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No "Obstacles" In Playgrounds That Are Not Only Accessible But Also Inclusive

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Abstract

In the current century, the importance of play for children is a major issue addressed in the literature. Play enables the physical, mental and social development of children. According to the United Nations Convention on the Rights of the Child, engaging in play is a fundamental right for children. This article of the convention covers all children below the age of 18 and does not exclude the children with disabilities. Like their peers, children with disabilities should also enjoy the right to engage in play, and societies should use every means available in order to help children play whether indoors or outdoors.

According to the 2011 Population and Housing Research, 6.6% of the population in Turkey has one or more disabilities. The target group of this study is 'children with disabilities' who live in İstanbul. In this group, speech disorders (21.9%), and mental disabilities (17.1%) prove to be the most dominant disabilities. However, the number of playgrounds where disabled children can play are scarce in number.

Keywords: *Children, play, playground, inclusive design, İstanbul.*

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This study provides an analysis of children's playgrounds, which are essential for the development of children, and evaluates the design features of these playgrounds based on inclusive design principles. The study also addresses the requirements of inclusive playgrounds by referring to the examples of inclusive playgrounds around the world as well as those few examples in Turkey. The design principles of inclusive playgrounds were also evaluated for three parks in İstanbul which were designed and are currently in use - namely Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park.

INTRODUCTION

"Playing" is among the fundamental needs for children in order to ensure a healthy development beginning from infancy. According to the Convention on the Rights of the Child, it is evident that engaging in play is one of the fundamental rights of children. Every child on earth has the right to engage in play, and children with different abilities should not deprived of the right to engage in play.

Children's playgrounds are urban facilities that enable children to enjoy the right to play in the public realm. While children may sometimes play on the streets, they may also use planned and designed playgrounds (Whyte, 1980).

Although children's playgrounds are simply designed to ensure the safety of children while playing, they also prove to have many advantages for both children and adults. Therefore, children's playgrounds are among the most critical urban facilities for children, and their design should put children at its center. Only this way, it will become easier to comprehend children's needs related to play, and playgrounds that serve their purpose can be designed.

Today, in many countries, the inclusive design approach is adopted for the projects carried out to meet the children's need to play, and many research on inclusive design is conducted. Lately, the available literature on the topic puts specific emphasis on the fact that children with disabilities and particularly those who are physically disabled have difficulty in accessing such playgrounds, and even if they managed to reach these playgrounds they are not adequately welcome to play, and the playgrounds that can actually meet their needs are scarce in number.

Inclusive playground designs would provide a space for all children with different abilities where they can play together with their peers whenever they need and desire and not feel left out. Children who can fulfill their need to play without any

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obstacles enjoy a healthy development, and they would contribute to society when they become adults.

DESIGN THAT IS NOT ONLY ACCESSIBLE BUT ALSO INCLUSIVE

The residents of a city participate in the daily life practices by using public spaces, and they should enjoy the right to equally benefit from the opportunities and facilities available in the city. The concept of inclusive design has emerged in order to allow individuals reach the opportunities in an equitable fashion (Mace, 1998). In a nutshell, inclusive design refers to the process in order to design products and environments that can be used by as many individuals as possible in as many occasions as possible (Prellwitz, 2007).

Since the concept has emerged, there have been many definitions. According to the British Standards Institution, inclusive design ensures that essential products and/or services are designed so that they are available for the access and use of as many individuals as possible without any adjustment or special design(http://www.ek.yildiz.edu.tr//images/images/yayinlar/ktp.pdf, 2013). It can also be defined as an integral design approach that allows individuals to use all products and environments regardless of their age, capabilities and status, and a product design process that enables as many individuals as possible to use such services and products under all circumstances (City of Calgary, 2010).

When we take a closer look at the definitions and descriptions of inclusive design, it becomes quite evident that accessibility and inclusiveness are starkly different from each other in many ways. Therefore, accessible spaces and inclusive spaces differ from each other. Inclusive spaces are all accessible; however, from time to time, accessible spaces fail to possess the characteristics of an inclusive space. Thus designers should pay due attention to design inclusive spaces rather than accessible spaces in order to increase diversity, and they should also ensure that individuals with different capabilities can spend time together.

Design Principles of Inclusive Playgrounds

In 1998, Architect Ron Mace and a group of architects, engineers, product designers and environmental engineers who joined him in founding the Universal Design Center developed seven principles in order to clarify the definition of “Inclusive Design” and to provide guidance to design professionals (http://idea.ap.buffalo.edu/udny/Section3.htm, 1980).

These principles ensure that more functional and aesthetic designs for individuals with different anthropometric dimensions and different abilities are developed. These principles are *Equitable Use, Flexibility in Use, Simple and Intuitive Use, Perceptible Information, Tolerance for Error, Low Physical Effort, and Size and Space for Approach and Use.*

Even though play can be defined as the universal language for the children around the world regardless of their language, religion, ethnic identity, physical dimensions, age and abilities, it is quite critical to provide inclusive play, which is of high-quality and which can be enjoyed everyone. However, the provision of inclusive play is usually neglected.

In order to provide inclusive playgrounds, current playgrounds should be redesigned so as to transform into inclusive, and new playgrounds should be designed based on the inclusive design principles.

User-centric playgrounds that comply with the inclusive design principles can be identified as 'Inclusive Playgrounds'.

Equitable use ensures that the design makes the space fun for everyone, provides continuous and balanced diversity of physical and social activities, features various options for different users and allows several children to play with the same play equipment at the same time (http://www.inclusiveplaygrounds.org/ me2/principles, 2015).

Flexible use ensures that spaces are designed so as to be easily understood, to give children the opportunity to try and succeed and to make the users feel safe. Designers should consider in which ways the design can fulfill the needs of different users' needs (Kirazoğlu, 2012; Skulski, 2007).

Simple and intuitive use ensures that designers not only fulfill children's needs and expectations from a playground but also eliminate unnecessary complexity. If designers develop play equipment that can be clearly understood by children from different age groups and with different abilities, children will intuitively start exploring these equipment over time; and consequently, they will greatly enjoy their time at the playground and will end up using the playgrounds more frequently.

Perceptible information considers the fact that children process information via visual, sensory or experimental means, and thus argues that any information conveyed through the design should be easily understood by users (http://www.inclusiveplaygrounds.org/me2/principles, 2015; Kirazoğlu,.2012; Skulski, 2007).

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Tolerance of error minimizes the risks in inclusive playgrounds and allows children make minor errors while they are exploring and challenging their surroundings (Kirazoğlu, 2012; Korkmaz, 2014).

Low physical effort suggests that a successful design does not require children to spend extraordinary effort during play. Spending less effort can only be ensured by enabling children maintain a neutral body posture and by achieving a balance between play activities that require less effort and play activities that require repetition.

Size and space for approach and use facilitates the design process by ensuring designs that are appropriate for children with different body dimensions, postures, activity and motor skills. Consequently, playgrounds designed by professionals can reach out not only to individuals with ‘standard’ abilities but also to individuals with different abilities; therefore, more users will end up benefiting from the playgrounds (http://www.inclusiveplaygrounds.org/me2/principles, 2015; Kirazoğlu, 2012).

Although these principles differ from each other, they all boil down to characteristics such as safety, accessibility, usability, intelligibility and inclusiveness. In addition to these principles, different countries have adopted various regulations and standards that differ from each other on the basis of diverging perspectives on children and children’s playgrounds.

Figure 1. Livvi’s Place Playground-Sydney, Playground Finder, 2013.

Figure 2. Playground in the Grommet Island Beach Park, Together We Play, 2012.

Livvi’s playground in Australia (Figure 1), Grommet Island Beach Park in Virginia Beach (Figure 2) and Clemyjontri Park in Virginia are excellent examples of inclusive playgrounds (http://www.special-education-degree.net/, 2014).

Australia’s first inclusive playground Livvi’s playground and Josh Thompson’s Grommet Island Beach Park were both designed to prioritize the sensitivities of families with a disabled child due to a disease. Both of these inclusive parks allow disabled children,

their families and children who are not disabled play along with each other.

These examples demonstrate that the adoption of inclusive design principles in existing and future playgrounds will enable disabled and children without a disability play along with each other allowing disabled children share the same public space with their peers.

EVALUATION OF INCLUSIVE PLAYGROUNDS IN ISTANBUL

According to the data available in TÜİK's Population and Housing Research in 2011, İstanbul takes the lead with a total of 670,756 disabled residents. The same research indicates that the rate of children between the ages of 4-17 with a physical or orthopedic disability 4.2% (roughly 28.000 individuals).

A research study emphasizes that children's playgrounds in Turkey are inadequate in terms of both quality and quantity, while the 2013-2017 National Child Rights Strategy and Action Plan indicates that the existing playgrounds can fulfill the needs of only 25% of the children in Turkey (http://cocukhizmetleri.aile.gov.tr/data/54ad4cd6369dc5dac028bda2/ulusal_cocuk_haklari_strateji_belgesi_ve_eylem_plani.pdf, 2012). Furthermore, in their study, Aksoy (2001) mentions that the rate of green space per person (m^2/person) in İstanbul is way below the standards.

The primary motivations behind this study are the population of the disabled in İstanbul, the rate of disabled children among the disabled and the data that reveal the inadequacy of playgrounds. This study aims to scrutinize inclusive playgrounds in İstanbul; and for this purpose, three parks that are currently used - namely, Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park were analyzed. These parks were comparatively analyzed based on the design principles for children's playgrounds.

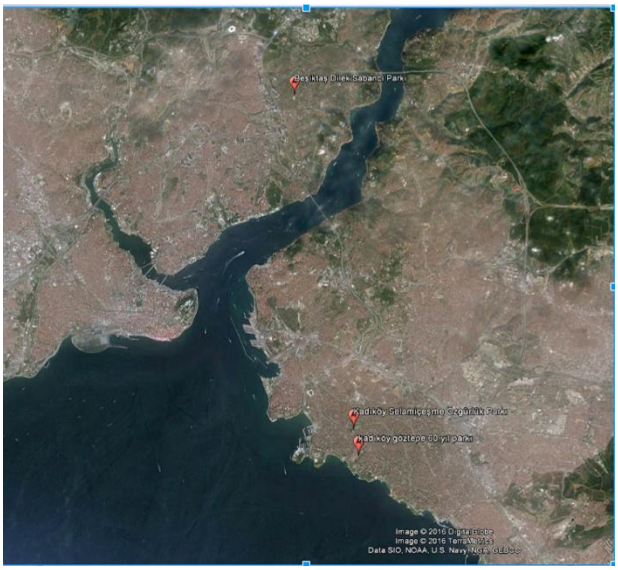

Figure 3. Location of Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek.Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park in İstanbul (Pola, 2015).

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RESEARCH METHODOLOGY

Kadıköy Göztepe 60. Yıl Park, Beşiktaş Dilek Sabancı Park and Kadıköy Selamiçeşme Özgürlük Park were analyzed by making on-site observations conducted with the checklist that was developed and localized based on the descriptive principles for inclusive playgrounds in Sydney, Australia 2014.

Kadıköy Göztepe 60. Yıl Park | **Beşiktaş Dilek Sabancı Park** | **Kadıköy Selamiçeşme Özgürlük Park**

Figure 4. Parks that were compared under the scope of the study, (Pola, 2015).

Table 1. Comparison of the inclusive design criteria and the three parks in İstanbul, (Pola, 2015)

Criteria for inclusive playgrounds	Kadıköy Göztepe 60.Yıl Park	Beşiktaş Dilek Sabancı Park	Kadıköy Selamiçeşme Özgürlük Park
1-Play activities			
Diversity of options for use	✓	×	×
Sensory richness	×	×	×
Solutions at the ground-level	×	×	✓
Spaces that help socializing	✓	✓	✓
Options to play together or along each other	✓	✓	✓
Diversity of play activities	✓	×	×
Convenience for different body dimensions and postures	✓	×	×
Socially inclusive play options; the opportunity to play along each other	×	×	×
2-Social amenities and opportunities			
Bus stops and other stops	×	×	×
Restrooms	✓	✓	✓
Water features	✓	✓	✓
Public transit in close vicinity	✓	✓	✓
Walking trails	×	×	✓
Diversity of the components that make up the silhouette (trees, entrances, etc.)	✓	✓	✓
Garbage bins	✓	✓	✓
Sitting areas	✓	✓	✓
Bicycle parking	×	✓	✓
Boundary features	✓	✓	✓
3-Paths and entrances			
Intelligible road network	✓	✓	✓
Interrelated play activities	✓	×	×
Perceivable entrances	×	×	✓
Information signs	✓	✓	✓
Attractive colors and visual features	✓	✓	✓
Color scheme and color match	✓	×	✓

4-Accessibility			
Wide, continuous and accessible pedestrian paths	×	✓	×
Points of rest	✓	✓	✓
Car parking in close vicinity	×	×	×
Accessible social amenities	✓	✓	✓
Accessible play activities	✓	×	×
Safety precautions in play equipment	✓	✓	✓
5-Natural features			
Vegetation	✓	✓	✓
Open green spaces	×	×	✓
6-Proximity			
Proximity of play groups and social amenities to each other	✓	×	×

Comparison of the parks in İstanbul that feature inclusive features

Göztepe 60. Yıl Park is located in Kadıköy district. The park was inaugurated in 2005, it was then renovated and reopened in 2013. After the renovation work, İstanbul Metropolitan Municipality Parks and Gardens Directorate for the Asian Side transformed the 8-hectare park into a theme park (Bahadır, 2014).

Göztepe 60. Yıl Park is listed among the top 15 playgrounds in İstanbul, and it features an ample space with play groups. The first section includes a technology-themed section where visitors can play audio games. The second section, also known as the 'action fly', includes the cable car. The third section features play equipment including but not limited to slides, swings, trampolines, cubic climbing track, and İstanbul-themed equipment such as the Bosporus Bridge and the Galata Tower. The fourth section includes the ship play group, which was made of teak to ensure resistance to air conditions. The playground is divided into four sections, and there is a fitness area right next to the play area. In addition to the fitness area, there are 7 tennis courts in the park where various tournaments are held.

The overall analysis of the park reveals that paths that can also be used by the disabled and ramps with optimum slope along with stairs were included. Four section for play and the fitness area include play equipment for children with disabilities, and disabled children who come to the playground with their families can seize the opportunity to use these play equipment along their peers. However, inclusive play equipment and paths appropriate for the use of the disabled are not sufficient to characterize the playground as inclusive. Therefore, due attention should be paid to other features such as the location of the park and whether users can benefit from the park in an equitable fashion. Although the park can be easily accessible with

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private cars and public transit, the responses provided by disabled respondents whom we surveyed imply that children with disabilities cannot access the park without any assistance. When the park is analyzed on the basis of the inclusive design approach, it is evident that it has features that are in favor of the disabled.

Dilek Sabancı Park is located in the Levent neighborhood of Beşiktaş district. It is quite significant for it is the first park designed for the use of the disabled, and for it proves to be the first park where disabled children can play themselves without any assistance (Bahadır, 2014). The park was inaugurated in 2002, and it is 16 750 m2.

There are 2 large children’s playgrounds in the park. Only one the playgrounds have only a single swing appropriate for the use of the disabled. This swing is located in isolation from the other play equipment, and thus is far from being inclusive. The second playground does not include any play equipment appropriate for the use of children with abilities, and sand was used as a surface material. Consequently, although there are two playgrounds and the paths that lead to the playgrounds are designed with the disabled in mind, children with disabilities cannot use these playgrounds.

Despite the fact that the children’s playgrounds are not used by disabled children, the paths within the park are designed with the disabled in mind. Ramps with adequate slope and width as well as the railings used where necessary help the disabled use the park. Furthermore, stairs are located where necessary allowing everyone use the park and making the park achieve a certain level of inclusiveness. In addition to the children’s playgrounds, there are basketball and volleyball fields, an indoor fitness center, cafeteria, a decorative pool and children's playgrounds.

When Dilek Sabancı Park evaluated on the basis of inclusive design principles, it is apparent that the park was designed accordingly to prioritize the disabled.

Individuals with disabilities who visit the park can reach anywhere in the park thanks to the ramps at optimum slope and number. Even so, the observations revealed that the social amenities and children’s playgrounds are not appropriate for the disabled. Only one of the playgrounds feature a swing for the disabled, while the second playground does not include any inclusive equipment for children to play. Moreover, the swing for children with disabilities is placed in isolation from the main group of play equipment, and the surfaces in both playgrounds prove to be an obstacle for the disabled. Thus, it is possible to

suggest that both playgrounds do not comply with the inclusive design approach.

In short, despite the fact that Dilek Sabancı Park is the first park specifically designed for the disabled, it still has certain shortcomings in terms of inclusiveness. Also, the design of the park is appropriate for the use of the disabled, however, it separates users with disabilities from other users. In addition, the playgrounds in the park cannot be used by children with disabilities due to the fact that they lack the appropriate features.

Selamiçeşme Özgürlük Park is located in Selamiçeşme vicinity of Kadıköy district. Given its proximity to public transit thanks to its location in walking distance from Bağdat Street and Minibüs Street, the park stands out with its highly convenient location.

The park has an area of 120.000 m2, and it has become a point of attraction for the residents of İstanbul on account of the social amenities and the green spaces it provides. The park enables users to rest and have fun at the same time, thus it is used by many particularly on the weekends.

There exists numerous opportunities and facilities inside the park to fulfill the evolving physical and social needs of individuals. These include football and basketball courts, a tennis court, walking trails, bicycle and jogging track, children's playgrounds, sandpit, fitness area, decorative pools, an amphitheater, special areas for pets, picnic areas, rest areas, cafeterias and tea gardens.

There are 5 playgrounds in Özgürlük Park. The observations conducted in the scope of this study indicate that 2 of these playgrounds can be easily accessed by disabled children, while the other 3 require assistance to access and thus cannot be used by children with disabilities.

When Selamiçeşme Özgürlük Park is analyzed based on the inclusive design criteria, it is possible to suggest that the overall design of the park is appropriate for the use of the disabled, and users with different abilities have equitable access to the park.

The analysis of the 5 playgrounds found in the park reveals that 2 of these are easily accessible by all children, whereas the other 3 fail to provide access to children with disabilities. The playgrounds which cannot be accessed by the disabled have stairs at their entrances and do not have adequate play equipment for the disabled. Rubber or rammed earth are used to cover the surface in all 5 playgrounds. These materials are not appropriate to be used by children with disabilities and particularly by wheelchair users. When the play equipment in the playgrounds are observed, it was evident that they were not

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in appropriate dimensions, and thus could not be used by children who use assisting devices.

In summary, Selamiçeşme Özgürlük Park is in general designed considering users with disabilities. However, the playgrounds in the park are not inclusive due to characteristics such as the play equipment and surface materials. Consequently, the park cannot be used by children with disabilities and fails to fulfill their need to play along with their peers.

CONCLUSIONS

Göztepe 60. Yıl Park, Dilek Sabancı Park and Selamiçeşme Özgürlük Park were all designed with a particular focus on inclusiveness. The analysis of these parks based on the requirements of inclusive design approach, it is possible to suggest that all 3 parks include paths that are equally accessible by users with different abilities. Even so, Dilek Sabancı Park is far from being inclusive due to the fact that the paths that lead to the playgrounds and the paths inside the playgrounds are not appropriate for the use of children with disabilities. When the playgrounds in these parks are evaluated, Göztepe 60. Yıl Park proves to be most appropriate for disabled children, and it allows users -whether disabled or not- enjoy play equipment along each other. On the other hand, as mentioned previously, Dilek Sabancı Park does not feature any playgrounds appropriate for the use of the disabled. A total of 5 playgrounds were designed in Özgürlük Park; however, none of them can be used by children with disabilities due to inappropriate surface materials and play equipment.

EVALUATION AND RECOMMENDATIONS

This study addressed the importance of inclusive playgrounds and provided an analysis of the existing parks in İstanbul based on inclusive design principles. According to the findings of the study, the recommendations listed below can be emphasized:

- Designs that comply with the inclusive design criteria should provide equitable rights of use for everyone, they should be kept simple by eliminating unnecessary complexity, and above all, they should be implemented so as to ensure the safety of users.
- Playgrounds are critical in fulfilling children’s need to play; therefore, any designs proposed for children’s playgrounds should pay due attention to the inclusive design criteria and consider all children regardless of whether they are disabled or not.

- Children's playgrounds should ensure equitable access not only between two locations within the playground but also to the play equipment and social amenities. Therefore, disabled users shall be considered accordingly, and ramps with optimum slope and width should be included in the playground equipment where necessary.
- Along with the standards for accessibility, creativity should always be considered when designing children's playgrounds. Playgrounds should include play options which intensify the desire to play and which are interesting and inclusive.
- Every child learns in a different way, thus the notifications on the playground should address different learning styles in order to enable users to easily digest the information provided.
- The equipment on the playground should enable children maintain a natural body posture; sufficient space for children who use assisting devices should be provided; the playground surface material should be smooth enough to allow the use of wheelchairs, and the paths in the playground should have different widths and characteristics so that they can be used by children with different abilities.
- When designing inclusive playgrounds, not only the design professionals but also the relevant authorities play a critical role. Authorities should endeavor to inform both the residents of İstanbul and society in Turkey about disabled individuals and disability; they should raise awareness by carrying out various projects and by taking advantage of the social media and mass communication tools, and they should make every effort to prevent the exclusion of disabled individuals from society. Such activities can make individuals who are not disabled can truly empathize with the disabled and show more respect to the disabled members in society. When authorities inform society about disability, they should put specific emphasis on children with disabilities and on the importance of inclusive playgrounds from which disabled children can also benefit.
- Apart from raising awareness, research about disabled children's opinions on and expectations from play and playgrounds should be carried out (Pola, 2015), and the designs proposed should be grounded on the research performed.

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In short, existing obstacles should be eliminated by adopting a design approach that provides not only accessible but also inclusive playgrounds.

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Resume

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