

# Children psychology and outdoor play areas in Istanbul: Bakırköy & Beylikdüzü cases

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*Received: December 2013      Final Acceptance: April 2014*

## Abstract

City contains a heterogeneous structure with the different profiles with different needs. Study at hand, this wide range of “child” section will be examined. The child’s relationship with the city is limited because it depends on the conditions that can move between users of the city. In recent years, cities have become virtually uninhabitable for children, especially in metropolitan density of buildings, traffic, vulnerability, such as the timelessness of the main obstacles almost confront the situation of children made them cannot face to city. However, the most basic need of the child’s social environment needed for the game and self-recognition is expected to meet in urban space.

In this context, urban areas, public open spaces designed for children, children’s playgrounds will be elaborated. For the child, the child’s current status with the design of these spaces will be considered. In this sense, the area selected as the study area, such as Istanbul’s fast-growing (built) and contains a significant portion of the housing stock in urban districts; Bakirkoy and Beylikdüzü. At this point, proposed as hypotheses, observations made on the basis of certain criteria, these two towns on the existing areas of public open spaces lack with the basic problem that does not meet the need for quality care.

In the study, definitions of a child and user will be made, and 2-6 years of age children will be the reference due to they are on a new period of relations with the external environment.

## Keywords

Child, City, Open play spaces, Affordance concept, Child friendly spaces.

## 1. Introduction

Although children represent a large group in city population they are still considered at least possibly assets in whole urban design process. However, as the contents of this study will be a 'child-friendly city' " points out that the city is a platform to lead children to be an individual with features that support physical and social development of his city in the future (Barre, 1984). Having a relationship, socializing and expressing himself better, which are the basic needs an individual since early childhood, are strongly based on the ability of rendering life in outer space, than it is so important that the urban design process to respond the expectations of fiction depends on the context of relationship building. By that way, urban design process is the primary condition to provide a healthy environment.

Thus, considering the subject in the case of children, the situation becomes more rigorous and comprehensive. It is not only important for building a healthy mental and social future for children, but also considered an equally important for the continuity of urban space. The existence of a living, sustainable urban space depends on people's comfort, mobility, freedom and motivation, live in the city.

In this study, the major target is to uncover the children's basic needs by examining their motor, physical and social development periods and it is so important to define the role and effects of present urban space; especially open playgrounds on the children's life and the periods of their development.

## 2. The aim and the scope of the research

In this study, Piaget's "children's perception of space" concept is taken as primary reference and in the light of recent studies in this field, the effects of place in children's perception is examined. Firstly, the "child" must be characterized and the relationship between child and urban space is searched and the nature of sample outdoor play areas was carried out on all over the world. By that way some design criteria could be pointed out and then these criteria would be searched in Beylikdüzü and Bakırköy; case study areas that would

help to find out if these places are child friendly or not (Piaget, 1955).

## 3. Theoretical base, material and the method

Method for the study is to observe James J. Gibson's defined "affordance" concept through the concept of child-friendly environments and various examples from around the world to examine and evaluate the case. Affordance concept, firstly used in 1966, is nearly most popular approach in environmental perception psychology (Chatterjee, 2006).

The most common description of affordance is the set of observations of the environment in a residential area perceived by the individuals. Although the concept of affordance varies from person to person, when generalized, it has equal potential for everyone in. How much the concept of affordance is offered to society has a great importance. To ensure the same opportunities and potentials for all children is the premise of the social condition of a community. Affordances are perceived by motion and physical activity and utilized by person's own physical providers (arms, eyes, legs, etc.)

In this context, the concept of affordance can be described as a holistic system nested with a sequential plot (Bærentse, 2002). All these motions and activities period both reveals the affordance and seems to be an instrument to perceive consecutive several affordances. By the way, every affordance is followed by another activity and every activity becomes a provider of the perception of a new affordance. Affordances are not only classified as based on their content of potential, can be detected, received and shaped, but also separated positive and negative and calibrated as useful, more useful, etc.

When we relate the data with the content of this study, the affordances of outdoor playgrounds concept has been gotten a social dimension and distinguished Field of Free Action (FFA) and Fields of Promoted Action (FPA) (Kytta, 2003).

Affordance concept could appear if only any public sanctions and applications are set up, and so they could be

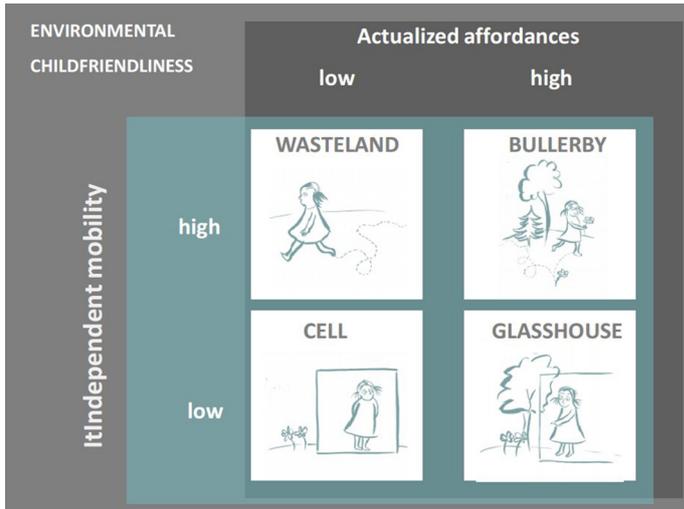


Figure 1. A schema of four models (Kytta, 2003).

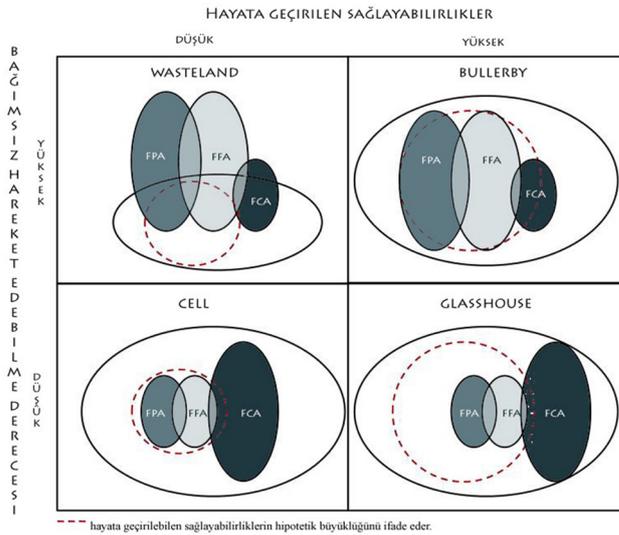


Figure 2. Affordance and independent mobility schema (Kytta, 2003).

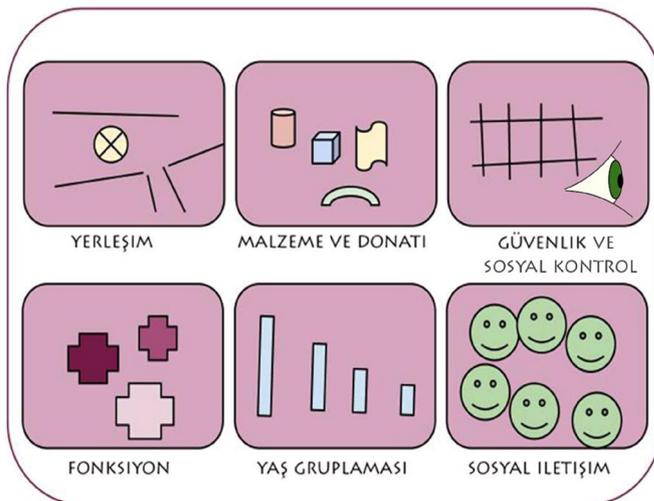


Figure 3. Open playground area designing criteria schema (Selçuk Kirazoğlu, 2012).

detected and shaped by these authorities. However, Kytta (2003), points out that it is possible not only to actively promote the actualization of affordances, but also to actively restrict the process and refers to this subset of potential affordances as the field of constrained action (FCA).

Lastly, it must be also examined as a separate parameter.

All these studies provide child related and the environmental data that would shed light on designing open playgrounds. Thus an assessment model for a child-friendly environment was constructed in 2003, which comprises two central criteria for environmental child friendliness: children's possibilities for independent mobility and their opportunities to actualize affordances (Gibson, 1977). There are four models planned; Bullerby, Wasteland, Cell and Glasshouse (See Figure 1).

Main purpose of establishing these models is to classify the city part according to the nature of the space and to take the design decisions with a participatory approach (Figure 2).

Bullerby model has been derived from the study and "child friendly environment" criteria have been investigated. Design criteria of open playgrounds are to be determined and these community spaces are to become as qualified, has a fictional setup beyond a single type of standard equipment which leads out child's imagination and creativity.

Eventually, children's open playgrounds are becoming increasingly more important in today's cities and we are committed to provide children more than a couple of standard equipment as playgrounds. The equipment and open playground areas could only be designed by the help of reasoned and certain criteria.

In this context, the scope of work safety, function, age grouping, comfort, materials, and maintenance of social communication are defined as important design criteria. If and only a working method that takes into account these criteria with the children's physical, emotional, social and intellectual development could be supported. (See Figure 3.)

In all studies, it is emphasized that

the basis of emotional and personal development is highly dependent on environmental factors and loyalty, loyalty to the earth, and so on curative effect on human psychology (Şener, 2001).

The child-friendly environment makes the child to be an individual with features that can support the development of its physical and social environment.

The city with all its parts should be a place to make children feel safe and comfortable in the physical sense, and in the symbolic sense, well designed urban areas should transmit the message, both children and adults as a part of it and equal to other members of the community. What is important here is to organize urban space itself to support children's physical and social development.

To make the observations, the two selected part of İstanbul are predominantly residential settlements; Bakırköy and Beylikdüzü. Surveys and assessments were made based on observations of these two districts.

#### 4. Conclusion and evaluation

It is aimed to determine the general negative and positive affordances in İstanbul with the evaluation of the observation and the questionnaires. Firstly, the question of whether there have been enough open playgrounds near the housing estate in the urban scale and the physical conditions of these areas are investigated.

The two regions; Beylikdüzü and Bakırköy where the results are mostly seen, are emphasized. For these regions the criteria of CFC are sought. The question of "what kind of positive and negative effects do the open areas included open playgrounds have on pre-process children?" is tried to be understood. The questionnaire has been carried out with parents since it will not work with pre-process children. In this study, it is aimed to interpret the areas in terms of being available and detectable.

In Bakırköy, an old residential area, children's outdoor activities are restricted because of the population growth, overflow traffic and the degeneration of the neighbourhood relations. However, in Beylikdüzü, while it is expect-

ed to develop in a more planned and ordered way compared to old ones, the same restrictions are experienced.

In Beylikdüzü, the typology of the settlement is generally composed of ten or more floored buildings. They consist of indoor and outdoor car parks. Since the housing estates are designed mostly as closed units, they have implemented the constitutional recreation areas as playgrounds and sitting benches. Even though this situation has an impression of 'designed for kids' at first glance, in fact it doesn't answer to the description of an outdoor playground with its typical closed position. In terms of equality, parents and children can only have a playground with the scope of the type of their houses. Some of the housing estates may not have this opportunity so the children may have to play among the buildings, on the concrete floor, in the vehicular areas and in the construction sites. In this regard, the affordances are observed to be positive for some people while negative for the others.

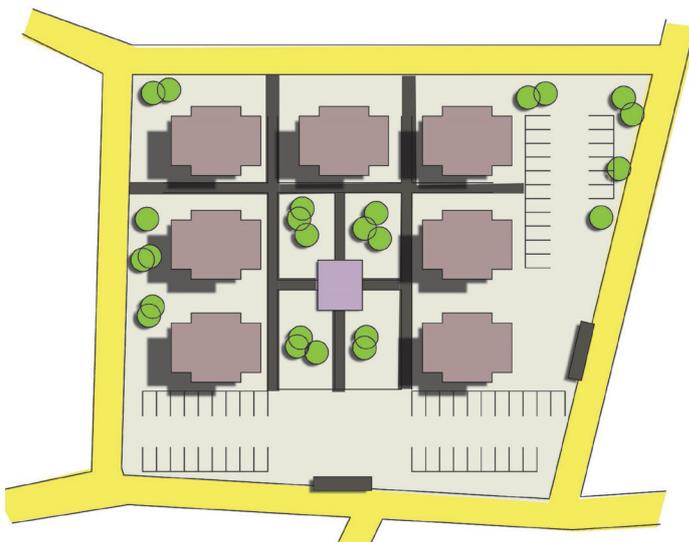
In Bakırköy, as based on the research, a typical outdoor playground is generally placed in a district of 2-5 floored buildings and streets. This kind of playgrounds has an important role in carrying out the social control. In the neighbourhood, parents can sit on the benches nearby and spend time together with their children. Therefore, the security system for the children on the playground is automatically obtained (Figure 4 and 5).

On the other hand, according to the observations in Beylikdüzü, the standard typology is too far from being a public outdoor area.

In the site, remaining free space, ex-



**Figure 4.** Open playground areas in Bakırköy (Selçuk Kirazoğlu, 2012).



**Figure 5.** Open playground areas in Beylikdüzü (Selçuk Kirazoğlu, 2012).

cept for outdoor car parks, has been turned into playgrounds replacing game equipment. The number of children playing in the playgrounds is very few. Well-qualified forestation is not in existence. Shading system has been provided by multi-storey buildings. However, out of the site, public outdoor areas where children can play and socialise with their peers are almost none.

According to the questionnaire carried out with 50 parents (from Bakırköy and Beylikdüzü 25-25), parents mostly prefer spending time with their children in outdoor playgrounds. The most preferred ones are by the sea or surrounded by greenery. However, some parents prefer going indoor shopping centres just because of the security and hygiene of them under any weather conditions. According to the answers of the parents; the most important reasons for them not to want to take their children to a playground are listed as; heavy traffic, security problems, air and noise pollution, having limited time to be with children, lack of playground nearby.

It is obvious that the outdoor playgrounds are in good condition in Bakırköy in terms of equipment and external fittings such as trees, bushes, ponds and sitting benches. However, they are still not safe enough for children because of the traffic, lack of the car parks and the security problems. On the other hand, there are

no planned and designed public playgrounds nearby in Beylikdüzü. According to the observations made by the parents in Beylikdüzü, they constantly need to control their children while playing outdoor because the lack of security.

In Bakırköy, the situation is more different. In established neighbourhoods, parents participated in the questionnaire stated that they may be care-free when their children play outside thanks to their neighbours. Everybody looks after each other's child as they know them.

Moreover, these parents emphasize that there are neither toilets nor changing rooms around the playgrounds. They mention about the lack of the units they can satisfy their children's needs.

In this study, when we try to classify two districts of investigation area Bakırköy and Beylikdüzü, with Kyttä's models, Beylikdüzü more close to the Glasshouse and Cell models. In this context, FCAs takes an absolutely intense area. On the other hand, Bakırköy still seems to be in Bullerby Model with its neighbourhood pattern. In Bakırköy, there has still a sense of neighbourhood unit and so it is closer to Bullerby model.

In this study, the neighbourhood housing typologies in three to four-storey buildings and on the other hand gated communities are taken to make an assessment. The evaluation does not include the whole of the city but the two districts where residents have optimal income level choose to move in after they have children. It is clear that both of the settlements could not offer the opportunity of free movement which is the primary requirement of Bullerby Model. On the other hand, although Bakırköy is an older a placement, allows this sense more than Beylikdüzü and it seems to has a balance of positive and negative affordances in a profile in Bakırköy. Here in Bakırköy, the street appears to be FCA and breaks and vehicular traffic streets, and parking arrangements have to be considered revising the needs of children. In Beylikdüzü multi-storey buildings and its gated profile make the district closer to the model Glasshouse model.

It is commonly found that where the quantitative values of affordances increase, than the qualitative values start to decrease. Within each complex, there are one or more “private” open playgrounds and mostly they have no used because of unqualified position they have. These open playgrounds should be set in a manner for qualified oversight of 3-5 closer residential complexes and thus, they could gain increased activities. In that case, firstly governments, NGOs, designers and then parents have great roles. To expand the children open playground areas there must be more open spaces left in residential areas and these spaces must be well organized, arranged in such a way that allows children to use their creativity. These designs should be evaluated taking into account the different age groups and gender. In this context, the most important equipment for children, places for outdoor play and learning. In these places;

Half-open and closed units should be designed in the structures. Changes in weather conditions affect children. In enclosed spaces should be considered in the different activity areas generated for the winter. (Pictures, music, indoor environment, sports, folk dance, dance courses, etc.).

Care should be taken to the use of ground materials in open playgrounds, materials used in compliance with the standards for different activities.

Access to the children’s play area in a safe manner. This is also very important. It should be easy to transport. There should not be any the busy main roads, heavy traffic, unsafe, uncontrolled regions between house districts and open playground areas.

There must be hidden places, spaces where the children collectively play to generate their imaginary.

Equipment used in the playgrounds should be creative, assembly of parts and the child brought into blocks away offers an alternative game consists of toys not standard. (slide, swing, seesaw, etc.)

In most open playground areas children have limited opportunity to move freely, by the buildings, walls, streets, fences, etc.

This study aims to establish a basis

for further studies on the subject. First of all, about the relationship between child development and the physical environment in the light of the fundamental review of the literature is presented, an then a wide research about the primary meeting places children with the city; open playground areas has been done and it is tried to determine the design criteria for open playground areas. The following step is to examine the concept of a child-friendly environment. However, monitoring and evaluation not completed this study, further research to expand the study with more parameters (parents’ education level, income level, geographical location, etc.). This further evaluation is very important to carry out studies.

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### **Çocuk psikolojisi ve İstanbul dış mekan oyun alanları: Bakırköy & Beylikdüzü örnekleri**

Kent, genel olarak toplumların ve bireylerin varlığına sahne olan mekandır. Kentin oluşumunda temel oluşturucu açık kamusal alanlar, her türlü sosyal sınıf, kültürel topluluk ve farklı yaş grupları, cinsiyetlerden insanı barındırır. Bireyin çocukluktan itibaren temel gereksinimlerinden olan ilişki kurmak, sosyalleşmek ve kendini iyi ifade edebilmek, dış mekan yaşantısını oluşturabilmesine, yani tasarımda mekansal kurgunun ilişki kurmada beklentilere cevap verebilmesine bağlıdır.

N. Schulz, kenti insanların bir araya geldiği bir "karşılaşma yeri" ve insanları saran, yakınlaştıran bir "mikrokosmos" olarak tanımlamaktadır. Sosyo-kültürel yaşantı, kentsel fiziksel çevre kurgusu içerisinde, kamusal açık alanlarda yoğun olarak gerçekleşmektedir. İnsanın fiziksel çevre ve toplulukla ilişkilerini kapsayan dış mekan yaşantısının sağlıklı ve çekici olması ise, kentsel fiziksel çevre kurgusunun detaydan bütüne ve kent ölçeğine kadar sağlıklı işleyişine, açık mekan yaşantısı ile ilgili beklentilere cevap verecek şekilde tasarlanmasına bağlıdır.

Birey, sosyo-kültürel yaşantısını, kentsel fiziksel çevre kurgusu içinde, kentte kamusal açık mekanlarda sürdürmektedir.

Bu bağlamda kent mekanının şekillenmesinde, mekan kullanıcısının fiziksel çevre ile ilişkileri, mekanı algılamaya biçimleri, ve bu fiziksel çevre içerisindeki davranışları önemlidir. Toplumda, cinsiyet, yaş aralığı, etnik köken, fiziksel, zihinsel yeterlik ayrımı gözetilmeksizin her bir bireyin özgürce kent mekanından faydalanabilmesi esastır.

Kentsel ve kamusal açık alanlar, birey ve toplumun bir arada bulunarak, sosyal etkileşime girdiği, toplumun he-

terojen yapısını ortak paydada buluşturabilen mekanlardır. Bu bağlamda, kentsel mekanın sağlıklı bir biçimde tasarlanması bireye sağlıklı bir ortam oluşturmada öncelikli koşuldur.

Kent içerisinde farklı profilde, farklı gereksinimleri bulunan ve heterojen yapı gösteren bir topluluk barındırır. Elinizdeki çalışmada, bu geniş yelpazede "çocuk" bölümü incelenecektir. Çocuğun, kent kullanıcıları arasında koşullara bağlı hareket edebilen, bağımlı tarafta olması nedeniyle kentle olan ilişkisi sınırlıdır.

Piaget'e göre, bir nesnenin bilgisine sahip olmak, o nesneyi yeniden oluşturmak -reconstruct- demek ise, bu bilginin, biçimsel (figuratif) ve işlemsel (operasyonel) iki yönünün olması gerekir. Biçimsel yön; dokunarak, keşfederek, duyularla algılamayı, işlemsel yön ise nesneyi yeniden oluşturmak için gerekli dönüşümlere olanak verecek, nesne ile birlikte yapılan eylemleri işaret ediyor. Burada, zihinsel düzey ne olursa olsun, algı ile zeka arasında bir ayrım yapıldığı gözlemleniyor. Aynı ayrımın mekana yansması ise; zihinsel ve algısal mekan şeklinde oluşmaktadır. Piaget' nin ele aldığı haliyle (Piaget, Inhelder, Szeminska, 1960) mekan kavramına karşıt olarak mekansal algı göreceli olma özelliğini korumaktadır. Zihinsel mekan ise, duyuusal-devinimsel mekan ve yeniden-canlandırılan mekan aşamalarını içerir.

0-2 yaş döneminde görülen duyuusal-devinimsel mekan anlayışı o dönemin en önemli zihinsel kazanımlarından biridir. Deneyimlenmiş, eylem ya da davranışlara sahne olan mekan henüz zihinsel olarak canlandırılma evresinde değildir. Yeniden canlandırılan mekan kavramı ise yaklaşık 2 yaşında başlar, tam yetkin biçimine de yaklaşık 12 yaşlarında, işlemsel düşünmenin yer aldığı somut işlemler döneminde ulaşır.

Yeniden-canlandırma, mekansal eylemin hatırlanması değil, simgesel ve içselleştirilmiş bir eylemdir. Bir başka tanımla, zihinde canlandırma, oluşturma ve yeniden üretmedir. Bu çerçeveden bakıldığında, duyuşal-devinimsel mekandan işlemsel mekana geçiş uzun ve eylemden işleme doğru gelişen bir süreçtir. Piaget (1926, 1951, 1952), Montessori (1963, 1964, 1979) ve Werner (1949) gibi araştırmacılar kuramlarında, çocuğun çevresiyle etkileşiminin, gelişimin temeli olduğunu, çevrenin de bilişsel - algısal gelişim üzerinde ölçülebilir fiziksel bileşenler içerdiğini vurgulamaktadır. Çocukların öğrenmede gözlem, keşif, deneme - yanılma yöntemlerini kullandıkları düşünüldüğünde kaynak bakımından zengin bir fiziksel çevreye ihtiyaç duydukları kabul edilen bir gerçektir.

Piaget'in "mantıksal - matematiksel bilgi" diye isimlendirdiği ilişkiler, sınıflar, ölçüm ve sayım bilgilerinin oluşması, işlem öncesi dönemin ana amaçlarından birisidir. Sınıflandırma (eşleştirme, arama, etiketleme), sıralama (karşılaştırma ve koordine etme) ve sayı konseptini (eşitlik yaratma süreci) içerir. Bu süreci desteklemede çevresel faktörler ön koşuldur. Çevrede bu faaliyetlere davet edecek, araştırmaya, karşılaştırmaya, aramaya ve saymaya teşvik edecek araçlar bulunmalıdır.

Mekansal olarak organize edilmiş öğrenme ve oyun alanlarında çocukların, gelişigüzel oluşmuş alanlardaki çocuklara göre daha kompleks aktivitelerle ilgilendiklerini, daha zengin şekiller ve renkler ürettikleri Nash' in (1981) araştırmalarında ortaya konmuştur. Bu çalışma mantıksal-matematiksel bilginin, öğrenme - oyun mekanı tasarımıyla desteklenebileceğine dair ilk deneysel kanıtları elde etmiştir. (Şener, 2001)

Çocuğun, günümüz kent mekanında, kamusal alanda yeri nedir, ne olmalıdır sorularına yanıt aranacaktır. Son dönemde kentlerin çocuklar için neredeyse yaşanmaz hale gelmiş olması, özellikle de metropollerdeki bina yoğunluğu, trafik, güvenlik açığı, za-

mansızlık gibi temel engeller yüzünden çocukların neredeyse kentle karşılaşmaması durumuyla yüzleşiyoruz. Oysa çocuğun en temel ihtiyacı olan oyun ve kendini tanıması için gereken sosyalleşme ortamını kent mekanının karşılaması beklenir. Bu bağlamda, kentte, kamusal açık alanlarda çocuklar için yapılan tasarımları, çocuk oyun parkları üzerinde durulacaktır. Çocuk için, kullanıcı olan çocukla beraber tasarlanması gereken bu mekanların güncel durumu üzerinden bir değerlendirme yapılacaktır.

Bu anlamda çalışma alanı olarak seçilen İstanbul gibi hızlı gelişen (yapılan) bir kent içerisinde konut stoğunun önemli bir bölümünü barındıran Beylikdüzü' dür. İlçede kamusal açık alanların yetersizliği ve mevcut alanların nitelik bakımından ihtiyacı karşılamaması temel sorundur.

Çalışmada öncelikle kullanıcının, çocuğun tanımı yapılacak, dış çevreyle ilişkisinin yeni başladığı dönem olan 2 - 6 yaş arasında olan çocuklar referans alınacaktır.

Çalışmanın yöntemi James J. Gibson' un tanımladığı affordance (sağlayabilirlik) kavramı üzerinden çocuk dostu çevreler (kentler) olgusunu incelemektir. Kytta (2002), Gibson' un çalışmasının üzerine algısal psikoloji ile çocuk dostu çevreler için değerlendirme kriterleri oluşturmuştur: bu kriterleri, 1) çocukların bağımsız hareket edebilmeleri (children's possibilities for independent mobility) ve 2) ve sağlanabilirliği hayata geçirme olanakları (opportunities to actualize affordances) diye iki ana başlık altında toplamıştır ve bu temelin üzerine Bullerby, Wasteland, Cell ve Glasshouse modelleri tasarlanmıştır. Bullerby modeli üzerinden Beylikdüzü ilçesindeki farklı çocuk parkları üzerinde gözlemlerle değerlendirilecektir. Sonuç olarak, çalışmada kamusal açık kent alanlarının ve çocuk parklarının kente kazandırılması, kullanıcının erişiminin sağlanması ve çağımız kent yaşamı içerisinde yeni rehberlerin kullanılması amaçlanmaktadır.