."

Considering the capacity of provided user knowledge in the design studio, existing sources of user knowledge show limitations. Therefore, it can be stated that design student's way of knowing user, through general theories and with little reference to complex nature of real users in a defined, controlled, and distilled learning environment is not sufficient to structure a rigorous, realistic image of user in the design studio.

Emphasizing this situated feature of knowledge with the design problem, it can be stated that required generation of user knowledge within design, can

be formulated as student's actual user research process as part of problem structuring in architectural design studio. This kind of formulation of user related knowledge generation both provides students an opportunity to experience diversity, elicit experiences of users, knowing by experience, and to utilize this problem-situated user knowledge in design more effectively. In other words, seeing the user situation from the perspective of design problem and selecting required knowledge from this perspective for design use may contribute development of a "designerly understanding" about user in architectural design studio.

3. 2. CANONICAL EXAMPLES OF INCLUSIVE DESIGN

Another dimension that Schön underlines for the integration of scientific knowledge to design studio is based on the importance of learned exemplars, prototypes, canonical examples (concrete problems) of discipline while approaching new problems. Schön proposes linking design exemplars or concepts with exemplars in science in order to integrate research knowledge with design.

Required canonical exemplars for learning user as part of design knowing can be provided both through including actual user cases in design studio and analyzing good examples of inclusive design. Actual user cases should present students knowledge about users, their building environment, and their interactions, problems, and needs about this environment. On the other hand, good examples of inclusive design provide knowledge of how user knowledge can be transformed inclusive design solutions. On this base, supporting students with opportunities, which involve exemplars of design and user domain, or linked-exemplars, may provide students an opportunity to observe problem and solution together as a whole. This learning environment, which involves problem–solution continuity,
brings students, with reference to Schön, "linked-exemplars," which have potential to translate user knowledge to design solutions. This holistic picture (problem-solution together) may provide students integrated knowledge about user and design and a good source for knowing user as part of design knowing.

4. CONCLUDING REMARKS

Considering that there is a great demand for teaching inclusive design in design studio, it is necessary to develop a broad understanding about user as an integrated part of design knowing, which depends on the formation of constructive relation between user knowledge and design. Generation of knowledge as part of design activity strongly demands search for knowledge and selection of necessary features under the guidance of design problem (Özten Anay, 2010).

Grounding on Schön's (1988) notion of "on-the-spot inquiry," framing user learning with reference to this situated feature of knowledge with design problem, placing
and integrating user search of students to their design investigation may provide students an opportunity for both feeling the behavior of user phenomena, seeing the user situation from the perspective of design problem and selecting required knowledge from this perspective to design use.

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