

# Playgrounds for children make a difference

Designing places for children in low income housing areas



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## 1 Introduction

During a study trip this year within the course Urban Shelter, we studied housing projects for low-income groups in Metro Manila, Philippines. The environments and buildings we encountered gave me very strong impressions, but also all the people we met that lived in these areas. Something I noticed and was touched by was the reality of the children. The children's outdoor environments differed a lot from what we are used to here in Sweden. In the areas we visited, the children were running around and playing outside on streets with hard surfaces. They were playing in unsafe areas designed for car traffic and not children. The only common area designed for playing was the covered basketball court. However, this is solely a place designed for older children and not the younger ones.

The outdoor space for children living in urban areas is often limited and not prioritized. However, we know that play has an important role in the child's development, health and learning. All children should have the same opportunities, possibilities and the same basic requirements. One way to start with this is to look at the environments and playgrounds for the children. The aim of this paper is to look at the impact playgrounds could have on children in low-income housing areas and how they could be designed in a safe, affordable and attractive way.



Playing children in different low income housing areas in Manila (photographs by the author, 2020).

## 2 Literature Review

### The Importance of Play

The outdoor play is valuable and has both physical, psychological and social benefits for children's development (Shi 2016, s. 654). Play in early years of life is important for childrens' health, wellbeing, learning and long-term development. Children learn both about objects and social relationships through the play and it also enables children to develop physical and problem-solving skills (Ambardekar, Powell, & Sheehan 2005, s. 403-404).

Further more, other effects of early play experience is: that it stimulates imagination and creativity, enhances vocabulary and communication skills, strengthens the self-confidence, persistence and concentration. Children learn to control and regulate their own behaviour through play and it's good for anxiety reduction and conflict resolution (Kellock 2015, s. 4).

Physical activity is also a way to prevent obesity in society. There are connections between the built environment and health, and both public parks and play areas are factors which with the population's health could be improved (Ambardekar, Powell, & Sheehan 2005, s. 403-404). Creating playgrounds and other environments for exercise is also a way to create more social meeting places in society (Faskunger 2011, s. 3). Research has also proven that play interventions are a powerful and cost effective poverty reduction tool, with sustained impact. Research on play interventions show that they result in significantly raised IQs, greater levels of education attainment, higher rates of employment and increased wages (Kellock 2015, s. 3-5). Play during first years of life is particularly foundational to later life development and have the highest payoff in the long run (Kellock 2015, s. 23).

### Lack of Time and Out of Space

Urban populations have expanded strongly since the late 1990s. In 2014, the world had an urban population of 3,9 billions, which corresponds to 54 per cent. Rapid urbanisation has increased the demand for low-cost housing, but the poor majority often have a low priority in most developing countries (UN-Habitat 2016, s. 51). Low-income families often have many children and proper playgrounds are therefore needed to support the high number of children in these areas (Ahmad and Hanapi 2015, s. 20). In today's society there is a need for families to have accessible playgrounds in their own communities (Ambardekar, Powell, & Sheehan 2005, s. 403). Unfortunately, urbanization has resulted in fewer open outdoor spaces for the children (Lenninger and Olsson 2006, s. 68). In low-income families are often also household duties, caretaking of younger siblings, family agriculture or businesses are taking the childrens' time after school. These chores often fall into the responsibility of the girls. Many children in the world's cities therefore neither have place nor time for play (Kellock 2015, s. 9).

## Early Planning

Much in social planning is about power and children do not have much power. Therefore, spokespersons are needed who can highlight their perspective (Lenninger and Olsson 2006, s. 155).

Environments for children and playgrounds must take place early in the community planning, not least in large cities where the interest of the land is high (Faskunger 2011, s. 3). According to Faskunger (2011, s. 41), there are three crucial factors in community planning that create good conditions for spontaneous sports and physical activity in residential areas. These important considerations are: closeness, accessibility and usability.

Closeness is about the actual walking distance and not the bee line. To promote the use of, in this case a playground, several times a week or daily, a walking distance of less than 300 meters is required. For children aged 2-6 years, the recommended distance is even shorter, at most 50 meters.

When it comes to accessibility, it's important that it is easy and safe to get to the playground. Accessibility is a relative concept, which depends on the physical and mental conditions of individuals and it also matters during the days that you are out.

Lastly, usability means that the surface can be used for what it is intended for. High usability means, among other things, a good condition of the playground - that it attracts many different users, that there is lighting, that it feels safe to be there, and that surrounding properties/houses have a good overview of the playground (Faskunger 2011, s. 41-44). Faskunger (2011, s. 44) has compiled the following points in terms of a checklist, concerning areas for spontaneous activities: area analysis, the size of the place, variation/diversity, equality, segmentation, information, supporting aspects, maintenance/condition, aesthetics, lighting, season, orientability, safety and security.

## Design for Play

Lenninger and Olsson (2006, s. 16) state that outdoor play does not only require different play equipment. This does not mean that we should reject the classic playground, rather the opposite. They are a kind of marker in the public rooms, that show that children may have their place in the city. However, there is a need for areas that allow the children to discover, be in close contact with their surroundings and participate in creating their own places.

Play should be able to be created in the moment. It is easy to get caught up in various functions – here the kids can swing, here they can dig etc.

Lenninger and Olsson (2006, s. 17) enhances the importance of materials (preferably natural land with loose material, such as cones and sticks), vegetation and areas that make the environment interesting and give the children freedom. Trees, bushes, stones, water and sand are as important elements as the play equipment. The decisive factor is that there is dynamic interaction between the different places and functions. There must be something that holds the various elements together so that a “landscape” is created for the play, rather than just an “environment” of isolated functions (Lenninger and Olsson 2006, s. 18). A really good outdoor environment for children is according to Lenninger and Olsson (2006) characterized by the fact that the children are inspired by what is around them and that they constantly find new places and new things to do. Furthermore, hilly terrain, shrubbery and trees are important. The play equipment must be located near the vegetation. A mixture of different play environments, greenery and open spaces is important for the play (Lenninger & Olsson 2006, s. 19). According to Lenninger and Olsson (2006, s. 52), the play arises in the meeting between chaos and order and contributes to children’s creativity.

Important not to forget is that playgrounds are crucial for all children’s development, even for children who have different types of disabilities (Harvard 2006, s. 1). Even here are factors such as accessibility and usability important keywords, when it comes to adapting the physical environment for these children. Harvard (2006, s. 6) emphasizes that the adaptation must not be an addition that points out and distinguishes. According to Harvard (2006, s. 1) can playgrounds also be made welcoming to everyone, without the cost being particularly higher.

According to Varona<sup>1</sup>, urban poor communities are highly congested and there is not enough of space for play areas (it is not a priority in the development). This despite that the law is stating that a percentage of a whole site should be allocated for playgrounds. Play spaces are usually created in-between residential buildings and often arise from spontaneous free spaces. These spaces are often narrow, dark, physically unsafe, steep or rough. Following should be considered when designing a playground in these areas:

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<sup>1</sup> Faith Varona, architect-environmental planner at the University of the Philippines, email on May 4<sup>th</sup> 2020.

1. portable – allows the children to move around the play equipment in a convenient, safe, secure place in case of need (if it rains, if it is too hot etc.)
2. multi-use public spaces - transformable
3. time-shared public spaces - roads becoming play areas at certain times of the day
4. age-inclusive - secure spaces for parents and elderly watching their children play, which also can be enjoyable and promote social interaction

## Safety

Planning for safety means anticipating as many possible situations in which a child may get injured and then take steps to prevent such injuries. This could be achieved with great creative thought and variety in mind (Shi 2016, s. 677). Since public playgrounds in urban areas are available for use by many children, it is important that they are safe. The following hazards are common in playgrounds located in low-income neighbourhoods:

- *Lack of maintenance:* Lack of equipment maintenance, including gaps, broken, rusted or missing parts. Also trash in the fall zone.
- *Unsafe surfaces:* Lack of protection from vehicles. Also the use of asphalt for the surface in the playground. Protective surfaces (for example wood chips) are often too thin.
- *Lack of supervision:* Adults missing out in their supervision of children. Injuries could be prevented with the presence of adults (Ambardekar, Powell, & Sheehan 2005, s. 403-404). In multi-storey houses with high density it's hard for the parents to keep an eye on the children outside the house and it's therefore safer to keep them indoors (Ahmad and Hanapi 2015, s. 20).
- *Unsafe equipment design:* For instance swings that aren't made of soft materials and platform barriers that aren't age appropriate (Ambardekar, Powell, & Sheehan 2005, s. 403-404).

Organized maintenance is usually something that is lacking in low-cost housing, due to cost (Ahmad and Hanapi 2015, s. 21). As a solution to the problems above, Ambardekar, et al (2005) suggest a pool of volunteers in the community or neighbourhood, that would be available to regularly rake the loose surface materials and pick up trash.

There are also other types of dangers that emerge when children are allowed to play outdoors instead of indoors. Parents' fear of security issues can be the reason for why some children aren't allowed to play outside in their communities. Social fear of strangers, bullying and unsafe neighbourhoods are some examples (Shi 2016, s. 677). Poor neighbourhood relationships also tend to make neighbors more suspicious towards each other and by extension their children's safety (Ahmad and Hanapi 2015, s. 25). It's less likely that children living in high-density low-cost housing areas will spend time outdoors. They are more likely to play along corridors where they are close to the adults supervision (Ahmad and Hanapi 2015, s. 22). Researchers have suggested that issues like this, as well as traffic risks and the risk of getting injured, should be taken into consideration in the design of outdoor play spaces (Shi 2016, s. 660).

Overcrowding, poor air quality, and high temperatures also play a role in the use of a playground. A hot and humid weather, like in Manila, can create discomfort for the children during daytime, while mosquitos could be another problem in the evening (Shi 2016, s. 677).

There is also a gender dominance issue that is common in low-income housing areas. Girls are often given a smaller space or they're located far away from the main playground. For this reason they tend to play indoors instead (Ahmad and Hanapi 2015, s. 23).

### 3 Playground Design

The outdoor spaces for children in low income housing areas are often limited and not prioritized. Reserving land for children's play is therefore the first step to take.

How can we then increase interest and motivation for children's playgrounds?

One way is of course to make them affordable to build. The Australian non-profit organization "Playground Ideas" (2020) has come up with a concept of DIY designs, a 3D playground designer and how-to handbooks, so playgrounds could be built, using only local materials, tools and labor. They provide whoever wants with guidelines for the design and construction of outdoor play equipment for children and it's for free. For smaller projects, they offer online support and for larger projects they can provide on-site support. I believe the concept of self-help playground construction is a smart and effective concept that can get more playgrounds built and provide the opportunity for more children to play.

The use of low cost and local materials is crucial in a concept like this. Which materials can then be used to build a playground? The first step is to see what materials are available in a specific context. The possibilities are then endless if you let your imagination set the boundaries. Tiles can be used to build a slide, old car tires can turn into a groovy motorcycle, swings, an obstacle course or a climbing wall and earth hills can be made from dirt leftover from construction projects. When working with the materials it's important not to forget to make it to a inclusive design, so that the playground becomes a place that welcomes all children.



Illustration that show how car tires can be transformed into a playground equipment (illustration made by the author, 2020).

“Playground Ideas” has a handbook about safety available. Is this sufficient for this kind of concept? Perhaps check-ups are required by more knowledgeable people. How can a playground further be designed so that parents feel safe and dare to let their children play? An important factor is of course the traffic. Children lack the understanding of traffic and how to keep safe in these areas. Playgrounds should therefore not be placed along bigger roads with heavy traffic. In some contexts, it may even be necessary to fence a playground, with either a hedge or a fence. Another factor that should be considered is the possibility for supervision. It's important that a playground is built near a residential building. In multi-storey houses with high density it can be hard for the parents to keep an eye on the children outside the house. If the relationship between neighbors is good, they may feel safe that other neighbors can keep an eye on the playground. If, on the other hand, the neighbourhood is unsafe, other measures may be needed. Making it possible for parents to stay at the playground with their children is then important. Benches are a simple option, having the playground next to other facilities is another option. This can for example be a shop or utility room. On the other hand, it may be that the parents do not have time to stay in the playground.



Green open spaces are important for everybody in a community and can also be combined with environments for play. Creating places for play can even be a way to strengthen the neighbourhood community, since it can promote interaction and conversation between neighbors.

In the design of a playground one must also take into account the conditions of the specific climate zone. Providing shade and ventilation is for example very important in hot and humid climates. As previously mentioned by Varona (2020), the playground equipment can also be built on the idea of being mobile. This gives the opportunity to move it if the weather is poor. If this comfort is not provided, there is a risk that the space would not be used, no matter how well designed it is. A manual on this area can therefore be useful.

## 4 Discussion

Our cities continue to grow, so when should the children's perspective be taken into account everywhere in the world? In the urbanized world we live in, the very first step is to reserve land for the children's play. Where the poor live, there is often less room for play. From what we saw during our study trip, the city of Manila is an example of where this is evident. In poor countries it is more common that children's play is not prioritized in the same way as in Sweden, because the children may have to help with household chores or look after younger siblings. One approach to this is to build cheap, in order to have some playgrounds built at all. However, it should not be at the expense of sustainability and safety. The place that is available for children is often also for boys. Here in Sweden we take for granted that girls and boys are equal and should have the same value, but this is not always the case abroad. One step in the whole is therefore to see the equal value of girls and boys. Perhaps more attention should be paid to how girls want to play in a playground.

Neighbourhood volunteers may be the ones building a playground.

As mentioned earlier, poor neighbourhood relationships is one reason why children are sometimes not allowed to play outside. With a concept of self-help playground construction it could be possible to strengthen the relationship and trust between neighbors. Another positive thing is that the children can be involved in the creation of the playground.

Involving children's ideas and reflections is essential to improve their outdoor play spaces. By asking the children questions and asking them to draw (their own dream playground for example), material can be collected for the design. To some extent they can also be involved in the construction of the playground, as far as possible i.e. and of course with the help of adults. The children are the ones who are going to use the playground and being able to join in and create their own place can stimulate creativity and creative joy. Having managed to build something on your own contributes to a sense of pride, for both children and adults. You want to take care of the things that you are proud of. In this way, the maintenance of the playground can be reviewed. However, to ensure the upkeep, a group of volunteers for this commitment is likely to be needed, as Ambardekar, et al (2005) suggests.

The concept of "Playground Ideas" is to provide knowledge about how to create cheap and easy-to-build playground equipment. It is about individual elements combined into a playground. However, Lenninger and Olsson (2006) emphasize the value of interconnected functions, not individual elements. They talk about a landscape for play rather than isolated functions. Vegetation plays an important role here, and placing a playground in a park can be an advantage for this reason. However, to think about here is to plan vegetation with pollen allergies in mind. There must be a balance between safety and letting the children discover and be "wild". The playground's design should encourage the children's natural need to explore and the safety issue should not contribute to a boring and unstimulating playground. If a playground is designed based on the self-help concept, it must be safe though. Of course in order to make it a safe place for the children who use it, but also so that the playground does not risk to be removed because of lack of safety. In play are places reshaped and a "dangerous stone" on a playground may have been placed there by a child. In some respects, discussions about safety may therefore need to be widened.

As mentioned earlier, physical activity is a way to prevent obesity in the society. We talk a lot about children being overweight and sedentary and the problems that will affect these children as adults as a result of obesity. However, we do not talk as much about how the adult world functions as a role model through workplaces and diets.

Apart from different cultural differences between Sweden and the Philippines, there are also major differences in the climate. Therefore, it is important to choose the location for a playground with care. Large nearby trees can e.g. be good for providing shade for the playing children. If vegetation does not provide enough shade, shading devices may need to be built.

The value in designing and planning for children's outdoor environments is something that needs to be noticed. Children, the elderly and people with disabilities are the groups that are most bound to their local environments and most dependent on good areas available. With improved knowledge can the planning be better. If we want to create sustainable communities for the future, it is important to invest in the children.

## 5 The Role of Architects

One of the main things as an architect is to understand the environment and the people living there with their prerequisites. To be able to make a good design for an environment requires both an aesthetic feeling and competence. There are different challenges in various contexts. Sweden and the Philippines are examples of two opposite climates, which therefore require different thinking when it comes to the design of buildings and the spaces in between. As an architect you could already from the beginning plan for and create economically favourable design. Good lighting conditions can decrease the need of lit lamps and thereby the cost of electricity. In a hot country like the Philippines, the need of good ventilation is important. When it is possible to create this in a natural way it gives the opportunity to also cut the costs for the future residents. By creating a sustainability in our designs, we can take our responsibility towards the environment and the imprint we leave. The choice of material is for example an important aspect when it comes to sustainability. Choosing materials with local connections and sustainable production methods is important. Except the ecological durability, it is also important to think of the social sustainability. In our profession, we create environments for people and it is important that they thrive and can develop in the environments that we design. All people regardless of race, age, religious beliefs, sexuality, disabilities etc. should be included.

So what are the architects role when it comes to designing places for children? First of all, it is important to create space for the children and not forget about their existence. It is crucial to develop places that are dedicated to the children, where they can play and explore under safe conditions. To create encouraging and stimulating environments for the children, it is important not to forget their perspective. Maybe it would do us all good not to forget about the child within ourselves as well...

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