A Study about Public Participation in the Universal Design of Public Spaces

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Abstract
Through a partnership between civil society stakeholders and the various project design teams, issues related to the universal design of public spaces are better discussed for the community members who feel undermined by existing design schemes. Public spaces which are properly and adequately designed could contribute to ensuring equal opportunity for all groups of people in the community and help boost social mobility. Consequently, finding suggestions about the appropriate design of public spaces for all groups of people with the support of public engagement should be a basic prerequisite requirement for providing community facilities. Within this scope the analysis of a case study of High-Line Project in New York, USA, as a part of a regeneration project that has utilized the universal design well through the inclusion of the society is evaluated. In brief it can be suggested that universal design is an efficient tool for boosting social sustainability via creating urban environments for the usage of a wide range of all individuals as much as possible and public engagement must be a part of this design process.

Keywords: public spaces, universal design, public participation, case study

Özet
Kamusal alanların evrensel tasarımıyla ilgili konular, sivil toplum paydaşları ve çeşitli proje tasarım ekipleri arasındaki iş birliği aracılığıyla, mevcut tasarımlar tarafından ihmal edildiğini düşünen marjinal topluluk üyeleri için, son zamanlarda daha iyi tartışılır hale gelmiştir. Düzgün ve yeterli bir şekilde tasarlanmış kamusal alanlar, toplumdaki tüm insan grupları için eşit fırsat sağlanmasına katkıda bulunabilir ve sosyal hareketliliği artırmaya yardımcı olabilir. Sonuç olarak, halkın katılımının desteğiyle tüm insan grupları için uygun kamusal alan tasarımı hakkında çözümler bulmak, toplumsal fayda sağlamak için temel bir ön koşul olmalıdır. Bu kapsamda, evrensel tasarımı toplumun katılımıyla iyi çözümleyen bir yenilenme projesi kapsamında ABD, New York'ta High-Line Projesi'nin bir vaka çalışması olarak analizi değerlendirilmektedir. Bu çalışma sonucunda özetle evrensel tasarımın, mümkün olduğunca geniş bir yelpazedeki tüm bireylerin kullanımına yönelik kentsel ortamlar yaratarak sosyal sürdürülebilirliği artırmada etkili bir araç olduğu ve halk katılımının bu tasarım sürecinin bir parçası olması gerektiği söylenebilir.

Anahtar Kelimeler: kamusal alanlar, evrensel tasarım, halkın katılımı, vaka analizi

1. INTRODUCTION

Urban public spaces have a significant role in providing people living in the city a good quality of life. This is in line with the global goal of sustainable growth, which aims to achieve greater social equity. Actually, as it is known sustainable urbanism targets not only the social paradigms but also the environmental, cultural and economic dimensions. And it can be argued that public spaces have vital significant direct or indirect benefits for all four dimensions of the sustainability (Woolley, 2003).

In order not to be ignored or neglected, the urban community should be able to provide more resources to disadvantaged population groups. Properly and suitably constructed public spaces could contribute to ensuring equal opportunities for all classes of people in the society and help to improve social mobility. The correct and appropriate design should therefore be a basic requirement for the provision of community facilities (Davarinezhad and Rahnama, 2015). Physical barriers often restricts the use of the public space domain by individuals with disabilities, the elderly, persons with disabled children, pregnant women etc. (Yousefi and Fardi, 2016). Ease of access to public areas, such as pedestrian walkways, must be free from barriers that may prevent people needing special attention from taking urban street expeditions (Sisiopiku and Akin, 2003; Asadi-Shekari et al., 2012).

The design of public spaces appears to be an interactive and interpretive process, carried out in communities through complex and transformative discussions with a positive approach to interpersonal and intercultural agendas, focusing on the 'arenas of struggle' (Healey, 1993). Public space design should also take into account the general way of thinking of the masses and involve them in regular dialogs to help them communicate their thoughts more freely. Such that this can only be done in a culture of democracy. At the end of the day, the community is the main beneficiary and recipient of these completed projects and will therefore also be able to play a significant role in the construction process, because they clearly know what suits them best.

The idea is that the diverse framework of community-based organizations, including local citizens, interest groups and private and public organizations, is a key factor in the successful adoption of the Universal Design, which creates social creativity and equity. Barton et.al, (2003) argued that the greater the participation of the local community in the design and construction of residential projects and public spaces, the greater the possibility of creating a place of community importance. Due to their day-to-day interactions with these special groups, the public will play an important role in ensuring that their needs are better addressed.

By applying the universal design principles to urban public spaces, the disadvantaged members of society could make use of urban environments in a more qualified way and could receive support for their public life. Urban public spaces, as part of the urban environment, must meet the necessary and important needs of the disadvantaged. This study therefore firstly explores the concept of urban public spaces, secondly, universal design of public spaces and thirdly, public participation in the course of universal design of public spaces. After the literature review, High-Line Project in New York, USA as case study is evaluated. Finally the study is concluded based on the outcomes of the literature review and the case study analysis.

2. URBAN PUBLIC SPACES

Day by day the cities are becoming more important for the humanity as the urbanization continues to accelerate in today's modern era. Urban public spaces are a significant asset of the cities (Kart, 2005). In the meantime, their importance is highly recognized as the urban environments have mostly become intense concrete surfaces carrying serious environmental, social and cultural challenges.

According to many researchers, scholars and planners, there are different definitions of the concept of public space in the literature. It can be argued that there are two main types of this concept as urban open and urban green spaces. Urban open spaces are the remaining openings or empty spaces outside the buildings and transportation paths that are dominantly covered with hardscape material. These open spaces within an urban environment are mainly streets and squares. See Figure 1.

(a) An urban open space

(b) An urban green space

Figure 1: Public spaces in Warsaw, Poland (author)

Urban green spaces are the remaining openings or empty spaces outside the buildings and transportation paths that are dominantly covered with greenery. These green spaces within an urban environment are all parks and greeneries starting from the building unit up to city level such as neighborhood parks, botanic parks etc. There are many remarkable benefits achieved from urban green spaces. They can deliver social services for quality of life and are considered as a key component for the concept of sustainability (Lee and Kim, 2015).

In general public space provides many social, environmental and aesthetic benefits to cities (Korkut et al., 2010). Creating a suitable environment for recreational needs, achieving positive psychological effects on residents, helping to tackle global warming and climate change are among these benefits.

There are disparate classifications of the concept of public space. They can be classified according to the usage type as public, semi-public, semi-private and private. In addition, they can be classified according to their level of function (Ceylan, 2007).

3. UNIVERSAL DESIGN OF PUBLIC SPACES

People's public life exists in a diverse collection of forms and functions in urban public spaces. Accordingly, such spaces must be able to accommodate a variety of habits, uses and activities, such as shopping, walking, talking, using facilities as everyday activities to entertain, relax or even spend time, as well as occasional celebrations and events (Jalaladdini and Oktay 2012). The urban community will be able to offer more opportunities for disadvantaged population groups to prevent marginalization and desolation. Public spaces are where people meet their friends on a regular basis and carry out their daily activities and therefore play a vital role in people's lives (Low, 2000; Mehta, 2013). Most of the previous research focused on public space accessibility for specific groups, such as women, the disadvantaged, particular ethnic groups, the disabled and the elderly (Mehta, 2013). This is because public spaces make a major contribution to the definition of people's quality of life. This relates to the social objective of sustainable development, which seeks to achieve greater social equality (Reiter and Herde, 2011).

Such that the poor quality of the roadways and potholes tends to build hurdles and make the poor feel unsafe on the streets. For instance the lack of audible alarms at street crossings also makes it unsafe for people with disabilities to cross public streets, especially those with hearing disabilities. Consequently, the ideas that the city must make the streets open, safe and convenient for the disadvantaged ensures that universal design concept is always relevant and convenient.

Universal design is the design of products and technologies that can be used by all people as widely as possible without the need for adaptation or advanced design (Eslami and Mahmoudi, 2016). Universal design is an approach that promotes the preservation of social sustainability factors that ensure equal distribution of resources and services within and between generations (i.e. intra-generational equity and intergenerational equity) as well as the allocation of rights to use environmental services within a given ecosystem (Rahim, 2012). See Figure 2.

(a) Outside Oslo central station that is designed according to the universal design principles (https://zeroproject.org/)

(b) Belediye Boulevard in Yenikent-Nicosia designed according to the universal design principles (author)

Figure 2: Samples of urban spaces designed according to the universal design principles

Universal design has proved to be a new source of inspiration for designers on their journeys to achieve designs that suit a wide range of users to the greatest extent possible. The definition of universal design is defined as the design of space and the equipment used for most people of any skill or age, in accordance with their space needs (Imrie & Hall, 2001; Segherlou & Farzin, 2014). In other words, the main goal of universal design is not to make people conform to space, but to make spaces suitable for people. The design principles for universal design were developed by a group of U.S. designers and design educators from five research organizations in 1997. These principles are as follows:

- Equitable Use
- Flexibility in Use
- Simple, Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size and Space for Approach and Use

4. PUBLIC PARTICIPATION IN THE UNIVERSAL DESIGN OF PUBLIC SPACES

Public dialog offers an opportunity to dilute self-interest statements by adding theoretical elements to convince others of their relevance, or at least their credibility. Hypocritical as these statements may be, they may lead to compromises in the public interest or in the interests of other groups (Allmendinger, Tewdwr-Jones 2002). The use of a participatory approach allows for timely identification of principles, priorities and future disputes, and the participation of stakeholders and, as a result, planning activities. It can improve local people's conditions because businesses can bring wealth if they are set up with social and mutual values.

The designing of public spaces appears to be an engaging and interpretive process, conducted in communities through diverse and transformative conversations with a constructive approach to interpersonal and intercultural agendas, focusing on the 'arenas of struggle' (Healey, 1993). The planning of public spaces should also take into account the general way of thinking of the masses and engage them in constant dialogs to help them to express their thoughts more freely; this can only be seen in a culture of democracy. The community is ultimately the primary beneficiaries and users of these completed projects, and therefore, they should also be able to play an enormous role in the development process as they know specifically what suits them best.

The theory is that a key factor in the successful implementation of the universal design which generates social innovation and equity is the unique structure of community-based organizations, including local residents, interest groups, and private and public organizations. Barton et.al, (2003) argued that the greater the involvement of the local community is in the design and development of neighborhood developments and public spaces, the greater the likelihood of establishing a place of local significance. The public due to their day to day interaction with these special groups; they can play a huge role in ensuring that their needs are better achieved. Throughout the construction of spaces and public streets, the interests of marginalized groups in the community have usually been overlooked.

The combination of top-down policies that allow neighborhoods to self-organize their municipal resources and bottom-up community-led organizations are now showing fascinating results in terms adoption of the universal design concepts. The objective is so that the disadvantaged could make use of urban areas and urban environments similar to other members of society and could continue their public life without support. The final outcome of this process of engagement between national and local levels is the development of community-based enterprises that are able to preserve the social sustainability factors that ensure equal distribution of resources and services within and between generations (i.e. intra-generational equity and intergenerational equity) as well as the allocation of rights to use environmental services within a given ecosystem (Peredo and Chrisman, 2006).

5. CASE STUDY: THE HIGH LINE, SKY CITY PARK IN NEW YORK, USA

High Line Park is a 2.33 km elevated section of the disused Central New York Railroad. Inspired by the 4.8-kilometer Promenade plantée (tree-lined walkway), a similar successful project completed in Paris in 1993, the High Line was rebuilt and designed as a greenway landscape and a railway-to-trail park. See Figure 3, 4 and 5.

Figure 3: High-Line railroad in the 1980's (tr.pinterest.com)

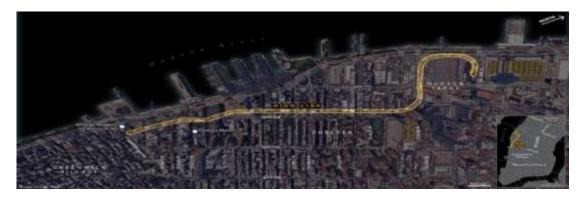**Figure 4:** The High-Line before restoration (thehighline.org)

Figure 5: The High Line Map Layout (washingtonpost.org)

A group of landowners lobbied for its demolition in the 1980s, after the railroad was out of service, while local residents and activists challenged the demolition efforts in court. In 1999, the residents of High Line founded an organization called "Friends of the High Line" to advocate for the preservation of the High Line and to reuse it as a public open space. The study found that the High Line project was financially beneficial and resulted in a fair competition for ideas on the design of the High Line. In 2006, CSX Transportation Corporation donated ownership of the High Line to the City, and after numerous public hearings, the best design, championed by the "Friends of the High Line" was chosen and designed to be the symbol of New York City. The design entailed of a universal design that had to incorporate all disadvantaged population groups.

The High Line, in its neighborhood, has become a signature element and a strong driver of investment in New York City. This is considered to have contributed significantly to the rejuvenation of the West Side of Manhattan. The City rezoned the area around the High Line in 2005 in order to stimulate growth while preserving the identity of the neighborhood. The park's mix of rezoning and growth helped create one of New York City's fastest growing and lively neighborhoods.

The design of the park is clearly symbolic and has inspired other cities to evaluate the ability to replicate it in their cities. The universal design of the site offers more opportunities for disadvantaged population groups to prevent marginalization and desolation. With the application of well laid wooden and concrete floors and inclined stretches in the amphitheaters and stairs so as to make the physically disabled feel represented and catered for they would be free to use the public space even when in wheelchairs and strollers. The application of Peel-Up benches design, which entails of benches that seem to rise up as a natural extension of the path itself. It enables children and even the physically disabled to easily sit down and get up from the benches without much restrictions. The Inclusion of the original rails in the design by lining it with loose gravel bonded with aggregate giving the landscape a more rough and rugged feel, but with a rather smooth and solid feel which is accessible for people with disabilities (Figure 6, 7, 8 and 9).

Figure 6: Well laid concrete floors enabling the physically handicapped to walk (thehighline.org)

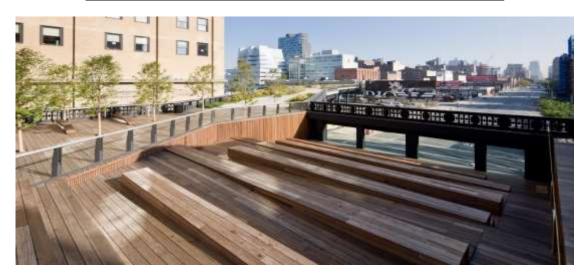**Figure 7:** Peel-up benches design enabling ease of use (thehighline.org)

Figure 8: Inclined stretches in the amphitheatre making it easily accessible for physically disabled persons (thehighline.org)

Figure 9: Original rails lined with loose stone gravel bonded with aggregate, smooth enough for the physically disabled to use (thehighline.org)

The High Line is important and meaningful as a politically, ecologically, culturally, socially and economically sustainable campaign. Politically, as evidence and as an example of the impact of civic participation, members of adjacent neighborhoods played a huge role to have it rescued. Ecologically, it is in the center of town, it boasts of a green roof of 6 acres. Historically, the conversion of an unused rail line into a modern public space as a building project was unheard of. Socially as a neighborhood and a world-class park where families, tourists and the community come together and economically as an entrepreneurial initiative that has demonstrated the potential of public spaces to raise revenue, attract businesses and improve local economic growth. See Figure 10.

Figure 10: Present day view of the highline (thehighline.org)

6. CONCLUSION

As the urbanization is increasing worldwide, more and more individuals have the requirement of accessing public spaces in the urban environments. Therefore, these spaces must be well organized and designed in order to be reached by all sorts of urban residents. Universal design is an emerging topic for the design of different scales of urban environments including both buildings and public spaces (Steinfeld & Maisel, 2012). This concept is a principle that brings equity and also seeks to ensure equal distribution of resources and services within and between generations and classes of people. In other words universal design is a tool to raise the impact and quality of the public spaces

In addition, public participation plays a huge role in the ensuring that the adoption of the universal design policies have been put in place. Such that the direct role the public play in finding different strategies that generally help elevate the lives of the disadvantaged and minority groups cannot be understated. With the example of the High-Line Project in New York, USA, the inclusion of the public through the "Friends of the High Line" organization who have played a huge role in championing of the regeneration of the old rail has been highly fulfilled. Hence it can be argued that the achievements of the universal design principles can be obtained to the greatest extent possible if the public participation is included to the process of design.

Due to the lack of appropriate frameworks for cooperation between project design teams and civil society stakeholders, significant human capital can be seen to be going to waste. It is therefore important to promote social sustainability rather than personal benefit and gain, in order to unlock these dormant resources and to stimulate the power of local communities. In brief, through such collaborations, vulnerable groups in society will also be better represented in the cities with effectively applied principles of universal design. Because, such examples of public participation is highly required around the world.

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