

# Exploring the Parent-Child Landscape Pattern after COVID-19

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## Abstract

This article discusses the design of parent-child landscape space, in the 5-minute life circle, that is getting more and more attention in the late stage of the new coronavirus (COVID-19). By studying the theory and practice of current parent-child landscape design, combined with the age characteristics of children, it is proposed to divide the parent-child landscape site into 5 small landscape spaces. At the same time, the design features and suggested landscape elements of these 5 landscape spaces are listed. These 5 small landscape spaces can be enlarged or reduced according to the actual size of the site.

## Keywords

Parent-child activity space, Community park, Design principles.

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## 1. Background and Overview

A sudden outbreak of new corona· virus (COVID-19) in the end of 2019 triggered a strong sense of public insecurity. As the epidemic becomes more and more controlable, human starts to think about the issue of "how human can coexist with the nature", pay more attention to health, pay more attention to the environment, pay more attention to the ecosystem around our lives. One of the common experiences of many recoverers is to have a positive and healthy physical and mental state. How to design a beautiful, comfortable, healthy and sanitary landscape has also become a topic for designers to explore.

Many families are more concerned about raising children than having children. Although the current community park design considers many natural ecology or people-oriented factors, but the space consideration for parent-child activities is not very deep. A series of problems such as inadequate utilization, monotonous forms, and inadequate humanistic care in the design of community park design, these issues need to be further explored. In addition, how to give parents a comfortable landscape environment where both parties can also enjoy it, is another issue that designers need to consider more urgently.

Space design for parent-child landscape activities, mainly in the form of games. The significance of parent-child activities is not only to make children closer to their parents, to help children grow up, to make children meet more friends, but also to allow parents to relax the pressure and get a pleasant feeling. This kind of pleasure can not given by others and other things. [1] Having a more comfortable environment for raising children, I believe that anxiety of raising children will be reduced a lot, and it may also prompt more people to be willing to respond to the national call to have a second child.

## 2. Design Principles

### 2.1 Convenience

Convenience is one of the important principles of parent-child activity space. Under normal circumstances, parents who bring their children to the park, hope the parking lot to the entrance gate and then to the destination to be as short as possible. In particular, the younger the child is, the more carry-on items the parents bring. So they always wish to reach their destination earlier. Older children can walk on their own, and do not need too many accompanying items, they can extend the walking distance appropriately. Therefore, toddler and preschooler's activity areas should be arranged as close to the entrance as possible, and schoolchild's and preteen's activity areas can be set in the center of the park. Public toilets, canteens and other landscape architectures that are often used should also be considered near the infant and area.

### 2.2 Security

Security is absolutely the top priority of all principles. Security issues are mainly from the following aspects.

#### 2.2.1 Traffic Routes

All parent-child activity spaces must be strictly separated from car and non-motor vehicle lanes. There are no intersections between motorized lanes and various activity areas, and even non-motorized vehicles should not enter the event venue, especially the intersection of various event venues. All motorway (including electric vehicles) are recommended to surround the entire park's green space for a week. Bicycles, skateboards, roller-skatings and other activity roads can be considered in the youth activity region, but away from other younger children's activity region.

#### 2.2.2 Traffic Routes

Inside the region needs to have a moderate gentle slope. It should not be set up in steep areas. Do not leave ditches in activity areas. If it must be kept, the ditch must be covered and the road surface must be on a level surface! [2]

#### 2.2.3 Plant selection

Avoid thorny or poisonous plants. The following plants, which are often used in the public landscape, should be avoided.

- (1) Poisonous plants, such as *Nerium oleander L.*, *Convallaria majalis Linn.*, *Pharbitis nil (L.) Choisy.*
- (2) Spiny plants, such as *Opuntia stricta (Haw.) Haw. var. dillenii (Ker-Gawl.) Benson*, *Rosa rugosa Thunb.*
- (3) With flying plants, such as *Salix babylonica*, *Populus L.*, *Platanus orientalis Linn.*
- (4) Pungent odorous plants, such as *Dysphania ambrosioides (L.) Mosyakin et Clemants*, *Ocimum basilicum* [3]

#### 2.2.4 Facility details

Amusement facilities should be made of wood or other environmentally materials, with smooth and flat surfaces. Welds, rivets, bolts, etc. must be sufficient pressure resistant. Laying buffers to reduce injuries is also a good idea. Bark, wood chips or sand are recommended for floor cushioning material.

### 2.3 Ecology

Complying with nature, ecology and environmental protection is always the principle that we cannot discard. On the one hand, we expect high-end technology to bring us various excitements and surprises, on the other hand, we always look for a real sense of security in the familiar nature.

### 2.4 Meet the needs of both parents and children

In parent-child space, children need to practice more communication skills and emotional expression skills. At the same time, children can grow up more comprehensively through sensory stimulation,

intellectual openness, and interest guidance. For adults, they need to let go in time and leave for a short time to satisfy themselves. Only when parents really feel happy and joyful can they motivate their children to invest more in their potential.

At present, most of the parent-child landscape interactive spaces are difficult to meet the actual needs of families, and their practicability is not high. And facilities often take into account the needs of children, and rarely take into account the needs of adults to participate. Parents can only stand by with no participate. Less consideration of areas for parents to rest, less consideration of shade and shelter from rain, it is often difficult to achieve the role of rising family happiness through parent-child interaction space. [3]

## **2.5 Easy to implement**

We look forward to the development of a parent-child landscape design model that can be widely used in different sizes of spaces, especially residential green space, community parks, street greenbelt, etc., which can help designers get more easily implemented guidance directions for parents Add a little joy to your childcare.

## **2.6 Regional Culture**

Refining regional cultural characteristics is very helpful to cultivate the sense of belonging of adults and children. For example, local traditional festivals, architectural colors, environmental characteristics, and so on, are integrated into the design from shapes and colors. For example, in the design of Jiaying parent-child landscape space, the culture of Nanhuling, Wupono, and Qiang culture were used to create a cultural element with a distinctive water and rural area style and parent culture, allowing children and parents to feel the charm of culture while playing. [4]

# **3. Discussion on the design model of parent-child landscape**

## **3.1 Functional partition**

According to child development psychology, this paper divides children into infant & toddler from 0 to 3 years old, preschooler from 3 to 6 years old, schoolchild from 6 to 10 years old, and preteen & teenager from 10 to 15 years old.

### **3.1.1 Infant & Toddler (0~3 years old)**

The main behaviors of children before the age of three are: doing nothing, watching, playing alone, repeating mechanical action, etc. At this stage, children need normal life cycle rules, careful care of others, great dependence, and lack of the ability to challenge the world alone. [5]

### **3.1.2 Preschooler (3~6 years old)**

During the age of 3 to 6 years old, playing is the main form of preschoolers, which can promote the positive development of preschoolers' cognition, emotion, behavior and personality. Compared with of schoolchildren, the outdoor activities of preschoolers are also more abundant. Therefore, children in this period began to need large outdoor activity spaces. Preschoolers themselves have no concept of where to play. As long as they are interested, any place where they can play, can become a playground. [5] Preschoolers prefers cute fairy-tale, adventure-like items, but not too exciting.

### **3.1.3 Schoolchild & Teenagers (6~15 years old)**

From 6 to 15 years of age, learning becomes the main activity of children at this time. Psychological development plays an important role in parent-child relationships. Children like group activities and attach importance to establishing friendship with peers. At this stage, children's academic burdens are relatively heavy, ... Usually, the place of activity is not far from home in the community or outdoor space around the community, such as community green space, street parks or squares. [5] School-age children prefer more exciting and varied programs.

### 3.1.4 Adult

The activities of children between 0 and 10 years are often much more different from their parents. It is more to take care of themselves. If the parents themselves can not be satisfied at all, they will easily feel tired. Space for parents to leave for a short time, even a dozen minutes, can also give parents a breath and recharge energy.(Table 1)

Table 1 Parent-child Space Partition Reference table

Partition	Features	Activities	Design element
Infant & Toddler (0~3 years old)	doing nothing, watching, playing alone, repetitive mechanical games, need to be looked after	Camping / picnic, swinging, playing with sand	Grass, swing, bunker
preschooler (3~6 years old)	Recognizing, playing, having a sense of adventure but not too exciting, more free time	Jogging, playing house, painting, climbing low, picking fruits	Fairy tale cottage, game jungle, mushroom shelter, watchtower, flowers and fruits, swing, small fountain on the ground, paddling pool
schoolchild (6~10 years old)	Heavy academic burden, like group activities, like exciting and changeable projects	Cycling, jogging, kite, paddling, roller skating	Drink exchange table, runway, multi-purpose square, lawn, multi-purpose swimming pool
Preteen & teenager (10~15 years old)	Heavy academic burden, like group activities, like exciting and changeable projects	Football, table tennis, climbing, skateboarding, roller skating	Runway, multi-purpose square, grass
Adult	(Provides activities mainly for parents in toddlers and children)	Rest and communication	Outdoor lounge chairs, drink and dessert houses, walking trails

The above activities and design elements can be freely selected and combined according to the size of the venue. The whole garden proposes to take the toddler area or children's area as the center, and the juvenile area as the sub-center. The infant area is placed in a corner opposite to the youth area. The adult area can be located between the infant area and the toddler area. Large and small lawns can connect various areas, and the main areas such as square runways focus on children and juveniles spaces.

## 3.2 Landscape elements

### 3.2.1 Landscape architecture

It is recommended to set up semi-outdoor buildings, especially in infants and toddlers, and fully consider activities such as breastfeeding, changing diapers, and feeding complementary foods. At the same time, drinks and dessert houses for adults should be as straight as possible to reach the infant and toddler areas, but the shade in summer cannot be ignored, especially in the afternoon in the south. Toddler-sized toilets should be provided with toddler-sized toilets, so that some children can go to the toilet alone. The schoolchild's area and the teenager area can be set up with common gazebos and promenades, and more rest benches are provided for parents to rest.

### 3.2.2 Water feature design

Due to the limited area of green space, from the perspective of safety, it is not recommended to set a large water area. A shoal or other small playable water features can be set near the children's area.

### 3.2.3 Small animals

The pond with small fish will always be a classic theme of children's favorite parks. If conditions permit, the proper placement of small animals that are safe for others, such as sheep, chickens, ducks, and geese, can even be considered as stocking in the whole garden, which can bring more vitality to the site.

### 3.2.4 Plants

Functional requirements are higher, and occlusion and transparency require careful consideration of the landscape to reduce the trimming workload. Try to choose the plants which are easy to grow and manage, beautiful and harmless, the color levels reflect seasonality. Especially in the toddler area, more colorful plants are needed to stimulate children's sensory development, and flowering plants will be more popular here.

## 4. Conclusion

In the past, people paid more attention to activities in large city parks, but with the influence of the new coronavirus, people found that the space close to them could also be better used. Creating a comfortable living circle that can be reached within 5 minutes is the task that designers in various fields must carefully consider. This article discusses a kind of parent-child landscape design model that can be flexibly applied. This model can choose different combination elements according to the size of the green space and the proportion of people. In the later stage, we will be committed to applying the theory to specific practices, such as how to configure different landscape elements and rationally arrange space for different green areas, so as to reach parents who can truly serve the busy work but still insist on raising their children.

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