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## Raising awareness about accessibility

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### Abstract

Every citizen has a right to move throughout a city safely and independently. The term accessibility refers to this right in a built environment mostly for public uses. In the beginning of the 20th century, accessibility started from a restricted application but nowadays it became more comprehensive due to a better understanding of physical barriers in the world. According to a recent research, designers are not aware of how architectural barriers restrict accessibility for different users. It should not be forgotten that accessibility for everyone will increase the whole citizens' quality of life. Thus, the paper tries to show the importance of raising awareness in design studios for better implementing accessibility for all people. In our urban design studio, a strong relationship has been found between accessible design solutions and students' awareness about physical barriers. The paper concludes that there is an immediate need to elaborate design courses with universal design principles.

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### 1. Introduction

Designers should provide mobility in built environments since it is a human right and freedom. Edmund Bacon, a famous urban planner, defines mobility as “a dominant organizing force in architectural design” (Bacon, 1976, p.34). “From this point of view, mobility must be provided if the city is accessible to everybody” (Evcil, 2010, p.1883). A wheelchair user, a blind person or an elderly are not disabled in an accessible environment, but, even a normal person can be disabled if accessibility is not provided (Sherrer, 2001). Goldsmith (1997, p.7) articulates the situation as follows: “They are disabled because the architect who designed the building did not anticipate their needs, or did not care about them”.

Besides this, there is a growing interest on providing accessibility for all which is indispensable for everybody to participate in social and communal life. Indeed accessibility is a key factor to ensure social sustainability. There is a range of research that has documented that if people are excluded from the built environment, and then discrimination occurs and opportunities for social integration are lost (Paşaoğulları and Doratlı, 2004). Therefore, accessibility is the capability for social interaction (Newton et al, 2002).

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It is clear that accessibility for every body increases day by day in all around the world. From a realistic point of view, accessibility is a big problem which will never really disappear (Imrie and Kumar, 1998), but it can be improved with the help of designers' awareness.

## **2. Literature Review**

### *2.1. What is accessibility?*

In a brief explanation accessibility means the ability to access every where. Indeed accessibility is a technical item which expresses “an umbrella term for all parameters that influence human functioning in the environment” (Iwarson and Stahl, 2003, p.58). It is believed that a well-designed urban environment is livable and readily accessible for everybody. Nowadays, many urban planners work on the subject of creating livable cities. There is a consensus that one of the key factors of creating livable cities is accessibility and people's mobility (Evcil, 2009). Accordingly, accessibility of the public space is “one of the effective interaction in a public space” (Paşaoğulları and Dorathı, 2004, p.226). Social theorists consider accessibility as the right of being a member of the society (Kitchen and Law, 2001). Accessibility is also a guiding principle of urban design in the United Nations Conventions where equal opportunities for everybody are encouraged in each physical arrangement for public use (Evcil, 2010). As a result of the aforementioned explanation, accessibility must be provided for all people living in the society regardless their age, ability or status in life in order to benefit from the built environments.

### *2.2. Short history of accessibility provision in the world*

The consciousness about the need of accessibility of the built environment especially for disabled people rose after the Second World War. One of the important developments on this subject is the declaration of disabled people's rights with Human Rights in 1948 by the United Nations General Assembly. Secondly, in 1993 again the United Nations adopted resolution 48/96 annex. It consists of the standard rules on the equalization of opportunities for disabled people.

Among the countries, the USA promote on the provision of accessibility for disabled people in 1961. At that time, the US government codified the American National Standard Institute. With the influence of the disability rights movements, in 1990 the American with Disabilities Act and accessibility guidelines has been ratified. “In this arena, the US has not been alone and several other countries are known to have developed accessibility standards some of which are even codified in legislation” (Gossett, et al, 2009, p.440). France and Germany passed similar laws in the beginning of the 20th century. In the United Kingdom, the government issued Part III of the Disability Discrimination Act in 2004 to overcome physical barriers to access (Newton et al, 2002).

All these acts, are based primarily on “the rights of individuals by forbidding discrimination, removing barriers and providing resources to help disabled individuals become included fully in society and work” (Mackelprang and Clute, 2009, p.208).

## **3. Awareness on accessibility**

They are too many factors affecting accessibility arrangement in physical environment. But, this paper mainly deals with the lack of knowledge on disability and different users in architecture education. Even in civilised countries, tutors who teach students about disabled people's needs as building users are scarce (Goldsmith, 1997, Holmes-Siedle, 1996). In 1991, researchers Miller and Denis from the Robert Gorbon Institute of Technology in Aberdeen conducted a study about the awareness of accessibility of students from design curriculum. According to the results coming from the schools of architecture, students have limited knowledge on disability and accessibility

provision. Most of them were defined disabled people as wheelchair users. Only a few of them were widened their definition by saying children, people with prams, pregnant women etc (Holmes-Siedle, 1996). A similar research outcome is expressed by Evcil (2010). She conducted a questionnaire among the architects and constructors in Istanbul and found that they considered generally physical impairments when they made their projects. In order to overcome this problem, design curriculum must be reorganised. The Council of Europe and the European Commission made a valuable improvement, so, they are seeking consultation of design for all curriculum development. In Turkey, the Higher Education Council (YOK) sent a circular to each universities, in which it is urged compulsory courses about design for all in the architecture and planning departments of all Turkish universities (30.09.2011\*041995, EÖB-199-6596 number).

User's differences and requirements cannot be negligible in design process. Thus, this key concept has to teach students during their professional education by the expert tutors.

#### **4. Methodology**

To clarify the importance of raising awareness in design courses for better implementing accessibility for everybody, 46 architecture students were questioned during May 2011. The sample is consisted of the level II students registered to Urban Planning and Design Studio I at Beykent University. The aim of this studio course is to redesign public open spaces in the light of accessibility and design for all principles in Galata, a part of old town. The students were asked to complete a questionnaire before the end of the semester. Forty-four of the questionnaires were returned, while two of them were excluded because of incomplete answers. The resulting 44 usable forms represent a 45 % response rate among the level II architecture students in Beykent University.

The instrument of this paper is a questionnaire. It assesses how important being aware of accessibility for a student when he/she designs his/her project. Percentages are used to analyse the responses.

#### **5. Results**

77 % of the students are familiar with the concept of accessibility and design for all. 18 % of the students expressed that they learned design for all when they attained the elective course related with different user groups' need in the built environment. 67 % of the respondents said that they learned accessibility needs in this course. A few of them replayed that they learned accessibility provision when they participated to a workshop (7 %). There are 8 % of the students who expressed that their knowledge concerned internet usage. But, unfortunately 1 student out of 5 (23 %) were not aware of accessibility and/or design for all.

Another question was asked to know if the students were aware of different user's needs as disabled, children or elderly. Most of the students replayed as yes (72 %), but, 14 % said no and again 14 % expressed that they have very limited knowledge about different user's needs.

It is also asked that whether they could be applied accessibility provision and/or design for all principles during this urban design course in general. 72 % replayed as yes, but 28 said no. This negative reply is related with the historical environment where redesigning is very restricted.

They were asked "Do you believe considering different users' groups needs in design process is it necessary?". Only 2 students (5 %) answered as no, but, almost all of them believed that they should consider different types of users as disabled, elderly or children.

As the last question, they were asked, "Do you think design for all will impact you professionally?" The majority of the students replayed as yes (91 %) while 9 % replayed as no. They replayed negatively because they do not

believe that this new approach (design for all) will not be able to change today's situation such as unabling physical arrangement (Table 1).

Table 1. Results of the questions

Questions	Answers			
Being aware of accessibility and/or design for all	77% aware	23% not aware		
How are you aware of accessibility and/or design for all?	18 % in elective course	67 % in this studio	7 % in workshop	8 % in internet usage
Being aware of different users needs (disabled, children, elderly)	72 % aware	14 % not aware	14 % have limited knowledge	
Being able to apply accessibility provision and/or design for all in urban design	72 % yes	28 % no		
Believed knowing different users needs	95 % necessary	5 % not necessary		
Believed design for all will impact their projects after graduation	91 % yes	9 % no		

## 6. Conclusion

Everybody has to move throughout a city safely, independently and conveniently since it is a basic of living in urban area. From this point of view, disability could be defined as any restriction or lack of ability to perform an activity which can be overcome by an appropriate design. To achieve this goal, it is believed that the more designers know about the different user needs the better they will apply into real world.

Presently, accessibility issue and design for all are new concepts in Turkish curriculum for undergraduate programs in architecture. It is important to introduce students to these new concepts and to encourage them to apply principles into their projects. It is clear that "the design studio is inherently an experiential learning environment-student learn by doing" (Jones, 1995, p.64). It is also believed that students will apply the design for all principles and accessibility provision after graduation. Unfortunately this is not certain, this study is a limited pilot project but, at least it shows us that if they are familiar with the design for all/accessibility for all users' principles, they have the potential to apply them.

We also received notable design achievements parallel to the results of the questionnaire. These include; pedestrian friendly street design with more public usage, accessibility provisions as level access or ramps, use of light effectively and designing attractive urban open spaces for all ages and abilities.

As mentioned by Deardoff and Birdsong (2003), once students and professionals are consistent in the use of accessibility for all people/design for all people, their work will probably move beyond the appearance with the accessibility regulations and into more pleasing design solutions.

As a result, users will benefit from the environments which were designed pleasantly and useable to the greatest extent possible. It is believed that this achievement cannot be ensured without students' awareness on accessibility during professional education. Moreover, lessons from the USA, Canada and Austria point to the fact that one of the important way to ensure accessibility for all people is through the designers' awareness (Holmes-Siedle, 1996). Thus, some amendments must be done in design curriculum of undergraduate programs in architecture and planning in Turkey,

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