

Re-Imagining Responsive Frameworks for Circular Urban Design Pedagogy

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1. Shaping Sustainable Futures: The Transformative Power of Urban Design Pedagogy and the UN Sustainable Development Goals

Urbanization presents a complex set of challenges in the 21st century, including environmental degradation, social inequality, and economic disparities. As cities continue to grow and evolve, there is an urgent need for transformative approaches to urban design that can help address these challenges in a holistic and integrated manner. The United Nations' Sustainable Development Goals (SDGs), particularly SDG 11, envision cities and human settlements that are inclusive, safe, resilient, and sustainable. In so far as the SDGs provide frameworks towards these visions, albeit in ways we must continue to be critical of, urban design pedagogy must adapt and innovate to effectively educate current and future generations of professionals.

In recent years, urban design discourse has witnessed a shift towards the "Social-Turn" (Smith 2007; Lepik 2010) and the "Environmental-Turn" (Waldheim 2006; Mostafavi 2009), which emphasize the importance of addressing environmental, social, and governance dimensions holistically. These movements, inspired by earlier works on social and environmental concerns in architecture and urban design (Alexander 1964; Jacobs 1961; McHarg 1969; Papanek 1971), aim to reshape urban design discourse in a manner conducive to achieving the UN SDGs.

However, many contemporary urban design education approaches have faced challenges in addressing the diverse and complex demands emerging from the urban field. Since the establishment of urban design education at the Harvard Graduate School of Design (GSD), there has been increasing recognition of the complexity of urbanization problems, necessitating a change in teaching methods. Traditional urban design education has often reflected capitalist agendas, prioritizing aesthetics and profit-driven models, leading to an oversight of sustainable development's complexities (Brenner and Theodore 2002). As a result, contemporary urban design education approaches aim to move away from this traditional model by adopting a more inclusive and holistic approach that addresses the diverse and multifaceted challenges of urban development.

This paper proposes "Method Design", an urban design pedagogy that addresses the aforementioned challenges by establishing a blueprint for future education based on circularity, which envisions the urban design process as a continuous, regenerative, and adaptive cycle fostering sustainable and resilient urban environments. Drawing on multiple semesters of application, this paper will explore how Method Design reflects on these challenges, as well as the broader limitations of university systems in which students encounter these issues. In order to create sustainable and resilient urban environments in line with the UN SDGs, it is crucial to continue innovating and adapting urban design pedagogy to better equip the next generation of professionals. These approaches are in keeping with broader sustainability perspectives such as that of the indigenous Iroquois, whose concept of thinking in seven generations with regard to environmental stewardship (Leopold 1949) is in line with other inspirational worldviews such as the Whole Earth (Brand 1968) and the More-than-Human perspective (Abrams 1996).

In the following sections, the paper will further elaborate on the problematique of contemporary urban design education, provide examples of circular urban design pedagogy in practice, and discuss the implications of this approach for achieving the UN SDGs. The paper will contend that adopting a circular urban design pedagogy is a potent means of shaping sustainable futures while critically assessing and pushing the limits of the United Nations' Sustainable Development Goals (SDGs). The SDGs' importance cannot be overstated as they represent a global commitment to address critical socio-economic and environmental issues. By challenging the conventional approach, a circular urban design pedagogy can unlock new opportunities for sustainable and equitable urban development, thereby making a significant contribution to achieving the SDGs.

2. Urban Design Education and Experiential Learning: Tracing the Evolution from the 1960s to Now

The discourse of urban design as a discipline has evolved significantly since the 19th century, with cities shifting towards systematic and regulated designs that prioritize health and sanitation. Early urban design reform movements in the 20th century paved the way for today's focus on sustainability and a more comprehensive understanding of urban design, which takes into account factors such as space, environment, people, culture, political ideologies, and public interests (Crouch 2002).

Following this, urban design education emerged in the 1960s and 1970s with the introduction of new urban design programs, beginning with the first urban design program at Harvard University in 1960. This program, initiated by Josep Lluís Sert, then president of the International Congress of Modern Architecture (CIAM), established urban design as an intellectual discipline independent of architecture, landscape architecture, and planning. Sert's initiative was prompted by his direction of a conference on urban design at Harvard's Graduate School of Design (GSD) in 1956. The emergence of a socio-ecological perspective in urban design during the 1960s was a response to growing criticism of urban designs at the time, influenced by environmental movements and debates in the United States and Europe. Numerous milestones, such as the United Nations Conference on the Environment and Development in Stockholm in 1972, its subsequent publication Only One Earth: The Care and Maintenance of a Small Planet (Ward and Dubos 1972), the Brundtland Report (UN Commission on Environment and Development, Brundtland 1987), and the 1992 United Nations Earth Summit, have contributed to the urban design discourse by emphasizing sustainable development.

Over time, urban design pedagogy has evolved to incorporate more experiential learning approaches, as advocated by John Dewey in his 1938 book, *Experience and Education*. Applying Dewey's ideas to urban design education suggests that students should engage directly with the subject matter. Although Dewey did not specifically discuss urban design pedagogy, his ideas can be adapted to this context, indicating that effective experiential learning requires students to interact directly with urban environments. This pedagogical shift promotes immersion in the learning environment and content, encouraging active participation from both educators and students. Consequently, this approach could contribute to addressing the growing demand for sustainable urban design solutions.

Design studios, adapted from architecture and characterized by their commitment, intensity, and resource-intensive spatial requirements, have become a core component of urban design education. They promote innovation, creativity, collaboration, peer review, and interdisciplinary knowledge exchange, fostering a dynamic learning environment that mirrors the complexity of urban systems (Schön 1987). In these settings, learning occurs organically and engagingly through hands-on methods like group or individual sketching, brainstorming, and whiteboard activities, creating vibrant hubs of intellectual and social interaction, unlike passive learning environments common in other disciplines.

Urban design studios can take various configurations, such as a theoretical focus, travel studios, or mixed-method approaches. By engaging with urban, peri-urban, and rural development sites, the urban design studio transforms into a city-based learning laboratory. This transformation offers opportunities to strengthen links between different Sustainable Development Goals (SDGs), such as "Quality Education" (SDG 4) and "Sustainable Cities and Communities" (SDG 11). Incorporating experiential learning and sustainability principles into education policy

and curricula can support the training of professionals responsible for designing our future sustainable cities and communities.

3. Exploring the Method Design Approach: Engaging, Caring, and Acting in Urban Design Pedagogy

The Method Design approach, a set of dynamic tools emerging from urban design education at the ETH Zurich, is a comprehensive educational strategy that effectively integrates the principles of circular urban design pedagogy, in concordance with certain frameworks emerging from the SDG 11: Sustainable Cities and Communities, into urban design education. By embracing concepts like circular design thinking, the approach equips students with the tools and knowledge needed to address contemporary urban challenges in the 21st century while promoting inclusivity, safety, resilience, and sustainability.

The principles of circular urban design pedagogy, inspired by the concept of circularity (Webster 2015), emphasize a regenerative and holistic approach to urban development that focuses on continuous improvement and adaptation while considering the interconnectedness of ecological, social, and economic aspects. Circularity involves systems thinking, highlighting the interrelated nature of urban systems and the need for a comprehensive approach to urban design. It also promotes regeneration, encouraging practices that restore and enhance ecosystems, communities, and economies. Collaboration is another key principle, fostering interdisciplinary partnerships between academia, practitioners, policymakers, and local communities to address complex urban challenges.

At the Chair of Architecture and Urban Design at ETH Zurich, the contemporary city is examined through the lenses of informalization and urbanization. Research encompasses inequality, crises, migration, conflict resolution, and alternative development scenarios, aiming toward sustainable cities that merge urban, peri-urban, and rural paradigms. The Method Design approach, which incorporates circularity principles from the outset, has been adopted to address the diverse challenges that arise in locations such as Colombia, the Western Balkans, South Africa, and Rwanda in successive studios over several years.

Method Design is an approach to urban design education that merges the systematic procedure inherent in the term 'Method' with the creative and problem-solving nature of 'Design'. 'Method' signifies a planned, step-by-step process to achieve a particular goal, while 'Design' represents the creative and technical solutions to meet specific needs. Together, these form the basis of Method Design—a transformative approach that encourages open dialogue, systemic thinking, and experiential learning.

This approach centers on three essential concepts: "engagement", "care", and "action". "Engagement" sees students collaborating with diverse stakeholders, promoting an inclusive understanding of urban issues and encouraging circularity in urban design. "Care" demands considering design proposals' ecological, social, and economic implications, nurturing strategies that enhance urban ecosystems, promoting circular urban systems, and championing social equity. "Action", meanwhile, ensures these design solutions are implemented in actual contexts, allowing students to apply their learning to real challenges.

Rooted in circular design thinking and circular urban design pedagogy, Method Design transforms traditional design studios into dynamic learning laboratories, fostering interdisciplinary learning, collaboration, and inquiry-based techniques. Integrating environmental stewardship, creativity, and civic engagement propels designers to create innovative, environmentally responsive, and socially considerate solutions.

As urban design education evolves, the continuous adaptation of the Method Design (Figure 1) approach will be vital to shaping a more inclusive, resilient, and sustainable future. Offering a comprehensive framework for incorporating circularity in urban design education, Method Design equips future professionals with the tools and knowledge to contribute to sustainable urban development dynamically.

4. Integrating the Urban Toolbox within the Method Design Approach in Urban Design Education

The Urban Prototype design studio at ETH Zurich focuses on developing prototypical design projects, employing the Method Design approach and expanding Urban Toolbox, a conceptual toolbox for civic engagement and architectural innovation in the 21st century. Each semester, a teaching experiment engages a group of 10 to 36 students in both individual and group work, considering the architectural scale while collectively establishing a baseline scenario. The educational team encourages students to actively participate in all studio discussions, fostering a shared knowledge base and a common graphic language within the design studio, which enables project comparison. During integrated seminar weeks, fieldwork plays a crucial role in exposing students to various urban contexts and allowing them to interact with local partners and stakeholders. Students have explored and documented a range of topics in different locations, such as integrated infrastructure in Bogotá in Fall Semester 2017, water-resilient new town developments in Cartagena in Fall Semester 2018, urban innovations in Medellín (Fall Semester 2019), waste issues in Barranquilla in Fall Semester 2022, and the Market District 24/7 (Figure 2) project in Vienna, Austria in Spring 2021, as part of the MAK Vienna Biennale (Figure 3). These experiential learning opportunities enable students to immerse themselves in complex urban transformation processes, fostering collaboration with diverse stakeholder groups and informing their design decisions.



Figure 1. Method Design, Responsive Teaching Framework shows social, environment, and governance factors as a teaching framework for the Chair of Architecture and Urban Design, ETH Zurich. Source: Diagram by author; developed for Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.

Students then return to the design studio in Zurich, tasked with synthesizing multiple inputs into a unique position and framework. To create original designs, they must integrate complex, varied, and potentially conflicting inputs from various sources or reviewers across multiple disciplines. These insights inform their evidence-based urbanistic concepts and design solutions. Finally, process-driven prototypes are synthesized into narratives responsive to multiple scales, with urban design policy recommendations used to test and scale project concepts.



Figure 2. Market District 24/7—Vienna. Re-imagining Markets as Places of Circular Thinking, Care, and Transaction. Presentation space at ETH Zurich. Urban Prototype Design Studio Spring 2021. Source: Reused from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.



Figure 3. Studio mobile/think tank station located outside of the MAK Museum for Applied Arts to kick off the Vienna Biennale summer events, 2021. Source: Photo by author.

During this process, students collaborate in a game-like situation, assuming the roles of various stakeholders. They map qualitative and quantitative information, identify challenges and opportunities, and translate demands into diverse scenarios using research material such as historical surveys and city official contacts. Students are introduced to the concept of "design in time", involving a process-oriented design methodology that considers one generation, four seasons, seven days, and twenty-four hours. After an initial idea-mapping phase, students identify common ground among several scenarios, determine an overarching concept, and incorporate essential contextual elements to develop an idea and project scope for further refinement.

The potential of Method Design within the broader context of higher education systems is undeniable, yet several inherent limitations pose challenges for the advancement of urban design pedagogy, including the implementation of this innovative approach. These limitations often emanate from ingrained traditional teaching methods, bureaucratic processes, and a lack of sufficient interdisciplinary collaboration, all of which may inhibit the introduction and evolution of progressive pedagogical methods. Furthermore, the essentiality of time cannot be understated in the context of Method Design. It is necessary for simulating experiences and processes, and yet, it may also restrict students' access to critical fieldwork opportunities and advanced tools and technologies. The time-intensive nature of experiential learning, an inherent aspect of Method Design, can be at odds with the fast-paced, results-driven environment of traditional higher education systems (Bresciani Ludvik and Hensel 2013).

A significant concern lies within the potential discrepancies between fieldwork-oriented approaches and theoretical teaching. While Method Design emphasizes practical, hands-on experiences, the integration of theoretical knowledge remains paramount. Finding a balance between these two aspects can present a challenge, yet is essential for comprehensive, well-rounded urban design education. Funding and resource constraints may further limit the efficacy of Method Design, potentially restricting access to fieldwork experiences and the latest technologies. Moreover, the adaptability of Method Design to the rigid structure of higher education systems, characterized by bureaucracy and a lack of interdisciplinary collaboration, may also be a challenge.

Standardized testing and conventional evaluation methods often fall short in capturing the complexity of urban problems, and they may not adequately reflect the interdisciplinary and experiential learning that forms the core of urban design pedagogy. Therefore, the incorporation of alternative assessment methods, emphasizing critical thinking, problem solving, collaboration, and innovation, becomes vital. Such methods can help equip students with the necessary skills and knowledge to meet the diverse demands of sustainable urban development and circular urban design. Despite these challenges, acknowledging and addressing these limitations can allow the Method Design approach to retain its value in shaping urban design education for a more inclusive, resilient, and sustainable future. With continuous refinement and adaptation, Method Design stands as a promising cornerstone for contemporary urban design pedagogy.

One promising solution to these challenges is the incorporation of design studios within urban design pedagogy. Design studios offer a flexible and collaborative learning environment not constrained by traditional university structures (Salama and Wilkinson 2007). In such environments, students can engage in interdisciplinary collaboration, experiential learning, and creative problem solving, which is vital to addressing contemporary urban design challenges. Furthermore, this approach can enable students to develop the skills and knowledge needed to tackle the complexity of urban problems and equip them with the ability to provide innovative solutions.

Nevertheless, beyond these challenges, students not only learn to target comprehensive urban transformation processes, ensuring sustainability through exposure to a wide range of touchpoints between teaching, researching, and project-based methodologies in response to society's pressing challenges but their outputs also feed back into the research and practice activities of the Chair of Architecture and Urban Design at ETH Zurich. The following section will trace the various ways in which students' work leaves the university to engage, care, and act in further contexts.

5. Collaborative Learning and Decentralized Design Studio Model: Integrating Climate Care, Ecological Design Principles, and Market District Redesign during the Vienna Biennale 2021

In the summer of 2021, the Urban Prototype design studio (Figure 4) participated in the Vienna Biennale for Change, an event aimed at inspiring sustainable economies, communities, environmental stewardship, and innovative solutions to climate challenges. Partnering with the Museum of Applied Arts (MAK) in Vienna, the studio further explored the Method Design approach, integrating "climate care" and ecological design principles into its educational approach. This collaboration allowed students to connect with the broader context of the exhibition and engage in the climate debate. All of this served to expand the method design framework as an educational model that spans beyond the classroom and the university itself.



Figure 4. Urban Prototype Design Studio, Spring 2021. (**Left**) Configuration of stakeholders connecting top-down and bottom-up initiatives of different roles: mayor, architect, citizen, developer, and expert consultant. (**Right**) Presentation of all student projects in the virtual design studio space Endless Studio. Source: Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.

The Whole Earth interaction scale (Brand 1968) and the Anthropocentrism 2.0 concept (Independent School for the City in Rotterdam et al. n.d.) serve as crucial frameworks in the Method Design approach, highlighting the interconnectedness of humans and nature, as well as emphasizing the importance of addressing both human needs and environmental impacts in sustainable design. The Whole Earth concept stems from the idea that the Earth is not an object, but a subject, with the ability to resist and respond to human actions. This perspective encourages individuals to become agents and activists, making small yet meaningful changes to their habits, ultimately contributing to a more sustainable world. Anthropocentrism 2.0 is a concept that challenges the traditional anthropocentric view of the world, where humans are seen as the center of all considerations. Instead, it promotes a more inclusive and responsible approach to understanding our relationship with the environment and other living beings. This updated perspective acknowledges humans' responsibility for the environment and recognizes the importance of balancing human needs with the needs of the planet.

Within the context of the Method Design approach, students engage in critical discourse with architects, urban designers, and planners. They analyze global case studies, interact with practitioners, and translate their findings into axonometric drawings. By incorporating the Whole Earth interaction scale and the Anthropocentrism 2.0 concept, the Method Design approach facilitates a more comprehensive understanding of sustainable urban design. This understanding enables students to develop innovative solutions that prioritize both human well-being and environmental stewardship, ultimately fostering a more balanced and sustainable approach to urban development.

A key aspect of the studio's work during the Vienna Biennale was the focus on markets, urban agriculture, and rethinking food supply through architecture and urban design. Students were tasked with redesigning the Viktor-Adler Markt in Favoriten, Vienna's largest arrival district. The project, titled "Market District 24/7, Vienna: Re-Imagining Markets as Places of Circular Thinking, Care, and Transaction"(Figures 5–9), aimed to transform the existing market into a prototypical urban social infrastructure connecting global, regional, and local scales while incorporating both analog and digital lifestyles.

To bridge classroom theory and actual application, the Urban Prototype design studio employed the Studio Mobil/think tank station, a mobile laboratory that facilitated public participation in architectural and urban design processes. In tandem with Studio Mobil, the 24/7/365 Endless Studio, a virtual platform, expanded online learning opportunities, fostering real and virtual interaction between students, teachers, and the urban environment. This decentralized design studio model, combining digital and analog tools and methods, enabled global and local place making.

To understand the Method Design framework in action, four student projects featured in the Climate Care exhibition's Imaginaries section corresponding to the four conceptual categories—Nurturing, Dwelling, Moving, and Generating—can be considered. These address various design outcomes and encompass themes such as nature, food production, habitats, citizenship, transportation, and circular strategies. They furthermore demonstrate the cooperative nature of student projects within the studio environment and their connection to the method design approach, while also aligning with key principles of circular urban design pedagogy and SDG 11: Sustainable Cities and Communities.



Figure 5. Market District 24/7—Vienna. Re-imagining Markets as Places of Circular Thinking, Care, and Transaction. Urban Prototype Design Studio, Spring 2021. Nurturing section: Market as a Farm—A Catalyst for Urban Agriculture (Ekaterina Scholz). Generating section: The Knowledge Market—A New Heart for Favoriten (Pascal Steinmann). Moving section: Market in a Box—Adaptive Structure for a Resilient Market (Kaspar Stengele). Source: Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.



Figure 6. Market District 24/7—Vienna. Re-imagining Markets as Places of Circular Thinking, Care, and Transaction. Urban Prototype Design Studio Spring 2021. Dwelling section: Student Market—A Creative Explosion of the Youth (Ramon Oetterli). Source: Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.

 Nurturing, encompassing themes of nature, food, and production: One specific student project demonstrated systems thinking and sustainability by designing a modular and adaptive market space at the Viktor-Adler Markt. Embracing circular thinking, care, and transaction, the proposed design featured interconnected green spaces, urban farms, and modular market stalls that promoted local food production, distribution, and consumption. Digital technologies were incorporated to create a seamless connection between the physical market space and the online community, fostering collaboration and real-world engagement by allowing vendors and customers to engage with the market's offerings and share information about sustainable practices.

- 2. Dwelling, referring to how people live, work, behave, manage habitats, and understand citizenship and urbanization problems: One proposal merged a school with the market, incorporating rooftop gardens, sports halls, market halls, market stands on the ground floor, and a new main entrance on the market square. The project promoted regeneration and inclusivity by offering a student market with an exhibition hall, a surrounding community rooftop garden, a reimagined streetscape, and a youth center for the neighborhood. This aimed to integrate young people, provide better education, and create more successful career opportunities.
- 3. Moving, covering global transportation and the mobilization of goods and services: The flexible market system, or "BOX," exemplifies resilience and sustainability by utilizing a 3×3 m wooden grid that can be combined and extended horizontally and vertically to create a variety of market typologies. Stacking the modules creates free space on the ground level, enabling different functions within a minimal footprint. The adaptable and resilient market structure can respond to future changes in society and its needs, fostering innovation and collaboration.
- 4. Generating, providing ideas about new materials, tools, and frameworks to imagine circular strategies: The "Knowledge Market" project demonstrated real-world engagement and safety by envisioning an open-access market for the exchange of knowledge and skills to support local businesses and reducing the city's climate impact. By offering workspaces and providing diverse activities such as concerts, an open-air cinema, workshops, and startups, the project aimed to create an inclusive, accessible environment that supports unemployed and immigrant populations.

Elsewhere, in the Market District 24/7 project, students learned to balance the competing interests of different stakeholder groups and navigate the complexities of urban design while promoting sustainable food systems. This collaborative approach, combined with the digital and analog tools provided by the Urban Prototype design studio, helped students develop a deeper understanding of the challenges and opportunities involved in creating resilient and sustainable urban environments. The success of the decentralized design studio model during the COVID-19 pandemic underscores the significance of incorporating digital and analog tools in actual contexts and engaging local residents in a circular approach to student participation.

Future generations of urban designers must adopt a more open and collaborative mindset and abilities to address urban challenges effectively.



Figure 7. Studio vision of all projects shows Market District 24/7: Ideas for Favoriten in the categories of Nurturing, Dwelling, Moving, and Generating. Urban Prototype Design Studio Spring 2021. Source: Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.

By tackling pressing issues such as justice, migration, inclusion, housing, security, mobility, production, work, and the environment, the projects illustrate the efficacy of the method design approach in bringing students closer to the actual environments where their work takes place.

n 01 nurtring; Grand- mothers garden globalized!	n 02 nurturing: Alged as a bool for the urban environ- ment.	n 03 nurturing: reverse destructive lights into carting lights	n 04 nurturing: from urban to rural. Creating a new type of settle- ment.	n 05 nurtring: Infrastruc- ture as a Place for the People!	n 06 nurturing: Lod Market Els Derman Els Yerbakel Derman Verbakel Architects	D 26 Dwelling: Revaluat- ing macular Architec- ture Throug Research and Design to Enhance a Sense of Communi- ty!	D 27 Dwelling: Design against Estinction - Cohabita- tion in Green Cities	D28 Dwelling: Healing the City by adding Green Spaces	D 29 Dwelling: more green and freespaces and less traffic	D 30 Dwelling: Bringing the indiginous knowledge at the level of establish modern science	D 31 Dwelling: Experi- ment with materials to reduce waste!	D 32 Dwelling: Take away or walls and fences to regain urban qualities.

Figure 8. Studio vision of all projects shows Market District 24/7: Ideas for Favoriten in the categories of Nurturing, Dwelling, Moving, and Generating. Urban Prototype Design Studio Spring 2021. Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.



Figure 9. (Left) Cross-relations between projects for 100 Ideas for Vienna. Urban Prototype Design Studio Spring 2021. (**Right**) City Model of 100 Ideas including a banner. Imaginaries Section. MAK Vienna Biennale for Change 2021. Source: Adapted from Urban Prototype Design Studio, Chair of Architecture and Urban Design, ETH Zurich, used with permission.

The Method Design approach is applicable to those involved in urban design, as it encourages collaboration between practitioners, students, and a diverse range of stakeholders. This approach creates a platform for experiential learning and promotes an environment that appreciates multiple perspectives and expertise, making it particularly relevant for individuals interested in contributing to innovative urban solutions.

Moving beyond traditional predetermined briefs, Method Design emphasizes the exploration of new methods and the identification of intervention areas based on the challenges and opportunities present in urban environments. While this approach may not be suitable for those who prefer conventional methods, it offers a unique opportunity for individuals seeking innovative and collaborative urban design practices.

By engaging a variety of participants, such as local communities, government agencies, NGOs, and experts from different fields, Method Design enhances the practical applicability of urban design solutions. Effective moderation is crucial, ensuring that all participants can fully engage in the process and contribute their ideas and expertise. In doing so, Method Design facilitates the development of more inclusive, resilient, and sustainable urban environments, demonstrating its value for those looking to advance urban design practices.

6. Method Design: Embracing Circular Urban Design Pedagogy for Sustainable and Resilient Futures

The key findings of Method Design reveal its potential as a circular urban design pedagogy that can effectively address the demands of our time, particularly in the context of the Sustainable Development Goals and the climate crisis. Method Design shifts the focus of urban design and education towards a student-centered, inquiry-based, and circular-driven pedagogy, ensuring sustainability and relevance in the contemporary environment.

Three essential components of Method Design—"to engage, to care, and to act"—emphasize interdisciplinary learning; collaboration with peers, experts, and the general public; inquiry-based learning; and the integration of diverse perspectives. It promotes open dialogue, systemic thinking, and experiential learning, focusing on creating sustainable and resilient futures through circular pedagogy. By fostering a circular process of design thinking, Method Design promotes self-determination, solidarity, and independent thought in students.

The Urban Prototype design studio exemplifies the practical application of Method Design. The studio gathers evidence and feedback through collective action and community work, supporting the development of designs that benefit society. By motivating designers to create resilient designs that consider environmental stresses and human needs, Method Design emphasizes the importance of considering the relationship between design, the environment, and the communities affected by it. By engaging various stakeholders, such as local communities, government agencies, NGOs, and experts from different fields, Method Design enhances the practical applicability of urban design solutions. However, it is essential to recognize and address the limitations of the approach, which include the constraints of time, access to resources, and the challenge of implementing it within traditional higher education systems.

The proposed circular pedagogy in urban design incorporates elements of civic engagement, critical analysis, circular design thinking, creativity, collaboration across disciplines, and awareness of global and local sustainable development issues through design by advocating for circular processes and adopting the indigenous Iroquois concept of thinking in seven generations with regard to environmental stewardship (Leopold 1949), the Whole Earth (Brand 1968), and the More-than-Human perspective (Abrams 1996). Method Design fosters a culture of sustainability that respects the natural environment and recognizes its importance to our well-being and quality of life.

Despite these limitations, the Method Design approach represents a valuable, albeit imperfect, contribution to urban design education. Its ability to address contemporary challenges within the constraints of higher education systems showcases its potential. However, it is crucial to recognize that the approach must continue to adapt and develop in response to the evolving context of urban design and the broader limitations of university systems. By doing so, Method Design can further enhance its efficacy and impact, ultimately shaping the future of urban design education in a more inclusive, resilient, and sustainable manner.

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