Involving children

Children and young people are integral members of society, yet their voices are often overlooked in decision-making processes related to urban and architectural planning. This neglect is problematic because young people experience and navigate cities in ways that differ significantly from how adults do. The literature on children's participation emphasises the need to recognise their unique perspectives as vital contributions to shaping inclusive cities. (Hart et al. 1997) argues that children are not simply passive recipients of adult decisions but can be actively engaged in shaping their environments when given the opportunity. By involving youth in conversations about urban transformation, we can foster a sense of belonging, agency and responsibility from an early age, encouraging them to become stewards of their communities.

To engage with children effectively, it is crucial to adopt methodologies that resonate with how they perceive and interact with the world. Young people often relate to their environments through sensory experiences, play and exploration. Traditional urban planning languages and processes can seem abstract or irrelevant to them, which is why initiatives like the 'Jugend Stadt Labor' (Youth City Lab) emphasise the use of more accessible and engaging methods. As noted in youth-led movements, such as 'Youth City Manifesto' and 'Young Cities Now', urban development must meaningfully connect with the everyday lives of young people. This involves shifting the vocabulary used in planning and design to align with their experiences, interests and needs. By acknowledging and incorporating their life worlds into urban strategies, we create spaces that genuinely reflect the diversity of urban inhabitants.

One critical challenge in incorporating youth perspectives is finding appropriate ways to articulate their needs and ideas in planning discussions. Children and adolescents often express their thoughts and desires differently than adults, making it essential to use creative approaches to capture their input, such as participatory workshops, visual storytelling and art-based methods.

Projects such as UNICEF's Child Friendly Cities Initiative and the Young Urbanists[1] workshops have demonstrated that when young people are engaged through creative, playful methods, they can provide innovative solutions that might otherwise be overlooked. These participatory strategies not only validate young people's experiences but also enable urban planners to design spaces that are more inclusive, accessible and vibrant.

By making young people's agency visible, we can shift the narrative around who participates in urban transformation. Highlighting young people's contributions can inspire communities and policymakers to rethink how cities are designed and for whom they are built. More importantly, involving children and youth in these processes challenges the notion that urban planning is solely the domain of adults and experts. Instead, it positions young people as co-creators of their environments who are capable of influencing change. This approach not only democratises the planning process but also plants the seeds for future generations that are attuned to the needs of their communities. Ultimately, by recognising and nurturing the potential of young people, we can create cities that are not only more just and inclusive but also more imaginative and responsive to the needs of all inhabitants.

Engaging youth groups involves the ethics discussed in the previous section and requires specific tools and methods. This section is dedicated to exploring these tools, some strategic approaches and the use of produced material. The data gathered from such activities are symbolic in most cases. Incorporating children in the use of dynamic tools is extremely relevant not only to capturing their perspectives in spatial analysis and design but also to shaping their understanding of their role as co-producers of spaces.

1 See https://youngurbanists.org

Figure 12: Course Transformation of the built space, Rio de Janeiro, 2014. Source: Juliana Canedo

Approaching children

Unlike adults, children are usually much easier to reach and engage. They are generally curious and open-minded and are therefore likely to interact with creative methods, especially those involving arts and crafts or action-based activities, such as sports and games. Nevertheless, some aspects are crucial to consider when approaching children, not only to create a more engaged experience but also to obtain mutually beneficial outcomes.

The first aspect to consider is the nature of the children with whom you will be interacting and where the activity will take place. You must address the following important questions: Are the children already familiar with each other? Is the work going to be developed in a place where they feel safe? How old are the children? Are they all the same age? Are there any children with disabilities in the group? What is the main language spoken in the group? Depending on the answers to these questions, the methods and tools to be used and the potential involvement of mediators will differ.

The second important aspect to consider is your goal and the envisioned outcomes of your interactions with the group. Are you working with a specific space in mind, such as a playground to be designed, or are you trying to gather general information about the neighbourhood based on the children's spatial knowledge and agency? Defining a main goal and the expected outcomes does not mean that they will be achieved. Therefore, it is important to be flexible and open to the changeable nature of the process. Your interaction with children will often lead you down paths that you cannot predict. This is also due to our frequent lack of acknowledgement of children's spatial agency and knowledge in our training and practices. (Million and Heinrich 2014; Heinrich and Million 2016; Hart et al. 1997)

The third aspect is to carefully plan one or more activities for the children and to keep additional activities in reserve. In some cases, the children may not be interested in the initially planned activities that you envisioned would work well; the secondary activities you planned may ultimately play a central role in obtaining your desired outcomes. As you will see in one of the examples below, secondary activities can become extremely appealing depending on the group of children participating in your work.

The last aspect is to transparently communicate with children about how the collected material will be used and the relevance of their participation in your project. In other words, what will you give the children in return for their participation, and how can this be communicated in a way that they can un-

derstand? Of course, this will depend on various factors, such as their ages, whether there is a facilitator who is already engaged with the group (such as a teacher or community organiser) and the language they speak.

As mentioned in the Ethics section, data protection and privacy are extremely relevant when children are involved. Avoid taking pictures of their faces without their guardians' consent. In addition, do not publish the images on social media or any public forum, even if they are related to scientific publications. Several software tools can be used to blur the faces of people in images to ensure their anonymity, such as drawing on the images, as seen in Figure 11. Children's privacy can be preserved with these methods. You should always critically reflect on whether using tools such as photography or collecting data such as the participants' names and ages is truly necessary for your activity.

Figure 13: Seminar Integration through collaboration, Berlin, 2023. Source: Ani Tashi

In the following sections, I will offer some examples of tools and methods based on my experiences with my students and colleagues. This is not to be understood as a 'how-to' manual but rather as a starting point for the further development of tools that are adequate for the spaces, goals and groups of your project. Also, keep in mind that some of these tools for children can also be adapted for adults. The main tools that will be described in the following are

the use of drawings for mapping problems and wishes, collaborative three-dimensional (3D) models and games.

Drawing

Drawing is the most basic tool in collaborative work with children, as it requires few materials and no specific skills. Most children enjoy drawing, and it can be used as a warm-up activity to build trust or as the main outcome of the collaborative practice.

I would like to highlight some points that I consider relevant when asking children to draw. The most important point is to understand that the process is not about interpreting the children's drawings but rather using their drawings as a starting point for building a dialogue with them. Therefore, it is important that you talk with the children while they are drawing by asking questions, for example, about the meaning of a drawing of a castle or their choice to use yellow to represent a river. In many cases, their answers may not lead to anything concrete, but the process is relevant for building trust and inviting communication through the collaborative activity.

Associating broad questions with children's drawings is especially useful in obtaining targeted information from children. For example, children could be asked to draw their favourite place in the neighbourhood, the people living in their households or what they enjoy most in their daily lives. Keep in mind that the children will not always come up with concrete ideas that can be used in your design proposal, but the conversations arising from these interactions might reveal important issues regarding their perceptions, limitations and wishes of their spaces.

In a workshop that we organised with refugees living in a refugee shelter in Marzahn, Berlin, a group of students working with children developed a drawing activity as an approximation tool to establish contact with the children and to ask spatial questions. The decision to use drawing as the first activity was related to the fact that they didn't know in advance how many children would come to the workshop; therefore, it was important to choose a simple activity that could be adapted to different group sizes and children of different ages.

The proposed activity consisted of drawing postcards of their favourite places in the neighbourhood. In the students' words,

> [w]e gained main information about the spatial configuration, the rules and the use by children of the GU and its surroundings. Besides first learnings about the places in Marzahn and the habits of the children, we could experience the social dynamics of the children's group. We learned that it was a big group, organized by language and family structures. The group size and big diversity in age and languages was identified as the main methodological challenge whereas spatially, no singular problem was identified, which led to continuing with an open approach. [2]

This quote shows that the students' findings came from the drawings themselves, their conversations with the children and their active observations and dynamic reflections over the course of this experience. Furthermore, the children could later give these postcards to their friends or families. The products of the activity could also be presented in a small exhibition, as children usually feel proud to have their drawings displayed for their peers and families.

In this case, an exhibition was not possible because the students were working on an open playground. In other experiences, we created exhibitions of drawings by children by connecting their drawings to neighbourhood maps or organising them along similar topics.

The simple activity of drawing can be used in a variety of ways and is one of the most engaging activities for working with children.

2 Extract from the Ebook of the Studio Insurgent Design: unlearning practices through marginalized spaces (Juliana Canedo, Tuanne Monteiro, Qusay Amer, Maureen Abi-Ghanem and Francesca Ceola), TU Berlin 2024. Students: Annika Rüther, Salma Elbasty, Hannah Langels, Amalia Ardian, Lilli Reinkensmeier.

Figure 14: Winter School Building Resilient Cities, Cairo, 2024. Source: Juliana Canedo

3D models

3D models are useful for creating a commonsense understanding of children's and adults' spatial understandings and representations. Various materials can be used, such as LEGO, differently sized cardboard boxes, pre-cut wooden blocks and any recycled materials, such as cups, colourful paper, plastic, cotton, fabric, ropes or paints.

Despite having the goal of realistically reproducing spaces on a smaller scale, the goal here is to use 3D representation to discuss anything that cannot be represented in two dimensions. The aim should not be to produce a good-looking and precise model but instead to use as many textures, colours, materials and volumes as possible to discuss the participants' perceptions of the spaces instead of their real representation. For example, places that are important to children are usually represented using large elements and/or in a central position in the model.

The process for developing a 3D model are also especially important. For example, we usually start by building the place we are in, such as a community space within a favela. We then ask the children questions: Where do you live? Where is your school? Is it far? How is your route to the school? Are there trees? What is the road like? How do you feel when going to school? During these conversations, children can be asked to locate and represent the spaces they frequent by adding pre-made elements, building new ones, adding colours or sticking Post-it notes to the 3D model.

It is important to ask the children to represent the main problems they see in the modelled area, as well as the potentialities, the places they like to visit and why they like these spaces. Further questions can be asked: Why did you take one street instead of another to go to school? Why do you prefer this playground? What is interesting about the museum you like? Their answers can provide relevant spatial information that could be used in various research outcomes, such as design proposals, recommendations for public policies and planned activities for children.

This dynamic tool allows us to build the children's neighbourhood from their perspective according to their knowledge and the places they frequent. In addition, we can use the 3D model to imagine different uses or spaces for their neighbourhood. After establishing a common understanding of how the area is represented in the 3D model, we can explore the children's wishes and desires.

Again, the researchers' conversations with the children, as well as the representations the children decide to use, can be valuable for developing an understanding of the children's daily lives in specific spaces or areas, in addition to the key issues to address in these areas. It is important not to censor nonsensical suggestions, such as building a unicorn farm or putting a swimming pool in the living room. We should allow children's creativity to flow, which will build their trust and the connections developed through play.

Sometimes, these dynamic tools can lead to results that oppose what we intend to find. For example, when developing this method with a group of children living in a refugee shelter in Berlin[3], the students who organised the activity came to realise that the children had little experience of being outside their shelter. They knew only the building where they lived, which had a playground on the grounds and a view of the street through the fence. In contrast to most children living in Germany, the refugee children's experience of their neighbourhood was extremely limited. Thus, the students decided to explore the children's imagination and memories and to build a model of what the children wanted to see or explore in their neighbourhood.

In this sense, flexibility and openness were shown to be key to developing fruitful collaborations with this group. It is extremely unlikely that researchers will find the field exactly as planned or imagined. Therein lies the beauty and challenge of this research process.

3 Activity developed during the Winter School Integration through collaboration (Juliana Canedo, Hassan Elmouelhi), TU Berlin and Yarmourk University 2022.

Figure 15: Winter School with refugees in Märkisches Viertel, Berlin, 2022. Source: Juliana Canedo

Games

Games are a fun and effective way to engage children in research activities and can be used as secondary or central activities. I will report on one of our previous experiences, which started as a secondary activity and became central to our research. Games can be active, like a treasure hunt or hide and seek, or more introspective and strategic, like board or card games.

It is important to manage expectations, as in all other interactions. In one of our planned activities with children in a peripheral neighbourhood in Berlin, the students proposed a game for which they would bring boxes of different sizes to build a playground with the children. The idea was to use boxes large enough that the children could walk around them; hence, this model was somewhere between the scale of a 3D model and a life-sized model. However, the students did not expect that when the children saw the boxes, they immediately thought there were toys inside and started to open and destroy them.

This kind of frustration – both for the children who did not find any toys and for the students who now could not continue their plan – was impossible to predict. Therefore, some level of disappointment and 'failure' is intrinsic to the research process. The resulting question is what should be done when faced with such unexpected outcomes. It is important to find ways to transform the planned activity, rearrange expectations and continue with the interaction. Hence, planning backup activities, as mentioned earlier, is highly useful in overcoming these situations.

In the following sections, I will share examples of games developed by students for different occasions and contexts. However, understanding the use of games as potential collaborative tools is more important than explaining them, because these tools can reveal relevant spatial issues in unconventional ways. As we saw in the brief example mentioned above, the 'failures' of such interactions – in the sense that the planned activity didn't occur as envisioned – are also learning experiences. Without disregarding the ethical issue of not causing harm to the community and avoiding parasitic relationships where everything extracted by the researchers, students and practitioners leaves the community with no 'gains', some level of frustration and flexibility are expected in collaborative processes.

Figure 16: Seminar Integration through collaboration, Berlin, 2023. Source: Juliana Canedo

Treasure hunts

Treasure hunts can be played by different age groups in a variety of ways. Organising a treasure hunt for collaborative planning and design is interesting because it is a very spatial and active game that works well with children who need to expend energy and are less likely to engage with researchers through the sedentary activities mentioned earlier, such as drawing and creating 3D models.

First, it is important to consider the age of the group and the location where the game will be played. Safety should never be underestimated and, depending on the context, age of the group or number of facilitators, it is important to consider conducting this game within a 'controlled' space, such as a gated playground or a community room. If it is possible to play in a more open set-up, treasure hunts can also be used to explore a space through children's eyes.

The aim of the game is to find a treasure. Hence, the participants must be informed about specific tasks and be allowed to ask questions. In some variations of the game, children can search for clues, and upon finding the first

clue, they will find instructions for the location of the next clue. In this way, the game proceeds until the children find the treasure.

Depending on the age of the group, the decisions about what kinds of clues or requests will be used and how they will be hidden are key. For example, for treasure hunts with older children, more complex maps, questions and tasks can be used. For younger children, pictures can be used or simple questions can be read aloud. Whether the children all speak the same language is a crucial factor in planning the game.

Decisions about what treasures will be used are also important. The treasure may be small gifts, such as stickers, temporary tattoos, snacks and sweets. It can also be related to the next planned activity, as shown in the following example. When offering sweets, please ensure that the children's guardians consent to this beforehand; whether the children have any allergies or cultural or religious food restrictions should also be known.

A group of students developed an experience in which a treasure hunt was a warm-up activity to get to know the children and ask questions related to their neighbourhood experiences[4]. In this treasure hunt, the children were aged between 4 and 10 years old, which created challenges in terms of their understanding of the dynamic tool. The students' plan was to conduct the treasure hunt before their main activity, which was to create a 3D model. The treasure in this case was a box of colourful blocks and arts-and-crafts materials that would later be used for the 3D model. The students also prepared some small gifts for the children such as temporary tattoos, stickers and small toys.

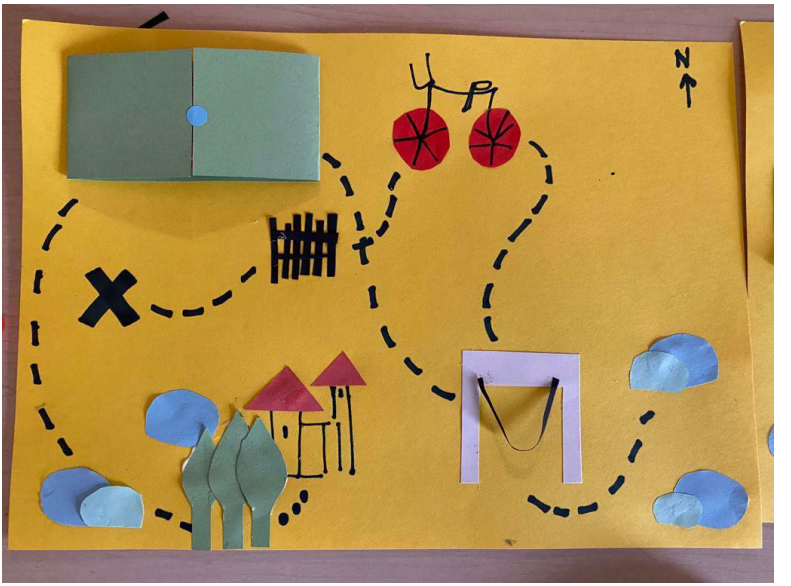
The treasure hunt was developed for a gated playground. While the children lived in the adjacent building, not all of them knew each other. Hence, the first questions the children needed to answer were related to their names, whether they had siblings and their favourite foods. After answering each question, the children received a map to find the next question and after the clue was followed, the full group needed to answer the next question. The following questions were related to space: What do you do on the weekend? Describe your favourite place in the world. What would you change if you were the mayor of the city?

These questions served several purposes: First, they extracted valuable information about the children's daily socio-spatial practices. Second, the questions prepared the children for spatial thinking, which can be helpful if follow-

4 Activity developed during the Winter School Integration through collaboration (Juliana Canedo, Hassan Elmouelhi), TU Berlin and Yarmourk University 2022.

up activities are planned. Third, the questions served as a means of integration and interaction among the children. For example, when they learn what their peers do on weekends, they can find common interests and form personal connections with one another.

Figure 17: Winter School with refugees in Märkisches Viertel, Berlin, 2022. Source: Juliana Canedo



The outcomes of the treasure hunt and 3D model activities, in addition to the conversations between the students facilitating the activities and the participating children, were then translated into bullet points listing the negative, positive and desired aspects of the neighbourhood from the children's perspectives.

Board games

Board games require more complex preparation than the aforementioned games, which depends on the participants involved. They can be creative tools that not only bring knowledge but also produce knowledge.

In one of our experiences, a group of students who were interacting with refugee children decided to develop a process-oriented framework in which the methods and tools they were using emerged from the interests of and interactions with the participating children.[5] The students prepared several parallel activities and continuously tested what worked and what didn't work. They immediately changed the planned activities to better match the behaviour of the children. Through this interactive process, the students incrementally developed spatial knowledge from the perspectives of these children over the course of a month, which guided their next steps. They described the activities as a process of 'unlocking spatial perceptions' that aimed to be inclusive of all the children who wanted to participate.

After their initial interactions, they introduced the planned secondary activity: a 'kid-friendly' map containing abstract drawings of the places that the children had mentioned during their previous interactions. This was designed as a game in which the children connected the represented places by indicating routes, describing the surroundings, and making additions to the map. The students were surprised by the children's level of spatial knowledge as they corrected the map. For example, the lake was in the wrong location; it was on the left, not the right side of the map. The children also corrected the direction and façade of their school and located distant places in other neighbourhoods.

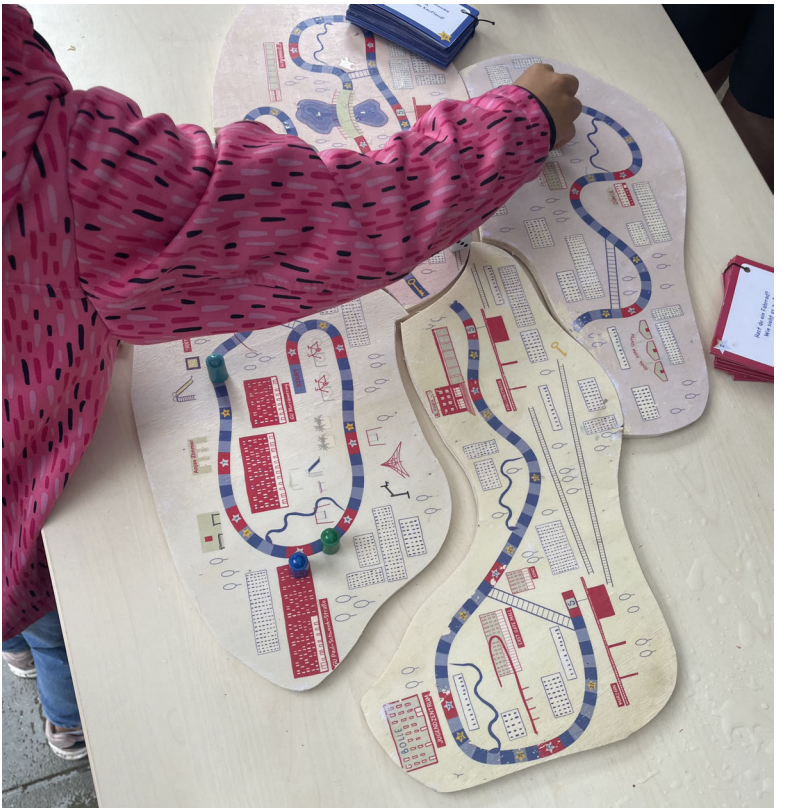
This success of this activity and the children's interest inspired the students to further develop the map into a board game. Situating the representation of the building in which the refugee children lived in the centre of the map worked particularly well. The children immediately recognised their home because their refugee accommodation in Berlin had colourful windows and a façade; it was so well represented by the students that the children immediately wanted to play with the board game. As the students observed, 'the goal was to develop a co-creative game that would show them a representation of their neighbourhood and make them able to change this while playing the game'.

The board game was based on 'Snakes and Ladders' and incorporated the students' spatial findings from their previous interactions with the refugee children. In the game, the students included action cards, such as visiting the lake to feed the ducks, and prompt cards that invited the children to think about and elaborate on additions or changes to their neighbourhood, which

5 Activity developed during the Studio Insurgent Design: unlearning practices through marginalized spaces (Juliana Canedo, Tuanne Monteiro, Qusay Amer, Maureen Abi-Ghanem and Francesca Ceola), TU Berlin 2024.

were represented on the map. Examples of these prompt cards included 'You are bored. Build something in the neighbourhood where you can have fun.' and 'Build a bus stop at a place where you would like to go.'

Figure 18: Studio Insurgent Design, Berlin, 2024. Source: Juliana Canedo



The board game was further developed every time the students played with the children. At the end of the project, the students produced the final version of the game in Styrofoam, which was presented and used during a neighbourhood festival.

The development and use of this board game showed the enormous potential for creatively developing open tools that can encourage conversations

about the spatial aspects of children's lives. The student group perceived much interest and engagement among the children as well as some challenges. For example, in some cases, the children were more focused on winning the game, which made it difficult for the students to establish their idealised spatial transformations. Despite such challenges, the use of board games can stimulate active exchanges of spatial knowledge and surface new spatial narratives from the perspectives of children.