

EDUCATION IN SUSTAINABLE URBAN PLANNING AND DESIGN AS A PREREQUISITE FOR INFORMED CIVIC AGENCY IN URBAN DECISION-MAKING IN NORTH MACEDONIA

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Abstract

Legal and urban policy frameworks worldwide, including in North Macedonia, recognise citizen participation as an important component of planning processes and regulate it through mandatory mechanisms for civic involvement in the planning of settlements. However, the existence of participatory mechanisms raises a fundamental question: to what extent are citizens equipped with the knowledge necessary to engage meaningfully in urban development processes? Legislation may ensure access to participation, but it does not ensure the capacity to interpret spatial proposals, evaluate trade-offs, and assess the long-term implications of urban transformation. Without such competencies, participation risks becoming symbolic rather than substantive.

UNESCO also emphasises active citizen participation in the development of cities and human settlements, while stressing that meaningful participation requires education. Through its Education for Sustainable Development frameworks, also promoted in North Macedonia, UNESCO seeks to equip citizens with the knowledge, skills, values, and critical understanding needed to contribute positively to sustainable development. However, the role of basic urban planning and urban design literacy in supporting informed civic participation in urban development processes remains insufficiently emphasised.

Drawing on urban theory, this research argues that urban planning and urban design play a central role in shaping sustainable urban environments. Principles such as density, mobility, walkability, connectivity, mixed-use diversity, permeability, adaptability, and the quality of the public realm directly influence environmental performance, social inclusion, accessibility, and urban resilience. Therefore, sustainability education frameworks should also integrate basic education on urban planning policies and urban design principles. In this way, it will generate informed civic participation in urban decision-making and a multidimensional approach to sustainable urban development.

Keywords: urban planning, urban design, civic inclusion, civic education, sustainable development

Introduction

Urban planning and design discourse has increasingly positioned citizen participation as a central component of democratic and sustainable urban development. International frameworks and planning theory emphasise that inclusive decision-making processes can enhance legitimacy, responsiveness, and long-term urban resilience (Healey, 1997; Innes & Booher, 2004; Alexander, 1977, 2002–2005; Carmona, 2001). In parallel, national legislations, including those of North Macedonia, have incorporated formal mechanisms to involve citizens in the planning process. Yet, citizens are typically involved at later stages of the planning process, and their contributions remain largely consultative, with limited influence on final decisions. However, the existence of participatory mechanisms raises a fundamental question: to what extent are citizens equipped with knowledge for engaging meaningfully in urban planning and design processes? While legislation ensures access, it does not ensure understanding. The capacity to interpret spatial proposals, evaluate trade-offs, and assess long-term impacts requires specific knowledge and competencies. Without these, participation risks becoming symbolic rather than substantive, aligning with what Arnstein (1969) described as tokenistic participation, where citizens are heard but lack real influence over outcomes. This reveals a critical gap between formal inclusion and actual capacity for participation.

On the other hand, UNESCO also emphasises the importance of active citizen participation in the proper development of cities and human settlements. However, it argues that meaningful participation requires education and public awareness, as citizens need adequate knowledge and critical understanding of environmental, social, economic, and spatial processes in order to effectively engage in sustainable development. Through its Education for Sustainable Development (ESD) framework, UNESCO promotes the development of knowledge, skills, values, and participatory capacities necessary for more sustainable and inclusive urban environments. Similar initiatives related to sustainability education and civic participation have also been promoted in North Macedonia through collaborations between UNESCO, national institutions, and international organisations. (Polenakovikj, 2024) However, they do not explicitly address urban planning and design as a distinct and necessary domain of knowledge, despite the fact that cities represent an important spatial context in which sustainability is materialised.

Urban planning and urban design constitute the operational interface through which sustainability principles are translated into the built environment. Urban planning primarily addresses the strategic organisation of land use, density, mobility, infrastructure, and the distribution of urban functions, while urban design focuses on the physical and experiential qualities of urban space, including walkability, connectivity, permeability, mixed-use diversity, adaptability, legibility, and the quality of the public realm. Together, these principles directly influence ecological performance, social inclusion, accessibility, economic vitality, and long-term urban resilience. From this perspective, sustainable development depends not only on environmental policies and technological systems, but also on the spatial organisation and everyday experience of the city (Carmona, 2021; Bentley et al., 1985; Homes and Communities Agency, 2013; English Partnerships et al., 2007; Ferati et al., 2019; Saidi et al., 2024; Saidi Qazimi, 2025). Without an understanding of these processes, citizens remain unable to meaningfully engage with the decisions that structure their urban environments.

Therefore, this research argues that sustainability education frameworks should integrate basic education on spatial, urban planning, and urban design principles that support healthy and sustainable environments. Such education should be introduced progressively across different stages of learning, from early awareness of the built and natural environment in preschool and primary education, to more critical engagement with mobility, land use, public space, density, infrastructure, and urban decision-making in secondary, higher, and adult education. In the case of North Macedonia, the existing Education for Sustainable Development (ESD) framework and climate education initiatives already aim to integrate sustainability across educational levels and teacher training. (Polenakovikj, 2024) However, they do not yet define sustainable urban planning and urban design literacy as a concrete educational domain. Without this spatial and regulatory literacy, citizens may become environmentally aware, yet remain unable to understand, evaluate, and participate meaningfully in the planning decisions that shape the sustainable development of their settlements.

Legal Framework and the Limits of Effective Participation

The legal framework of urban planning in North Macedonia reflects a long-standing recognition of public participation. Public engagement was first introduced through the Law on Urban Planning (Закон за урбанистичко планирање, 1958), which dedicated Articles 10, 11, and 12 to public inspection and the collection of citizens' comments and proposals over a consultation period of 30 to 60 days. These mechanisms were later redefined by the Law on Regional, Spatial and Urban Planning (Закон за регионално, просторно и урбанистичко планирање, 1965), which provided for public inspection during the adoption of regional and urban plans, while leaving the procedure to municipal assemblies. The Law on Spatial and

Urban Planning (Закон за просторно и урбанистичко планирање, 1973) made public inspection compulsory at all phases of spatial and urban planning, although the implementation procedures remained under the authority of local assemblies. The Law on the System of Spatial and Urban Planning (Закон за системот на просторното и урбанистичкото планирање, 1985) introduced councils and mandatory public debates as mechanisms of social influence in spatial and urban planning. Later, the Law on Spatial and Urban Planning (Закон за просторно и урбанистичко планирање, 1996) allowed public surveys and expert debates, enabling citizens to participate through written remarks, although this participation remained time-limited and predominantly advisory. Participation was further expanded through the Law on Spatial and Urban Planning (Закон за просторно и урбанистичко планирање, 2005), which introduced municipal participatory bodies, mandatory public presentations and surveys, and transparent reports with written responses to submitted remarks. The Law on Spatial and Urban Planning (Закон за просторно и урбанистичко планирање, 2014) further detailed public survey and public presentation procedures through the e-urbanism system, including written and electronic submissions and mandatory responses to submitted survey sheets. The current Law on Urban Planning (Закон за урбанистичко планирање, 2020) formalises participation through public surveys lasting between 30 and 90 days, public presentations of proposed plans, and participatory bodies composed of representatives from local government, civic associations, urban and local communities, experts, and activists.

Although participation is legally embedded, official mechanisms are often perceived as procedural formalities rather than instruments of meaningful engagement, since they are standardised, time-bound, and primarily oriented toward statutory compliance rather than genuine dialogue. In addition, these mechanisms are usually activated in the later stages of the planning process, when the main spatial parameters and planning agendas have already been defined. This limits citizens' ability to influence the formulation of planning priorities from the outset and confines participation largely to commenting on already developed proposals (Dokuzova et al., 2026).

These limitations are not only procedural but also educational and interpretive. A recent study conducted in North Macedonia, specifically in Skopje, shows that public participation tends to be fragmented, uneven, and reactive, clustering around controversial plans rather than reflecting sustained and systematic civic engagement. The same study found that, when citizens were asked to observe and represent their immediate urban environments, their interpretations were often rooted in localised everyday experience, while wider spatial relations and systemic urban structures remained less apparent. This does not mean that citizens lack valuable knowledge; rather, it shows that lived experience does not automatically translate into planning-relevant input. Without accessible visualisation tools, a shared spatial vocabulary, and basic planning knowledge, citizens often rely on descriptive narratives rather than analytical reasoning, making it difficult for their observations to enter formal planning discourse. (Dokuzova et al., 2026)

Such findings correspond with broader debates in planning theory. Participation is often institutionalised procedurally but lacks substantive impact when citizens are heard without being able to influence outcomes (Arnstein, 1969; Hordijk et al., 2015). As Forester (1989) argues, planning processes are shaped by the management of information, knowledge, trust, and power; therefore, meaningful participation requires more than formal access. Similarly, communicative planning theory emphasises dialogue, mutual learning, and the construction of shared understanding among stakeholders (Healey, 1997). This position is theoretically supported by Habermas's theory of communicative action, in which rational communication and public justification are central to reaching understanding and coordinating collective action (Habermas, 1984).

Christopher Alexander's (2002–2005) understanding of design as a gradual and generative process further strengthens this critique. He rejects mechanical, top-down design methods and instead argues for adaptive processes in which environments are shaped step by step, through decisions that respond to the existing spatial and social structure of a place. Such an approach implies that inhabitants should not be consulted only after plans have been completed. Their knowledge of everyday routines, needs, and spatial experience should inform the project while decisions are still being developed. Participation, therefore, is not a late-stage procedure for reacting to fixed proposals, but part of the generative process through which coherent and life-supporting environments are formed. Thus, effective participation requires both earlier inclusion in the planning process and the development of citizens' capacity to understand, evaluate, and communicate spatial issues in ways that can meaningfully inform urban decision-making.

Education as a Precondition for Informed Civic Agency

The limitations of civic participatory planning cannot be understood solely as institutional shortcomings; they must also be examined as a consequence of insufficient civic capacity. While legal frameworks provide mechanisms for inclusion, they do not equip citizens with the knowledge required to engage meaningfully with complex planning processes. In this sense, participation is not simply a matter of access but of competence. The ability to interpret spatial information, evaluate planning proposals, and engage in reasoned deliberation depends on forms of knowledge that are neither intuitive nor universally distributed. Therefore, one of the main ways to develop citizens' capacity for informed evaluation and meaningful participation is through education.

This perspective aligns with the broader principles of UNESCO's Education for Sustainable Development (ESD), which emphasises that sustainable societies require citizens to be educated in the principles of sustainable development so that they can understand complex environmental, social, and economic interdependencies, make responsible decisions, use resources sustainably, and contribute to more just, inclusive, and climate-resilient societies. UNESCO has played a central role in promoting ESD and, for the period 2020–2030, introduced the framework Education for Sustainable Development: Towards achieving the Sustainable Development Goals. This framework seeks to integrate ESD and the 17 Sustainable Development Goals into education systems worldwide. It focuses on developing the knowledge, skills, values, and attitudes that learners, as future citizens and active members of society, need to contribute to sustainable development. Its implementation roadmap identifies five priority action areas: advancing policy, transforming learning environments, strengthening the capacities of educators, empowering youth, and accelerating local-level action. (Anon., 2022; Polenakovikj, 2024)

However, although UNESCO strongly emphasises the need to educate citizens in the principles of sustainable development, its framework does not sufficiently foreground education in the basic principles of urban planning and urban design. This is a relevant gap, because urban planning and urban design shape many dimensions of sustainable development in cities and settlements, including land use, mobility, density, public space, environmental quality, social inclusion, and everyday urban life. If citizens are not educated in these spatial and planning-related issues, sustainability education remains partial. At the same time, the legal right granted to citizens to participate in planning processes remains limited in practice, since they may lack the knowledge required to understand, evaluate, and influence decisions that direct the sustainable development of their settlements. Without an understanding of these processes, citizens are unable to connect abstract sustainability concepts with the concrete realities of urban development.

In the context of North Macedonia, the integration of Education for Sustainable Development (ESD) and Climate Change Education (CCE) into the education system is considered particularly important for preparing future generations to respond to challenges such as uncontrolled urbanisation, air pollution, waste management, the lack of green spaces, and climate change. Education should not only raise individual awareness but also influence how cities, infrastructure, and public policies are planned and developed. According to the 2024 Action Plan, North Macedonia aims to integrate ESD and CCE across all levels of education and teacher training, in line with UNESCO principles. Its main priorities include the integration of ESD and CCE into curricula, the development of educators' capacities, and investment in educational infrastructure. (Polenakovikj, 2024) These curricula would become more complete if they also integrated education on urban planning processes and on the principles through which healthy and sustainable cities and settlements are planned, designed, and developed.

In the education system of North Macedonia, particularly at the primary and secondary levels, ESD topics are mainly focused on environmental protection, biodiversity, pollution, energy, and waste management. (Polenakovikj, 2024) However, more concrete content related to sustainable urban development remains insufficiently developed. This includes topics such as urban planning, public transport, rational land use, sustainable consumption, ecological construction, and the relationship between urbanisation and climate change. Issues related to active citizenship and social responsibility are also not addressed in sufficient depth. As a result, students may develop general environmental awareness, but still lack a clear understanding of urban challenges and of the role that individuals and communities can play in shaping more sustainable cities.

This gap is important because urban planning represents the link between sustainability principles and concrete decisions concerning land use, infrastructure, mobility, public space, and the built environment. Without the basic ability to interpret plans and understand urban processes, civic participation often remains limited to short-term concerns or individual interests. Citizens may evaluate urban conditions mainly through personal experiences, everyday inconveniences, or immediate needs, but such evaluations do not necessarily address the broader structural and global processes that shape the city and its sustainability, such as climate change, resource consumption, mobility systems, social inequality, land-use pressures, or long-term environmental resilience (Dokuzova et al., 2026). For this reason, such competencies should begin to develop from early education and continue through formal and non-formal learning.

Workshops, digital platforms, and community-based learning environments can help citizens connect everyday spatial experience with professional planning discourse. However, the most important step is to embed these issues within formal education by preparing teachers and integrating spatial literacy, urban sustainability, and civic participation into school curricula. This would allow citizens to gradually develop basic knowledge about urban processes from an early age, rather than engaging with planning only when specific local problems directly affect them. Spatial education could also take place through the way children experience, use, and interpret their school environment. In this sense, the schoolyard can also function as a pedagogical space for learning, social interaction, play, contact with nature, and the gradual development of environmental and spatial awareness (Dehari et al., 2022). In this context, gradual education becomes a precondition for meaningful participation, enabling citizens to move from fragmented reaction toward more informed and proactive civic engagement in sustainable urban decision-making.

Well-informed citizens can contribute not only to decisions concerning sustainable urban development in general, but also to more specific issues that directly affect everyday urban life and experience. For example, when abandoned buildings or neglected sites appear within the city, citizens can recognise their potential and question the absence of sustainable strategies for

their management and reuse (Ibraimi & Radevski, 2025; Ibraimi, 2022). They can also critically respond to decisions driven primarily by short-term economic interests or private investment priorities, rather than by long-term sustainability goals that include the community and correspond to its needs (Ibraimi et al., 2025). Similarly, informed citizens can defend their rights when built and unbuilt public spaces fail to accommodate all users equally, which contradicts the social dimension of sustainable urban planning (Ibraimi & Merxhani, 2023). They can also raise their voice when the physical and experiential qualities of cultural heritage need to be protected or cultivated, whether in relation to individual buildings (Saidi et al., 2021) or to the collective memory of characteristic traditional urban elements (Limani, 2023, 2025). Several developed Western countries have already integrated aspects of spatial awareness, urban development, and civic education into broader educational and public-learning frameworks. Germany offers one of the most developed examples of institutionalised civic education in Europe. The Federal Agency for Civic Education (Bundeszentrale für politische Bildung / bpb), established in 1952, has as its central mission the strengthening of democratic awareness and political education. Through publications, seminars, educational materials, digital platforms, and public programmes, it supports citizens' ability to understand political and social processes. Its work also addresses themes related to democracy, participation, society, and public life, making it a relevant example of how civic education can intersect with spatial and urban issues without necessarily being organised as a separate urban planning subject (Bundeszentrale für politische Bildung, 2003, 2011).

Denmark provides another illustrative example. The Danish Folkeskole is structured around national aims that prepare pupils for participation, responsibility, rights, and duties in a democratic society, while also developing their understanding of the relationship between human beings and the environment. Within this educational framework, spatial and environmental knowledge can be introduced through subjects such as geography, social studies, biology, and other curriculum areas concerned with society, environment, resources, and everyday life. This shows that urban and environmental awareness can begin in compulsory education, without treating urban planning as an exclusively professional field (Danish Ministry of Children and Education).

The Netherlands is also relevant as a comparative context because of its long tradition of integrated spatial planning and consensus-oriented public decision-making, often associated with the "polder model." Dutch planning culture has been linked to cooperation, negotiation, democratic self-rule, and consensus-building in economic, environmental, and spatial governance. This does not mean that citizens automatically possess planning expertise, but it suggests that public participation becomes stronger when it is supported by long-term institutional cultures of dialogue, public debate, and spatial decision-making. The Dutch case, therefore, illustrates that citizens' urban awareness is not accidental but shaped through sustained educational, cultural, and institutional practices. (Schreuder, 2001)

The following section briefly elaborates on how urban planning and urban design influence sustainable development, and why this research insists that citizens should be better informed about these principles. If citizens are expected to participate in the planning of their cities and settlements, their participation should be supported by an understanding of how planning and design decisions shape environmental quality, social inclusion, mobility, public space, and the long-term sustainability of urban life.

Urban Planning and Design as a Determinant of Sustainable Urban Environments

Urban planning and urban design play a fundamental role in shaping sustainable urban environments because they determine how settlements are organised, used, and transformed over time. Through decisions concerning land use, density, urban growth, mobility,

infrastructure, public space, and the relationship between built and natural systems, planning and design influence ecological performance, social inclusion, economic activity, and cultural continuity. At the environmental level, these decisions affect energy consumption, emissions, land transformation, resource efficiency, and the preservation of natural systems. Compact and well-connected urban structures can reduce transport-related energy use and limit the conversion of agricultural and natural land, while dispersed development tends to increase infrastructure costs, car dependency, emissions, and environmental degradation. In this sense, sustainable development is not shaped only by technological innovation, environmental regulation, or individual behaviour, but also by the spatial and physical structure of settlements themselves. (Næss, 2001; Larco & Knudson, 2024)

Urban planning and urban design influence sustainable development across multiple spatial scales, from the region and city to the neighbourhood, street, block, and parcel. Each scale contributes differently to ecological performance, social well-being, economic vitality, and long-term adaptability. Sustainability is therefore not produced through a single intervention, but through the coordination of planning and design decisions across interconnected levels. At the regional and city scale, planning decisions determine the direction of urban growth, the protection of natural and agricultural land, the location of major infrastructure, and the relationship between settlements, transport systems, and ecological networks. These decisions influence land consumption, emissions, commuting distances, access to services, and the long-term resilience of urban systems. Compact and well-connected urban growth can reduce pressure on agricultural land and natural habitats, while fragmented and dispersed development tends to increase infrastructure costs, car dependency, and environmental degradation. (Næss, 2001; Larco & Knudson, 2024; Carmona, 2001)

At the neighbourhood scale, decisions concerning density, land-use mix, public facilities, green spaces, schools, local services, and mobility networks shape the quality of the environment, everyday accessibility, social inclusion, and health outcomes. A well-planned neighbourhood can reduce dependence on private vehicles by placing daily needs within walking or cycling distance, thereby helping to lower traffic-related air pollution and emissions. It can also support residents' physical and mental well-being through safe pedestrian routes, accessible green spaces, active public spaces, and opportunities for social interaction. Thus, neighbourhood planning becomes a direct determinant of both environmental quality and everyday well-being. (Næss, 2001; Larco & Knudson, 2024; Carmona, 2001)

At the street and block scale, urban design shapes the quality of the environment and the everyday well-being of residents through the way movement, safety, public life, and environmental comfort are organised. Street connectivity, pedestrian comfort, shade, active frontages, traffic calming, stormwater management, and ecological continuity influence whether streets operate only as traffic corridors or become livable public spaces. Well-designed streets and blocks can reduce exposure to traffic stress, improve walkability, moderate heat, support safer movement, and create conditions for social interaction. At this scale, sustainability becomes directly experienced through walkability, microclimate, safety, social activity, and the capacity of streets and blocks to support multiple forms of use. (Næss, 2001; Larco & Knudson, 2024; Carmona, 2001)

At the parcel and building interface, design decisions shape the quality of the environment indoors as well as outdoors and residents' everyday well-being through the way buildings meet the street and relate to the surrounding public space. Building orientation, setbacks, ground-floor use, vegetation, surface permeability, entrances, edges, and the transition between private and public space influence energy performance in indoor spaces as well as outdoor ones, environmental comfort, privacy, safety, and opportunities for social interaction. This scale is important because it mediates between individual buildings and the wider urban environment. A building can either activate the street, provide shade, support pedestrian comfort, and create

a clear relationship between public and private space, or it can contribute to inactive edges, poor microclimatic conditions, social isolation, and fragmented urban experience. In this way, even small-scale design decisions affect how sustainable, comfortable, and socially responsive an urban environment becomes over time. (Carmona, 2001; Gehl, 2011; Larco & Knudson, 2024; Goxha et al., 2024).

Environmental policies and green technologies often define the desired outcomes of sustainable development, including reduced emissions, resource efficiency, ecological protection, and healthier environments. Urban planning and urban design translate these outcomes into spatial conditions through the form, configuration, and interrelation of primary urban elements, such as buildings, parcels, blocks, streets, and open spaces. Through these spatial arrangements, planning and design shape movement, accessibility, public life, ecological continuity, environmental comfort, and everyday urban use, making urban form a central mechanism through which sustainable development is generated.

The discussion above presented only a brief overview of how the built environment, together with urban planning and urban design strategies, can influence sustainable development and the creation of healthy environments for living. Several influential works in urban literature have attempted to synthesise the principles through which the planning and design of cities shape urban quality of life in ecological, economic, social, cultural, psychological, and temporal terms. One of the most comprehensive frameworks is offered in the work of Matthew Carmona (2001), where urban environments are understood through multiple interrelated dimensions: morphological, functional, social, visual, perceptual, and temporal. This perspective shows that urban sustainability depends not only on environmental performance, but also on how urban form supports accessibility, public life, identity, safety, adaptability, and long-term change.

A similar user-oriented logic is developed in *Responsive Environments* (Bentley et al., 1985), which explains how urban design can increase people's choices through permeability, variety, legibility, robustness, visual appropriateness, richness, and personalisation. These principles suggest that well-designed environments are those that people can move through, understand, use in different ways, adapt over time, and develop attachment to. The book "A Pattern Language: Towns, Buildings, Construction" (Alexander et al., 1977) adds another important layer by translating everyday spatial experience into recurring patterns of human use, showing how settlements, neighbourhoods, streets, buildings, thresholds, and rooms can be shaped to support social life, comfort, belonging, and everyday well-being. Taken together, these works demonstrate that the built environment has a direct role in shaping both the sustainability and the lived quality of urban settlements.

However, such works often remain selectively used by professionals and require considerable theoretical and practical commitment to be understood and applied by non-professionals. In contrast, the *Urban Design Compendium 1&2* represents an attempt to simplify and operationalise key principles of urban planning and urban design in a more accessible form. It translates complex urban design knowledge into practical guidance related to character, continuity and enclosure, public realm quality, ease of movement, legibility, adaptability, diversity, density, mixed use, streets, public spaces, safety, and resource efficiency. In this sense, it is not merely a professional manual, but a bridge between specialised urban knowledge and broader public understanding of how the built environment can be improved.

This is important because urban literature already contains substantial evidence and practical knowledge on how spatial planning and urban design can contribute to more sustainable and higher-quality environments. Many of these principles are also present, at least implicitly, in planning laws and regulations, where notions such as the humanisation of space, spatial harmony, protection of local character, environmental quality, and public interest are often mentioned as criteria that should guide planning decisions. However, these principles are

frequently formulated in broad and abstract terms, without clearly explaining the spatial mechanisms through which they should be achieved. As a result, they may remain declarative, weakly interpreted, or easily neglected in practice. The challenge, therefore, is not only the absence of knowledge but also its accessibility, simplification, operationalisation, and contextual adaptation.

While some principles of sustainable urban planning and design have broad relevance, others must be critically examined and adapted to the physical, social, cultural, and institutional conditions of specific settlements. For North Macedonia, this means that existing urban design knowledge should not be adopted mechanically. It should be analysed, contextualised, and translated into clear educational content and practical mechanisms that can be integrated across different levels of schooling. The aim is for these principles to become internalised knowledge, not only for citizens as a basis for informed public evaluation, but also for future professionals who will participate in planning, designing, regulating, and managing the built environment. In this way, education can help transform abstract planning values, such as spatial harmony, humanisation of space, protection of local character, and environmental quality, into more concrete capacities for understanding and shaping sustainable urban environments.

Conclusion

This research addresses the importance of educating citizens on the basic principles of urban planning and urban design, so that the legal and institutional right granted to them to participate in urban decision-making can become informed, meaningful, and effective. While legal and policy frameworks increasingly recognise citizens as participants in the planning and development of settlements, the mere existence of participatory mechanisms does not guarantee substantive engagement. A central concern raised in this paper is whether citizens are sufficiently equipped to understand spatial proposals, evaluate urban plans, identify trade-offs, and provide relevant input that can contribute to the sustainable development of their cities.



Fig. 1: Word cloud of key concepts

The discussion has shown that meaningful participation depends not only on legal access, but also on knowledge and interpretive capacity. UNESCO's Education for Sustainable Development frameworks attempt to strengthen citizens' ability to contribute to sustainable development by promoting knowledge, skills, values, and critical understanding. However, these frameworks tend to address sustainability in broad environmental, social, and economic terms, while the role of urban planning and urban design as key determinants of sustainable urban environments remains insufficiently emphasised.

By briefly demonstrating how planning and design decisions shape land use, density, mobility, public space, infrastructure, ecological systems, environmental quality, social inclusion, health, and everyday urban life, this research argues that sustainability education should also include basic urban planning and urban design literacy. Citizens cannot meaningfully evaluate or

influence the development of their settlements if they do not understand how the physical structure of the city is produced and how it affects sustainability.

The main contribution of this paper is therefore to argue for the integration of sustainable urban planning and urban design principles into education frameworks for sustainable development. These principles should be analysed, simplified, contextually adapted, and introduced across different levels of education, so that they become part of citizens' and future professionals' basic knowledge. In this way, participation can move beyond formal consultation and become a more informed civic capacity. If citizens are expected to contribute to the sustainable development of their settlements, they must also be educated in the essential spatial and design principles through which such development is actually shaped.

References

- [1]. Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Angel, S. (1977). *A pattern language: Towns, buildings, construction*. Oxford University Press.
- [2]. Alexander, C. (2002–2005). *The nature of order: An essay on the art of building and the nature of the universe* (Vols. 1–4). Centre for Environmental Structure.
- [3]. Anon., 2022. Education for sustainable development in the framework of the 2030 Agenda for
- [4]. Sustainable Development, New York: UN.
- [5]. Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216–224. <https://doi.org/10.1080/01944366908977225>
- [6]. Bentley, I., Alcock, A., Murrain, P., McGlynn, S., & Smith, G. (1985). *Responsive environments: A manual for designers*. Architectural Press.
- [7]. Bundeszentrale für politische Bildung. (2003). Leitbild der Bundeszentrale für politische Bildung. <https://www.bpb.de/die-bpb/ueber-uns/auftrag/51248/leitbild-der-bundeszentrale-fuer-politische-bildung/>
- [8]. Bundeszentrale für politische Bildung. (2011). Gründung und Aufbau 1952–1961. <https://www.bpb.de/die-bpb/ueber-uns/geschichte-der-bpb/36421/gruendung-und-aufbau-1952-1961/>
- [9]. Danish Ministry of Children and Education. (n.d.). The aims of the Folkeskole. <https://eng.uvm.dk/primary-and-lower-secondary-education/the-folkeskole/the-aims-of-the-folkeskole>
- [10]. Carmona, M. (2021). *Public places urban spaces: The dimensions of urban design* (3rd ed.). Routledge
- [11]. Dehari, F., Ibrahim, F., & Murati, H. (2022). Challenges of designing primary school grounds in North Macedonia. *Journal of Applied Sciences-SUT*, 8(15–16), 78–94. <https://eprints.unite.edu.mk/1100/>
- [12]. Dokuzova, M., Rafailovska, A., Veljanoski, P., & Penchikj, D. (2026). Public participation in question: Urban planning frameworks and informal practices in Skopje. *Journal of Sustainable Architecture and Civil Engineering*, 1(39), 46–57. <https://doi.org/10.5755/J01.SACE.39.1.41662>
- [13]. English Partnerships, The Housing Corporation, & Roger Evans Associates. (2007). *Urban design compendium 2: Delivering quality places*. English Partnerships.
- [14]. Ferati, A., Saidi, A., & Limani, A. (2019). The urban node: Configurational properties of urban nodes in Tetovo. In *Proceedings of the 12th International Space Syntax Symposium*.
- [15]. Forester, J. (1989). *Planning in the face of power*. University of California Press.
- [16]. Gehl, J. (2011). *Life between buildings: Using public space* (6th ed.). Island Press.
- [17]. Goxha, L., Besimi, E., & Ibrahim, F. (2024). Impact of appropriate orientation of residential buildings on energy efficiency: A case study in Tetovo, North Macedonia. *ResearchUT*, 10(19–20), 86–91. <https://doi.org/10.62792/ut.jas.v10.i19-20.p2743>
- [18]. Habermas, J. (1984). *The theory of communicative action: Volume 1: Reason and the rationalization of society* (T. McCarthy, Trans.). Beacon Press. Original work published 1981.
- [19]. Healey, P. (1997). *Collaborative planning: Shaping places in fragmented societies*. Macmillan.
- [20]. Homes and Communities Agency. (2013). *Urban design compendium 1: Urban design principles* (3rd ed.).
- [21]. Hordijk, M., Miranda Sara, L., Sutherland, C., & Scott, D. (2015). Participatory instruments and practices in urban governance. In J. Gupta, K. Pfeffer, H. Verrest, & M. Ros-Tonen (Eds.), *Geographies of urban governance* (pp. 130–146). Springer. https://doi.org/10.1007/978-3-319-21272-2_7
- [22]. Innes, J. E., & Booher, D. E. (2004). Reframing public participation: Strategies for the 21st century. *Planning Theory & Practice*, 5(4), 419–436. <https://doi.org/10.1080/1464935042000293170>
- [23]. Polenakovikj, R. (2024). *Action plan for integration of the Education for Sustainable Development and Climate Change Education into primary, secondary education (including VET), higher and adult education*. Project "Building Capacity towards sustainable capital development in North Macedonia,"

Activity Area III: Development and Delivery of Capacity Building Activities on Education for Sustainable Development and Climate Change

- [24]. Larco, N., & Knudson, K. (2024). *The sustainable urban design handbook*. Routledge. <https://doi.org/10.4324/9781315671239>
- [25]. Law on Urban Planning, Official Gazette of the People's Republic of Macedonia No. 16 (1958).
- [26]. Law on Regional, Spatial, and Urban Planning, Official Gazette of the Socialist Republic of Macedonia No. 15 (1965).
- [27]. Law on Spatial and Urban Planning, Official Gazette of the Socialist Republic of Macedonia No. 11 (1973).
- [28]. Law on the System of Spatial and Urban Planning, Official Gazette of the Socialist Republic of Macedonia No. 11 (1985).
- [29]. Law on Spatial and Urban Planning, Official Gazette of the Republic of Macedonia No. 4 (1996).
- [30]. Law on Spatial and Urban Planning, Official Gazette of the Republic of Macedonia No. 51 (2005).
- [31]. Law on Spatial and Urban Planning, Official Gazette of the Republic of Macedonia No. 199 (2014).
- [32]. Law on Urban Planning, Official Gazette of the Republic of North Macedonia No. 32 (202)
- [33]. Limani, A. (2023). *Kuzey Makedonya'da Tetova şehrinin mekân yapılanmasındaki gizli ağ* [Doctoral dissertation, Mimar Sinan Fine Arts University (Turkey)]. *ProQuest Dissertations & Theses Global*.
- [34]. Limani, A. (2025). Ownership in the context of kapijik: A spatial phenomenon in Tetovo. *Journal of Applied Sciences-SUT*, 11(21–22), 30–39
- [35]. Ibraimi, F., 2022. Industrial heritage buildings in Tetovo: Between demolition and reuse. *KNOWLEDGE - International Journal*, 55(3), pp. 455-460.
- [36]. Ibraimi, F., Jakupi, E. & Radevski, A., 2025. LOCAL COMMUNITY'S INVOLVEMENT IN MANAGING AND PRESERVING INDUSTRIAL HERITAGE. *JAS SUT*, 11(21-22), pp. 124-133.
- [37]. Ibraimi, F. & Merxhani, H., 2023. STRIVING FOR INCLUSION: ANALYSIS AND EVALUATION OF URBAN PUBLIC SPACES IN TETOVO. *JAS SUT*, 9(17-18), pp. 95-110.
- [38]. Ibraimi, F. & Radevski, A., 2025. INDUSTRIAL BUILDINGS IN TETOVO AND POSSIBILITIES FOR TRANSFORMATION. Nis, International Conference Synergy of Architecture and Civil Engineering SINARG.Næss, P. (2001). Urban planning and sustainable development. *European Planning Studies*, 9(4), 503–524. <https://doi.org/10.1080/713666490>
- [39]. Saidi Qazimi, A. (2025). Is it a house or a school? Interdisciplinary reflections on the importance of meaning in architecture. *Journal of Applied Sciences-SUT*, 11(21–22), 49–62.
- [40]. <https://journals.unite.edu.mk/Home?JId=18>
- [41]. Saidi, A., Besimi, E., & Limani, A. (2024). The impact of socio-cultural developments on the urban structure of Tetovo during the period of Yugoslavia. *JAS-SUT Journal of Applied Sciences-SUT*, 10(19–20), 27–46.
- [42]. <http://eprints.unite.edu.mk/id/eprint/1720>
- [43]. Saidi, A., Svetina, M., & Zupančič, T. (2021). Memorable impressions as significant descriptors of the qualities of a house: Exploring the experiential qualities of the traditional house in Tetovo. *Annales: Series Historia et Sociologia*, 31(3), 441–464. <https://doi.org/10.19233/ASHS.2021.28>
- [44]. Schreuder, Y. (2001). The polder model in Dutch economic and environmental planning. *Bulletin of Science, Technology & Society*, 21(4), 237–245. <https://doi.org/10.1177/027046760102100401>