DeCID Thematic Brief Nº 4

Participatory Design and Urban Infrastructure – An Overview

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Co-designing social infrastructure with children affected by displacement (DeCID).

The DeCID project aims to develop a new approach for the participatory design of social infrastructure for children in urban areas affected by displacement.

In partnership with humanitarian actors, local communities, municipalities and academics, the DeCID team will develop a practical toolkit to support those involved in the co-design. DeCID is a project led by The Bartlett Development Planning Unit (UCL) and CatalyticAction, and funded by UKRI through the Global Challenges Research Fund.

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KEY POINTS

- Participatory design can contribute to equalising power relations, situation-based actions, mutual learning, alternative visions, and democratic practices.

- The practitioner must focus on understanding and learning from the users' reality and context.

- Blending local and expert knowledge can lead to strong outcomes

- The focus of participatory design practice is shifting from designing objects towards designing processes.

- Urban infrastructure can be understood as a network of systems, comprising assets, knowledge, and institutions.

- The diversity of people's identities and the power relations between participants need to be recognised by the process.

- Choosing the right scale of intervention and thinking about the relationship between scales is key and requires a deep understanding of the context and the available resources.

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This brief explores participatory design and planning, its origins and current trends in the context of urban and social infrastructure. It provides a brief overview of the main actors, practitioners' approaches, and toolkits available, and finally analyses key debates around participatory design of urban social infrastructure.

PARTICIPATORY DESIGN

Participatory design can briefly be defined as 'a process of investigating, understanding, reflecting upon, establishing, developing, and supporting mutual learning between multiple participants in collective "reflection-in-action"' (Simonsen & Robertson, 2018, p. 2).

In this context, the participants become both users and designers, while professional designers focus on understanding and learning from the users' reality and context (ibid).

Defining participatory design is challenging as its value lies in it not being easily defined by formulas, rules, or predefined methods. Participatory design methods have been used across a variety of disciplines, such as IT workplace technology, architecture, international development and disaster relief, education, community and neighbourhood planning, urban scale decision-making, and master planning, each adding their particular methods. Nevertheless, the following common 'core ideas' can be found throughout most participatory design experiences (Luck, 2018):

- Equalising power relations
- Situation-based actions
- Mutual learning
- Tools and techniques
- Alternative visions about technology
- Democratic practices

Participatory urban planning

The European Commission report 'The Future of Cities' defines participatory planning as 'a community-driven approach to designing active, liveable cities, aimed at opening up most urban planning processes', further arguing that 'blending local and expert knowledge leads to strong outcomes' (Alberti et al., 2019, p. 114). UN-Habitat asserts that participatory planning can have a 'profound impact' on how people experience the city and how included they are, by prioritising environmentally just and socially inclusive urban development, and responding more precisely to the needs of the vulnerable and marginalised (UN-Habitat, 2017). Finally, the New Urban Agenda (NUA) which was adopted at the 2016 United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito argues that the policy frameworks at all levels must shift to include participatory planning and management of urban spatial development (UN-Habitat, 2016, p. 9).

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Urban infrastructure

While infrastructure has traditionally been understood as physical assets and facilities, according to UN-Habitat (2015), the last decade has seen a turn towards a more systems-based understanding. It defines three main infrastructure systems:

- Assets (including physical structures and the internal links between these structures)
- Knowledge of infrastructure (including planning, design, construction and operation of infrastructure, and also institutional know-how, legal, and regulatory frameworks)
- Institutions (including their planning, management, and operational capacities).

Therefore, infrastructure includes the delivery of safe water, sanitation, waste management, social welfare, transport and communications facilities, energy, health and emergency services, schools, public safety, and management of open spaces.

Social urban infrastructure

UN-Habitat asserts that 'a good city should foster social cohesion and build social capital, engaging the community in design, management and maintenance of public space' (United Nations, 2017). The New Urban Agenda (NUA) includes as part of their principles, 'providing equal access for all to physical and social infrastructure and basic services...' (UN-Habitat, 2016, p.7). But the definition of social infrastructure is broad, and might include schools, health centres, leisure and recreation facilities, libraries, community centres, religious facilities, local shops, open spaces, transport, utility, and emergency services, among others (HCA, 2011, cited in Brown & Barber, 2016). In any case, location seems to be key: the UNICEF handbook 'Shaping urbanization for children' stresses the large impact that strategically located, small-scale social infrastructure can have on addressing issues such as violence, poor education and severed social connectivity (Aerts, 2018 p.86).

MAIN ACTORS

UN-Habitat: Urban Planning and Design Branch

Un-Habitat is the main international agency on urban issues. Within it, the Urban Planning and Design Branch has developed reports, guidelines and pilot projects around the world, aimed at implementing the agency´s 'Global Programme on Public Space', comprising three main areas: 1. Partnerships for public space; 2. Citywide strategies and pilot/ demonstration projects; 3. Knowledge management. Its work is compiled in the 'Global Public Space Toolkit: From Global Principles to Local Policies and Practice' (Garau, 2016), and on their report on participatory experiences in Kosovo (D'Hondt, 2012).

UNICEF: Child Friendly Cities Initiative

The Child Friendly Cities Initiative by UNICEF helps municipal governments guarantee and implement the rights of children at the local level. They have developed reports on child-sensitive urban design and guidelines for play spaces, and fostered the production of child-inclusive, participatory workshops in urban planning, and urban water and sanitation management (Aerts, 2018).

European Commission: Joint Research Centre

The EC Joint Research Centre develops relevant research to provide advice and support to EU policy. In their 2019 report on cities, they champion safe, age-friendly, accessible and inclusive public spaces, providing multiple case studies on participatory planning. Nevertheless, they suggest that more robust evidence is needed on how participatory planning works (Alberti et al, 2019).

Think-tanks/labs

Urban labs are increasingly common, especially when social infrastructure is matched with ideas about innovation and participatory culture, while relying on the use of new technologies such as mobile apps or video games. Some examples include the <u>Malmö Living Labs</u> in Sweden, focused on developing innovation infrastructure and social engagement for disadvantaged groups (Björgvinsson et al, 2012), or <u>Participatory city</u> in London (2019a & 2019b), working around ideas of a participatory ecosystem. In both cases, the focus is on 'soft infrastructure': social interactions, partnership, skills transfer, etc. The idea of a lab has also been mainstreamed as in the case of the Inter-American Development Bank '<u>Cities Laboratory</u>' defined as a 'platform for innovation, design, and experimentation for sustainable urban development in Latin America and the Caribbean', working with co-design, prototyping, and urban innovation.

Small networks and non-governmental organisations

In recent years, a series of not-for-profit international networks and organisations have arisen, promoting small-scale architecture and urban design initiatives, knowledge learning and action-based approach, establishing links with both academia and international agencies, while also disseminating good examples of participatory urban projects. Some examples include Architecture Sans Frontières, Article 25, CatalyticAction, Emergency Architecture & Human Rights, Architecture for Refugees, Civic, Spatial Agency, and Architecture in Development.

TOOLKITS FOR PARTICIPATORY DESIGN

Due to the fast growth and mainstreaming of participatory design in the last decades, there is a large variety of methods, resources and tools available for participatory design activities and sessions. Here we present a selection:

Leaving space for conflict and dissent is key for alternative opinions to emerge.

Assessment toolkit:

The 'Enabling Inclusive cities. Tool Kit for Inclusive Urban Development' toolkit by the Asian Development Bank (ADB) helps explore the needs of specific populations or regions. It has two basic components: a policy and planning component, and a sectoral assessment component, which determines needs, options, and priorities within a sector (Singru et al, 2017).

Policy toolkit:

The 'Global Public Space Toolkit' by UN-Habitat includes multiple policy toolkits covering evaluation to implementation, their different scales, and a long list of global case studies. Particularly useful is the policy tool no. 9: 'Participation as if it were a Public Space'; and case studies no. 3: 'Sustainable Schoolyards - Kosovo', and No. 6: 'Lotus Garden - Mumbai, India' (Garau, 2016).

Participatory Planning toolkits

The Montréal Urban Ecology Centre's straightforward 'Participatory Urban Planning' document guides the implementation of participatory planning processes, and has been used by many communities across Canada. They define six stages for this process, each with specific stakeholders, key activities, and examples: 1. launch the project; 2. understand the issues; 3. explore solutions; 4. decide on scenarios; 5. act together; and 6. inaugurate designs. Concurrently, they define key conditions leading to successful participation: 1. plan; 2. communicate; 3. engage; and 4. take advantage of every opportunity (Gilbert, 2015).

The UN-Habitat 'Urban Planning and Design Lab' created the comprehensive tools for integrated and participatory urban planning toolkit based on their own experiences in places with no previous planning trajectory or difficult political contexts, aimed at proposing a planning alternative (Grcheva, 2016). Its author identifies seven main features of their projects: project-based approach; normative framework; integrated institutional process; capacity building; participation; design process; and focus on implementation. Specific participatory tools include design charrettes; community (design) workshops and mapping; participatory enumeration; interviews, bilateral discussions, and technical working groups.

Finally, there is currently a trend towards the use of new technologies to engage with communities in urban planning. Some examples are the use of the video game Minecraft in the project 'Block by Block', supported by UN-Habitat, which includes young people and children (Westerberg & Von Heland, 2015); the use of social media and mobile technologies (Kleinhans, 2015) or virtual reality (Stauskis, 2014) to promote engagement and self-organisation in planning processes.

DEBATES AROUND PARTICIPATORY DESIGN

Power relations amongst participants

UN-Habitat (2017) states that 'access to and participation in public space is a first step toward civic empowerment for the involvement of all citizens'. However, it has been noted that this might not always be the case: '(W)hile these created spaces (for participation) are viewed as empowering and democracy enhancing, such spaces reveal underlying

challenges of power relations'. As a result, participatory activities 'can both empower and disempower different actors in the process' (Wamuchiru, 2017, p. 556). Furthermore, it must be acknowledged that not everybody will feel comfortable or at ease raising concerns about the project or having an unpopular opinion. Therefore, practitioners need to keep in mind the potential vulnerabilities or inequalities of some of the participants. Leaving space for conflict and dissent is key for alternative opinions to emerge (Miessen, 2010).

Participatory design and social cohesion

UN-Habitat (2017) states that 'a good city should foster social cohesion and build social capital, engaging the community in design, management and maintenance of public space'. One of the main NUA objectives is to achieve 'social cohesion, inclusion and safety in peaceful and pluralistic societies, where the needs of all inhabitants are met, recognizing the specific needs of those in vulnerable situations' (UN-Habitat, 2016, p. 13).

Nevertheless, as Frediani points out (2016), there is a tension in participatory design practice between an emphasis on the physical/spatial and on the social/community aspects of an intervention, of which there are very diverse combinations in practice. Furthermore, participatory design 'has faced challenges in recognizing social diversity without homogenizing needs and aspirations, while also proposing viable collective actions' (ibid, p. 104), and often the policy objective of social cohesion can result in hiding important social diversity amongst participants.

The scale of intervention

Despite current examples of its use in masterplanning and urban scale processes (Luck, 2018), participatory design has shown little success in scales larger than the local or neighbourhood scales, with mere attempts at replicating successful local interventions (Frediani, 2016 p.102). Drawing on the above, agencies such as UNICEF encourage practitioners to work in strategically located small-scale projects (Aerts, 2018). On the other hand, Luck (2018) stresses the relevance for architects to scale up strategies, from participatory design projects to citizen participation in masterplanning and regional development. Some successful examples include: the R-Urban resilient commoning in cities; or the Jamie Lerner, Mayor of Curitiba, Brazil, applying an architectural approach to city-wide interventions such as the bus transit system.

Temporal challenges

According to Del Gaudio et al (2017), the timeframes of participatory design project development and implementation are important because:

- Projects are likely to be evaluated on specific achievements within pre-established timeframes;
- Projects require a series of actions performed by stakeholders, which are not within their usual work duties and routines, requiring extra coordination;
- Projects require specific interventions from external institutions and actors, each with their own methods and timeframes.

The understanding of time as a social phenomenon is key to participatory design, as time cannot be considered as something imposed or abstract that can be divided into intervals and structured according to pre-determined deadlines. The authors define three main challenges:

- The difference between design process timing and the time required for the social environment to evolve
- The difference between the speed of the designer's actions and of the community participation
- The difference between the design process timing and the design partner's timing

EVALUATION & IMPACT

Evaluating the added value of participatory design processes is complex. Drain et al. (2018) propose looking at three dimensions: insights, solutions and empowerment, with three crosscutting issues: equalising power relations, democratic practices and mutual learning:

Furthermore, Kusumaningdyah & Purnamasari (2018) propose three ways to evaluate children's participation, including a participatory ladder analysis to assess the degree of participation, a Designer-Children Typology Analysis, intended to understand the relationship between the designer and the community (children), and an analysis of the participatory techniques to assess the methods used in each stage of the process.

INSIGHTS	SOLUTIONS	EMPOWERMENT
Challenges	Effectiveness	Creative Capacity
Community Knowledge	Adoption	Social Inclusion
	Generalizability	
Equalizing Power Relations		
Democratic Practices		
Mutual Learning		

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