

From Isolation to Interaction: Designing Playgrounds for Multifunctional Use



Figure 1 - roof playground in Rotterdam (*Speeltuinloge Dakpark - Vitibuck, z.d.*)

This research explores the spatial and design characteristics that enhance playgrounds' adaptability and multifunctionality in urban settings. Drawing from personal experiences and observations in Hoboken, Antwerp, and insights from urban planning literature, including Gill (2021) and Ward (1978), the study examines how playgrounds can evolve from isolated spaces to vibrant community hubs that cater to diverse needs across age group

Introduction

In the first week of the Urban Architecture studio, we visited the Blikfabriek in Hoboken, Antwerp, a nonprofit creative hub located in the rapidly developing south of the city. Once a factory, the Blikfabriek has been transformed into a lively complex that now houses offices, studios, workshops, and other creative spaces. While walking around in the public outdoor spaces of the Blikfabriek, I noticed neighborhood teenagers riding scooters, walking, and hanging around in groups (figure 2).

Seeing the teenagers at the Blikfabriek took me back to my own youth. Playing outside was a big part of my youth. We did everything outdoors, from picnicking and building huts to playing ball games. The playground in my neighborhood stands out in my memory as a place we truly made our own—a safe spot where we could play freely and feel at home.

It also raised a fascination as to why these teenagers are drawn to the Blikfabriek? Is it simply the sense of freedom this space offers, or do other factors come into play?



Figure 2 - teenagers hanging out at the Blikfabriek (own photos)

When speaking to teenagers in Hoboken, they expressed little fondness for their neighborhood, even laughing at the idea that we had chosen to visit it. These conversations really stood out to me, prompting me to compare their experiences with my own memories of the neighborhood where I grew up. It made me wonder: Why don't these teenagers have more positive things to say about Hoboken? Could it be connected to their own childhood experiences? Perhaps they didn't have that one special playground where they could gather and do everything as they were growing up.

In *Urban Playground: How Child-Friendly Planning and Design Can Save Cities*, Gill (2021) argues that the presence of children in public spaces is a strong indicator of urban quality. Applying this perspective to Hoboken, I found that the streets felt rather empty. This observation, combined with my conversations with local teenagers, suggests that Hoboken may suffer from a broader lack of child-friendly urban planning.

Gill (2021) references Vauban in Freiburg as an example of child-friendly design, where green public spaces and play areas are integrated seamlessly with the urban landscape. This integration allows public spaces, even streets, to function as play areas, creating a more inclusive and engaging environment for children. The contrast on street level between Hoboken and Vauban (figure 3) is striking. Looking at how the public spaces are designed in Hoboken, it may be a reason as to why the teenagers I spoke to don't have great childhood experiences of the neighborhood.

Ward (1978) argues that an urban environment's failure can often be measured by the number of isolated playground "reservations" it contains. He thinks that playgrounds should be more than fenced areas with a swing and a slide (figure 4); they should serve as dynamic community spaces that cater to the diverse needs of people of all ages. By transforming playgrounds into public spaces that bring people together while remaining child-friendly, neighborhoods can become more vibrant, fostering a sense of liveliness and social cohesion.



Figure 3 - street in Hoboken vs. street in Vauban (DPG Media Privacy Gate, z.d.) (Innovate, 2022)



Figure 4 - fenced playground vs. child-friendly playground (Grant & Duncan, 2023) (Gill, 2021)

A crucial step in creating these vibrant, “inside-out” playgrounds is to establish conditions that attract people of different backgrounds and age groups to the space. To a certain extent it can be said that, to establish the conditions needed, the playgrounds should be multifunctional. Japanese photographer Hayahisa Tomiyasu’s *TTP Project* vividly illustrates this idea. In his series, a simple piece of playground equipment—a ping pong table—takes on countless functions, with its purpose defined by the imagination and needs of its users, bringing all kinds of people to the space (figure 5).



Figure 5 - *The TTP project, showing the different functions of a pingpong table (Tomiyasu, 2019)*

My experiences in the Blikfabriek, the insights on child-friendly design by Gill (2021) and the projects of Tomiyasu (2019) raises the question: **Which spatial and design features of playgrounds and their surrounding environments influence the likelihood and nature of the multifunctional use for activities beyond play?**

This research aims to identify the specific design and spatial characteristics that make playgrounds adaptable and multifunctional. By examining features such as seating, materials, greenery, surrounding functions, accessibility, and more, this study will clarify what makes a playground flexible and capable of serving diverse purposes. Such features benefit not only children but also contribute to creating inclusive urban spaces that support a variety of community uses—an essential quality currently lacking in Hoboken’s urban landscape.

Methodology

According to Gill (2021), Rotterdam has made great investments in child-friendly urban development, transforming public spaces into inclusive, vibrant areas that encourage diverse uses. He remarks that Rotterdam turned around the negative perceptions of the space by implementing a child-friendly plan (p.49), followed by an in-depth look at how this approach has impacted the city's urban landscape.

The following case studies showcase public spaces in Rotterdam that exemplify multifunctional playgrounds, integrating play with social, ecological, and community uses (see figure 6). By examining these sites, I aim to observe how the spaces are used in real-time and analyze their surrounding environments, which I will further elaborate later in this chapter. This combination of direct observation and analytical methods will help identify specific spatial and design features within these public spaces that promote multifunctional use beyond traditional play.

Benthemplein (*De Urbanisten*, 2013)

This city square helps prevent flooding in Rotterdam-North. In dry weather you can exercise there or sit quietly, in bad weather the square stores a lot of rainwater. Benthemplein is intensively used by students and by athletes and skaters. And it was created in close consultation with the entire neighborhood (Benthemplein, z.d.).

Dakpark (*Vitibuck Architects*, 2014)

A unique feature of this playground is how it makes use of the height differences of the rooftop park. For example, there is an eight-meter-long play river through which children can wade and make the water flow harder with pumps. For little ones, at the entrance on Hudson Street, there is a water mushroom near the playground lodge. Parents can buy ice cream there and keep an eye on the little ones while older children climb up (Speeltoerlog Dakpark - Vitibuck, z.d.).

Natuurspeeltuin de Blij Bij (*Zuid-Hollands landschap*, 2021)

The Brienenoord association and the Zuid-Hollands Landschap, the manager of the area, have made a natural playarea. There are tree trunks, river sand and willow branches to play with. The playground is also equipped with a climbing frame, a bee hotel, picnic table and a willow tunnel. In special beds kids can garden with vegetables, fruits and herbs. (Watertaxi Rotterdam, z.d.)

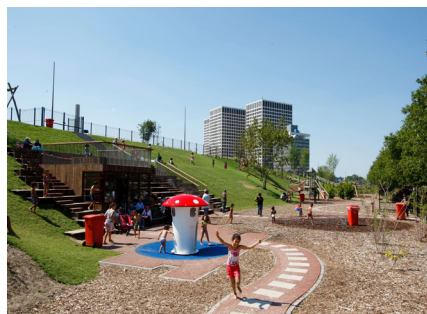


Figure 6 - Benthemplein (left), Dakpark (middle), De Blij Bij (right)

To get a complete overview of the features at the case study sites that encourage multifunctional playground use, I will categorize these features into two groups: *design features* and *spatial features*. This raises the question: what differentiates a design feature from a spatial feature?

Design features include elements such as materiality, forms, aesthetics etc. Do certain materials, seating areas, colours, signage etc. encourage the users to use the playground differently? Then another dimension is added by looking at the spatial features of the playground. How is the space organized, how are the spaces allocated and how accessible is the playground? These are just some initial questions that help to understand what differentiates the categories of features that encourage multifunctional playground use.

Prior to observing, I will develop a focused list of design and spatial features to monitor. For instance, I might dedicate an hour to studying how seating is utilized, followed by an hour observing how different materials enable varied uses. However, I anticipate that the observation process itself will help to refine my method. I aim to capture my findings through notes, sketches, and photographs.

These are initial ideas on how I am gonna conduct this research to find out which spatial and design features of playgrounds and their surrounding environments influence the likelihood and nature of the multifunctional use for activities beyond play. This means that this methodology will adapt over the course of this research.

Annotated bibliography

Benthemplein. (z.d.). Gemeente Rotterdam. <https://www.rotterdam.nl/benthemplein>

This website, provided by the Municipality of Rotterdam, offers information on Benthemplein, one of the case studies for this research. It provides insight into the municipality's perspective on the site and its intended purposes, helping to understand the vision and goals behind its design and use.

DPG Media Privacy Gate. (z.d.). <https://www.pzc.nl/antwerpen/ondergrondse-elektriciteitskabel-vliegt-in-brand-zes-mensen-gecheckt-voor-co-vergiftiging~a3dacb1b/?referrer=https%3A%2F%2Fwww.google.com%2F> [Photograph]

Eiland van Brienenoord: bijzonder natuurgebied midden in de Nieuwe Maas - Onderstroom. (z.d.). Watertaxi Rotterdam. <https://www.watertaxirotterdam.nl/onderstroom/artikel/eiland-van-brienenoord-bijzonder-natuurgebied-midden-in-de-nieuwe-maas>

This website provides background information about Eiland van Brienenoord, giving me a better understanding of the site before I begin my observations. As it's from Rotterdam's water taxi company, the content primarily serves to promote the location and attract visitors, so the descriptions may be somewhat romanticized for marketing purposes.

Gill, T. (2021). Urban Playground: How Child-Friendly Planning and Design Can Save Cities. In *Children Youth and Environments*.

In his book, Gill gives valuable insights on child-friendly urban planning and design. He shows multiple examples of what can be labeled as child-friendly design, which can be valuable references to look at. His statement about the fact that the presence of children in public spaces is a strong indicator of urban quality, accompanied with his examples on child friendly design, form the basis of this research.

Grant, H., & Duncan, P. (2023, 24 november). England's playgrounds crumble as council budgets fall. *The Guardian*. <https://www.theguardian.com/environment/2023/aug/04/england-playgrounds-crumble-council-budgets-fall> [Photograph]

Hayahisa Tomiyasu - GetxoPhoto. (2024, 12 juni). Getxophoto. <https://www.getxophoto.com/en/2024-edition/artists/hayahisa-tomiyasu/> [Photograph]

Hayahisa Tomiyasu spent four years photographing one ping pong table from his window. (2019, 25 januari). <https://www.itsnicethat.com/articles/tomiyasu-hayahisa-ttp-photography-250119>

In his photographs, Tomiyasu demonstrates how a simple piece of playground equipment—a pingpongtable—can serve countless functions. This illustrates the potential of multifunctional spaces to bring together a diverse range of people, highlighting the value of researching which elements contribute to creating such spaces.

Innovate. (2022, 26 december). Guided Tour through the City District Vauban - Innovation Academy. Innovation Academy. <https://www.innovation-academy.de/en/guided-tour-vauban/> [Photograph]

Speeltuinloge Dakpark - Vitibuck. (z.d.). Vitibuck. <https://www.vitibuck.com/speeltuinloge-dakpark/>

This website belongs to the architects of one of my selected case studies. It includes a detailed project description and showcases architectural drawings that provide valuable insights into the project's design and purpose, helping me to understand it better before visiting the site.

Ward, C. (1978). The child in the city. <https://link.springer.com/content/pdf/10.1007/BF02694719.pdf>

This book is a classic in the field of child-friendly design. Chris Ward was one of the pioneers advocating for the integration of children's needs in urban environments. He highlighted how urban design significantly influences children's experiences and development. Gill acknowledges Ward's work as a major inspiration, making this book a great reference for understanding child-friendly urban planning.