REVIEW ARTICLE

Young people's participation in urban landscape planning and transformation: a scoping review of interactive approaches

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Abstract

This article presents a review of methodological advancements and transformative potential in participatory processes with young people in urban landscapes. It offers a framework understanding of current types of participatory processes in relation to urban landscape planning, and underlines lifeworld and action as two key components in transformative participatory processes with young people. The two-step scoping review of a literature sample (n = 44 studies) finds a prevalence of less-interactive approaches to young people's participation in urban landscapes, and subsequently analyses openings for lifeworld and action in the more interactive approaches described (n = 17 studies). The interactive methods described demonstrate opportunities to facilitate young people's own articulations of lifeworlds within the urban landscape, especially in extended processes deploying multiple creative methods. The relatively few examples of actions and interventions resulting from participatory processes points to the need for further development and the ambition to include young people in transforming urban landscapes towards increased sustainability.

Large-scale environmental crises like climate change and biodiversity loss strike young people of today with marked differences. An abundance of scholarship (Hilder and Collin 2022; Marquardt 2020; Molder et al. 2022; Parth et al. 2020; Sloam et al. 2022; Corner et al. 2015) describes the protests and activism of young people and underlines their potential as a critique of the largely insufficient answers of political establishments. Meanwhile, disillusion, disinterest, and downright scepticism about the significance of these crisis tendencies have also been widespread amongst young people (Ojala 2015; Uba et al. 2023), and have been strongly linked to societal powerlessness and a lack of inclusivity in broader social processes (Ojala 2015, p. 1145). According to the UN (2010), young people should be key actors in transformation processes moving towards sustainable societies, yet they have very little say in the planning and development of their own living environments and conditions (Walther

et al. 2020, p. 1; Percy-Smith 2015, p. 5 of 18). In later decades, the environmental protests and activism of young people have risen to global attention. This warrants positive recognition, acknowledgement, and further action from politicians and practitioners involved in decision-making and planning. Patterns of disinterest and disillusion, however, also suggest a need for a broader participatory practice that engages with young people to take part in renegotiating basic socio-ecological relationships in their daily lives and on their own terms.

In a rapidly urbanising world, the urban landscape is a central stage for young people's struggles and dreams, and for taking part in negotiating socio-ecological relationships (Elmqvist 2008, p. 3666). New frameworks show the potentials of the urban landscape to improve human wellbeing as well as ecosystem functioning. Urban ecosystem services (Albert et al. 2020), blue–green infrastructure (Benedict et al. 2006), and nature-based solutions (Eggermont et al. 2015) provide new frames for understanding how values and benefits can flow from living ecologies to society. Such frameworks are present in urban planning horizons and governance discourses, aimed to maximise the environmental benefits of green, blue, and other open spaces in the city

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(Jansson and Randrup 2020; Albert et al. 2020). However, implementations of these approaches have also received sustained criticism of top-down implementation and a lack of meaningful integration of diverse urban populations' needs, activities, and perspectives (Kiss et al. 2022, p. 257, Langemeyer and Conolly 2020, p. 2 of 14). Remme and Haarstad (2022, p. 5 of 12) argue that even advanced participatory methodologies such as co-designing nature-based solutions tend to be ultimately subordinated to instrumental goals and fail to address inequality and power differences that hinder a just distribution of benefits. Contemporary urban landscape practice lacks fine-tuned participatory approaches to engage with diverse groups of citizens, both from an environmental justice perspective (Spirn 2005; Kotsila et al. 2022), and from a broader green space governance perspective (Fors et al. 2021; Rutt and Gulsrud 2016). 'Nature based thinking' has been proposed as a more open and inclusive framework in urban planning and development that calls for new ways to understand and articulate socio-ecological relationships with diverse groups of citizens (Randrup et al. 2020). While providing guidance for governance actors, 'nature-based thinking' remains relatively untested as a framing also of participatory practice with diverse groups of citizens.

Young people's participation in shaping public spaces has long been a topic in both grassroots- and academic work in urban planning and development (Frank 2006; Heinrich and Million 2016). It is commonly observed that the value young people ascribe to their everyday environments play at best a marginal role in planning and decision-making, (Percy-Smith 2015, p. 8 of 18). Especially 'older' young people are invisible in most urban planning contexts, as noted in Johansen's study (2017, p. 70). Typically, they appear in a deficit discourse, or are conflated with children (ibid.). This means that instead of being supported in taking up new roles and responsibilities, 'older' young people are seen as problematic elements in public space (ibid.), or as 'unfinished citizens' (Bourdieu 1978, p. 96). Thus, young people's participation provides an interesting case for how broader participatory approaches can strengthen the role of diverse groups of citizens.

Formal channels for youth participation in education, community-planning, and welfare service development have also been introduced over several decades; for example, in Europe (ibid.) and in the US (Cushing 2016; Derr et al. 2013; McKoy et al. 2021). In the US, a strong legacy has also been left by Karl Linn and other's (see e.g. Linn 2007; Hester 2006) who have pioneered 'hands-on' approaches by collaboratively designing and building community gardens and skateramps (Goodman 2019). While many examples can be found in Europe and North America, Roger Hart's emphatic report on children's participation brings attention to processes across the world where young people participate extensively in "the process of sharing decisions which affect one's life and the life of

the community in which one lives" (Hart 1992, p. 5). Hart's wide conception of young people's participation encourages us to look beyond more institutionalised and formal processes of participation into the various everyday life practices through which young people shape living environments and conditions.

Both theory and practice are needed to conceive of young people's activities as forms of citizenship that can be acknowledged and bolstered to garner new visions of sustainable transformations in urban living environments. As Schusler et al. (2003) argue, new forms of social learning between citizens and institutions are crucial to sustain practitioner's collaborative work around natural resources. Young people's participation has been shown to depend extensively on situating problem definitions, visions, and outputs in their lived experience (Percy-Smith 2015). This involves practitioners' approaching them as active citizens, already engaged in social contexts, rather than as users of specific services (ibid. p. 13 of 18). When allowed to take part in defining shared project goals, young people have been shown to be deeply engaged in changing immediate living environments and basic societal services (ibid., Tofteng and Bladt 2020), and to develop transformative visions for more sustainable forms of social and spatial organisation (Bladt and Percy-Smith 2021). Participatory approaches that favour experiential knowledge from everyday life, and integrate an action orientation, can help to elucidate the current struggles of young people's participation in urban landscape planning. The next section outlines how these understandings can expand the analytical vocabulary around participatory approaches with young people in relation to urban landscape planning.

1 Methodological lens: participatory approaches, lifeworld, and action

Engagements between groups of citizens and urban planners and landscape professionals can broaden the scope of relevant stakeholders (Reed et al. 2009), shape public policy (e.g. Arnstein 1969) and urban green spaces (Fors et al. 2021), and lead to various types of open co-governance arrangements (Arnouts and Arts 2012). However, as Arnstein (1969) and many others have pointedly argued, citizens in participatory processes rarely get to influence anything beyond the narrow parameters afforded them by the relevant authorities, and the processes often amount to manipulation or tokenism. Arnstein's ladder of participatory approaches has been widely applied in both youth participation contexts (Hart 1992; Botchwey et al. 2019) and in relation to the governance of urban open spaces (Fors et al. 2021). Fors et al. (ibid.) describe an overall typology of participatory approaches, and describe a spectrum ranging from more hierarchical- and closed, to more

open governance arrangements. This spectrum outlines the degree to which citizens have an actual chance of influencing planning visions or outcomes, and serves as a valuable starting point for understanding interactive participatory processes.

As an initial analytical frame, the spectrum outlines which types of approaches can be considered more interactive, i.e. involving, partnering with, or supporting young people in articulating their perspectives and in taking action in relation to urban landscapes. This spectrum is a starting point that helps us explore approaches that indicate a higher degree of interaction between young people and practitioners and scholars. We have replaced the final category of empowerment (5) in Fors et al. (2021) with a notion of 'transformative participation', as suggested by Bladt and Percy-Smith (2021). This shifts the attention from how well participants manage to engage with existing social- and governance systems they are embedded in, and to a methodological framing that incorporates attention to their lifeworlds and actions.

Also in the urban landscape field, Spirn (2005), for example, have argued for the need to foreground citizens' dynamic, experiential understandings of neighbourhoods. In her study of urban neighbourhoods, Spirn (2005, p. 396) poignantly notes: "… planners' and designers' maps are usually static snapshots of current conditions, narrowly framed". Spirn have instead demonstrated the power of engaging with young people's own jargon and metaphors to unveil otherwise hidden aspects of entwined spatial and sociopolitical landscapes in the city. In Spirns case (ibid. p. 403), the young people's articulation of their neighbourhood as 'the bottoms' became an organising phrase to integrate geographical, ecological, political, and cultural-historical understandings of the landscape. This helped articulate otherwise hidden environmental justice conflicts, and generate new planning visions (ibid.). In addition, human geographers have long emphasised the notion of the lifeworld as an antidote to abstract understandings of spaces. Thus, it has been applied as a conceptual tool to properly recognise the integrative, rather than compartmentalised, ways different preferences and problems in relation to outdoor environments appear outside professionalised practice (Seamon 1979). The concept of the 'lifeworld' brings attention to the lived, communicative understandings of citizens' daily practices as starting points for further understandings of shared reality (Svensson and Nielsen 2006, p. 36). This can help scholars and practitioners overcome theory–practice tensions (Forester 2020) in collaborative and democratic learning processes that address epistemic and power hierarchies (Svensson and Nielsen 2006; Fricker 2013).

Action research methodologies have underlined the importance of lifeworlds in participatory processes with young people, such as in youth participatory action research (Percy-Smith 2015), critical utopian action research (Nielsen

and Nielsen 2016; Tofteng and Bladt 2020), or transformative participation with young people (Bladt and Percy-Smith 2021). In his approach to youth participatory action research, Percy-Smith (2015, p. 3 of 18) utilises the notion of lifeworld to make a distinction between formal- and de facto participation. Formal participation refers to institution-led practices that typically look for input or citizens' preferences in relation to a specific planning question or development project. Established methods such as surveys, hearings, or focus groups can fulfil this role. However, formalised methods rarely succeed in capturing and addressing the integrated and diverse life conditions young people actually live under. Percy-Smith (ibid.), Jans (2004) and others (e.g. Tofteng and Bladt 2020) have turned attention to lived citizenship practices that emphasise social dimensions of participation in informal contexts, and capture: "the multifaceted ways in which young people participate more fully in everyday community spaces through their actions, choices, relationships, and contributions" (Percy-Smith 2015, p. 3 of 18). Young people's spatial practices, such as nondescript 'hanging out' have been shown as crucial in constructing a sense of citizenship (Gray and Manning 2022, p. 1401), but have also often been perceived as adverse by adults (ibid. p. 1408).

These practices could also be referred to as 'active citizenship practices', but as Kallio and Häkli (2011) point out, young people's active citizenship practices are often not recognised as such. They are either left unnoticed or constitute a problem to local practitioners, for example in municipalities. To overcome the prevalent lack of recognition, action researchers have developed methodologies to create free spaces for young people to share and relate experiences from everyday life and generate future visions (Tofteng and Bladt 2020; Bladt and Percy-Smith 2021). Percy-Smith points out the need for (2015, p. 8 of 18): "a situated social learning activity involving the negotiation of knowledge and meaning as well as an individual's own position in any given context of values and power". Only when this is established can participatory practice improve young people's chance to affect their own living environments. Methodological advancements in action research have shown efficacy and social learning arise in participatory processes that simultaneously work with citizens' lifeworlds and lead to concrete actions and interventions. They can reveal and challenge central power dynamics and real-world dilemmas and a sense of responsibility and citizenship around shared living environments (Egmose 2015; Tofteng and Bladt 2020; Bladt and Percy-Smith 2021). Concrete collaborative actions in participatory processes bring collective iterations of problems and visions into broader public discussions and can lead from informal spheres to wider social learning that builds and extends democratic citizenship practices (Percy-Smith 2015). Percy-Smith demonstrates (2015, p. 11 of 18) that a transformative participation necessarily goes beyond merely

allowing young people a voice in adult processes, and onto active collaborations with adult practitioners. Working with a notion of lifeworld that also links to social learning and action can thus lead to better outcomes and allow young people to derive meaning from the participatory process.

The possibilities of making concrete changes and instigating new forms of meetings between practitioners and young people have been shown to be particularly important to reaching marginalised groups in society. As Karl Linn's landscape architectural practice on neighbourhood commons demonstrated in the 1960s, hands-on approaches to designing and constructing spaces like urban gardens can help lift those who experience little access to formalised channels of decision-making and power to new recognition (Goodman 2019). As further noted in contemporary action research, when facing current and historical patterns of marginalisation, young people's participation is likely to depend on incremental changes (Bladt and Percy-Smith, p. 277). Such changes can amount to as little as an increased openness from scholars and practitioners about meeting places and times that correspond better to young people's daily lives, to providing food, to co-creating spaces in which to meet in the first place (ibid. pp. 280–281). Young people's actions and interventions in such processes have revealed complex relations around unequal access to care- and leisure time needs in young people's everyday environments and resulted in democratically organised meeting places for young people in several geographical contexts (Bladt and Percy-Smith 2021, pp. 281–285).

Hands-on approaches and action, when linked to young people's own understandings of problems and priorities, can thus lead to increased recognition of them as active citizens. This, in turn brings with it new possibilities for urban landscape practice to engage in fruitful dialogue and collaboration with young people. This perspective does not serve to distinguish which method is more efficacious in reaching young people. Rather, it considers which aspects of participation are needed to engage with diverse young people in collaborative action for transformative change. Transformative participatory processes grounded in an integrated understanding of lifeworld and action can interrogate how practitioners, academics, and other adult professionals might find ways to support citizens—active and maybe not so active—in diagnosing problems, pursuing visions, and taking action for transformative change (Nielsen and Nielsen 2016; Tofteng and Bladt 2020; Bladt and Percy-Smith 2021). A developed understanding of these dimensions could alleviate the concerns about tokenistic processes and top-down structures in participatory processes around urban landscapes, and activate new potentials to discern problems and articulate alternative visions between young citizens, scholars, and practitioners.

2 Aim and objectives

Earlier conceptual frameworks have focused on guiding adult practitioners, for example by providing handbooks for participatory processes (Driskell 2002), and outlining methods for engaging young people as experts in their own living environments (Bishop and Corkery 2017). Frank (2006) of empirical cases eloquently shows potential impacts of participation with young people, and aims to guide effective action. Frank's review (ibid. p. 366) advises planning practitioners to extensively adapt participatory processes to young people's life conditions by adopting 'youthful styles of working', while emphasising educational and capacity-building elements to empower young people (ibid. p. 366). It also reaffirms the need to address widespread tokenism (ibid. p. 370). Meanwhile, methodological developments in participation in urban landscapes have been conceptualised broadly in relation to urban open- or green spaces (Ambrose-Oji et al. 2011; Fors et al. 2021), and focused on building citizens' landscape literacy (Spirn 2005). The emerging examples from action research shows possibilities in going a step further. They evidence how young people, supported by scholars and practitioners, can develop alternative visions and change living environments (Percy-Smith 2015) and basic societal functions (Tofteng and Bladt 2020) in accordance with those visions. This shows the transformative potential that can arise from a combined methodological focus on lifeworlds and action that can reinvigorate relationships between practitioners and citizens and avoid tokenism (Bladt and Percy-Smith 2021).

We review a sample of literature using these developments in action research as a methodological lens for understanding key aspects of participatory approaches with young people in relation to urban landscape planning. In order to take stock of current developments in the field (also after Frank's review in 2006), the study aims firstly to investigate firstly (RQ1): What types of **participation approaches and processes** with young people in urban landscape planning have been described in the academic literature? The types of participatory approaches described and evaluated in current academic literature provides a reference frame for the ways practitioners engage with young people in relation to urban landscapes. Rather than strictly practical guidance, this paper aims to establish key conceptual focal points in young people's participation in urban landscapes. Thus, instead of devising specific methods for practitioners, we outline the implications of various types of methods in terms of facilitating and sustaining interaction with young people around urban landscape planning.

Secondly, this study investigates (RQ2): how do existing approaches to participation allow young people to articulate problems and visions for the urban landscape in the context

of their experiential **lifeworld**? We therefore consider the ways young people have been asked to provide input in relation to their living environments (and beyond), and to what extent they have been asked to shape the problem definitions, processes, and outcomes to be more meaningful in relation to their lived realities. The analysis aims to help scholars and practitioners involved in participatory practice related to urban landscapes to conceptualise engagements with young people and practically bridge formalised knowledge and frameworks for planning and development to young citizens' experiential knowledge (Table 1).

Finally, we investigate (RQ3): how do these approaches provide openings for concrete **actions and interventions** related to planning processes and the urban landscape? An action orientation allows participatory processes to show potentials arising from engagement with real-world problems, working towards desired futures, and for new relationships between citizens and practitioners to emerge in the process. As a final analytical step, we investigate whether the participatory approaches lead to concrete actions or interventions in processes pertaining to the urban landscapes of the young people involved. The review thus aims to show broad, methodological pathways to incorporate lifeworld and action into planning urban landscape transformation with young people.

3 Reviewing academic literature on young people's participation in urban landscapes

3.1 Types of approaches described in the academic literature

This review outlines how the literature sample was systematically collected (Randolph 2019), and examined more closely in a scoping review (Munn et al. 2018). We conducted a range of parallel online searches through academic databases (Scopus, Web of Science) for relevant studies, in order to distinguish prevalent types of participatory approaches. We searched broadly on young people's participation in urban landscapes and environments, and included specific terminology related to emerging frames for sustainable socio-ecological dynamics such as urban ecosystem services, green infrastructure, or nature-based solutions. We decided to narrow this down to three Boolean searches in Scopus (Table 2), as several of the initial searches yielded very few hits, or very large quantities of irrelevant hits. A simple search (1) of the most basic elements under scrutiny generated some relevant hits. As the number of studies was deemed insufficient, we expanded the search parameters with added terms (search 2), and finally also included a search for studies that did not necessarily deal explicitly with landscape, but focused on change and transformative processes

Table 1 Young people's participatory spectrum, roughly referring to existing frameworks inspired by Arnstein's ladder (Hart 1992; Botchwey et al. 2019; Ambrose-Oji et al. 2011; Fors et al. 2021)

Observation/information (1)	Consultation (2)	Involvement (3)	Partnership (4)	Transformative participation (5)
Considers whether young people are passively studied, observed, or merely informed in relation to planning or development processes	Considers whether young people have a chance to provide viewpoints, preferences etc. in relation to a planning or development process	Considers whether young people are involved in sharing decisions related to participatory process, plans or outcomes	Considers whether young people and practitioners engage in active collaborations where young people can initiate and influence process, plans, and outcomes	Considers whether process supports young people in finding possibilities to effectuate societal change based on their own-problem definitions and visions for the urban landscape

Table 2 Search terms

Search terms	Urban context	Frame for under-standing socio-ecological change	Demographic group	Process	Limitations to subject areas:
Search 1	urban	landscape	young AND people	planning	social science (SOCI), environmental science (ENVI), arts and humanities (ARTS), psychology (PSYC), agricultural studies (AGRI)
Search 2	urban OR cit* OR suburb*	landscape	youth OR young OR adolescents OR teenagers	participat* OR engage* OR action AND research OR involve* OR inclusion OR perspective*	
Search 3	urban	transition OR change OR transformation OR sustainability	youth OR (young AND people)	planning OR participation	

Asterisk refers to truncated use of word i.e. unknown letters that secures that the result contains other relevant variations of the word

and urban socio-ecological sustainability (3). While many studies showed up in more than one search, each of the three helped identify relevant studies included in the review.

We added a range of limitations to delineate fields related to the urban landscape and change in an integrated sense, and avoid hits from, for example purely ecological or medical sciences, where 'participation' is less likely to describe the social scientific aspects we interrogate. Reviewing titles and abstracts from the three searches, we decided to filter out hits that did not follow the central criteria for relevance: Being about young people's participation or inclusion in planning or changing the urban landscape. Large amounts of this literature only had vague connections to urban landscapes and planning. Another step involved excluding studies primarily focused on younger children. Figure 1 illustrates how we generated the literature sample.

The search for approaches (RQ1) is not meant to be exhaustive, but the scoping searches leading to the 44 studies included in the review provide a sufficient sample of an emerging topic. Furthermore, it generated a range of studies that were deemed relevant for our extended review and the conceptual, methodological lens detailed below.

A first analysis[1] of the sampled literature included background information such as:

– Geographical context of where the described participatory processes take place
– Age groups, and how the studies identify and signify specific age groups
– Number of participants in the processes
– Participatory approach; processes researchers/practitioners use to engage with young people
– Temporal perspective; if the process reflects a shorter or longer time span of engagement

– Study scale; if the process relates to an urban landscape in the perspective of a building block, neighbourhood, city, region, or nation.

All the categorised literature that described participatory approaches (44 studies) with young people were organised along the five types of approaches (Table 1). Methods/case descriptions were analysed to determine which type of participatory process was in question. The key distinctions here were the degree to which young people were involved in, and had a say over, basic aspects such as initiative, planning, design, and
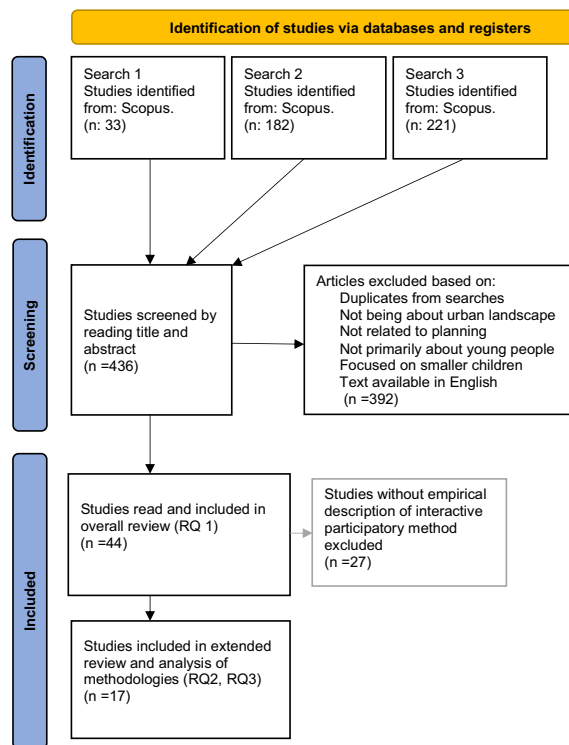
Fig. 1 Diagram of the literature search process

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[1] See Appendix A.

output (see also Fors et al. 2021 spectrum for a more functionally oriented division of processual phases in relation to participation in green space governance). The more passive forms of participation—for example in observations, surveys, and structured interviews where adult professionals maintained control over both problem definitions and visions for the urban landscape—were labelled accordingly (e.g. 'observation' or 'consultation'). At the more interactive end of the spectrum, studies might involve young people in defining key aspects of the study (involvement) or in sharing decision-making power over process and outcomes (partnership).

3.2 Lifeworld and action in the literature

We divided the analytical phase into two separate steps in order to distinguish approaches that brought young people's experiential lifeworld to the forefront of the participatory process (RQ2) and showed pathways for action (RQ3, see also Fig. 1). The first step aimed to provide an overview over participatory approaches. The second paid attention to methodologies and case descriptions in the 17 identified studies describing longer-term, qualitative approaches that allowed considerable interaction between young people and scholars and practitioners. This second part of the analysis looked more closely at two aspects of the studies falling into the more interactive categories (involvement, partnership, transformative participation). Special attention was given to descriptions where the investigative and analytical processes were driven by participants' experiential knowledge and therefore facilitated their working with their own problem definitions and understandings of the urban landscape. We also looked for openings in existing approaches that allowed young people to take action and intervene in relation to the urban landscape. This was meant to distinguish processes that describe young people having increased authority to influence decisions or take action. The analysis therefore emphasises methodologies that allow these processes to unfold within young people's problem definitions and visions while also engaging with—and constructively challenging—existing practice around urban landscape planning. This involved looking through process descriptions and results to see whether there were explicit pathways encouraging young people to take action related to a lifeworld-grounded analysis of the urban landscape.

4 Methodological advancements in young people's participation in urban landscapes

This section presents our review of current approaches described in the 44 included studies, and goes on to analyse how specific methodological advancements generate

lifeworld- and action perspectives for young people in urban landscapes in the 17 interactive approaches (involvement and partnership types of approaches, according to the participatory spectrum).

4.1 Types of participatory approaches

In order to address what types of participatory approaches appeared in the literature sample (RQ1), we categorised the processes described in the 44 studies by both the listed overall parameters, and the degree of interaction suggested in our analytical framework (Appendix A). We used the five categories (see Fig. 2) loosely adapted from the spectrum of participation in urban green space governance and the engagement of young people. However, for a large number of studies, such a typology was not applicable. Either this was due to a mostly conceptual focus on policies without detailing specific participatory approaches, or the studies did not contain substantial descriptions of interactive processes between young people and scholars and practitioners. An example of this is Freeman and Riordan (2002) who discuss the ambiguities of working with skaters in urban settings, who often utilise public spaces differently from what was intended by practitioners' planning and design. They show how this poses challenges and opportunities in existing planning approaches, but does not include any forms of specific engagement with actual young people. Due to the specific methodological focus in this study, these studies were not included in the review of interactive approaches, but were read and integrated into the framework and discussion, where applicable.

Of the 30 remaining studies, 13 could be described as having a lower level of interaction with young people, who were consulted as respondents to surveys or interviews (11 studies), or appeared mainly to be observed (either directly or via social media), or informed about urban developments (2 studies). The number of young participants (see Appendix A) in the processes varied widely, ranging from 5 (Cilauro
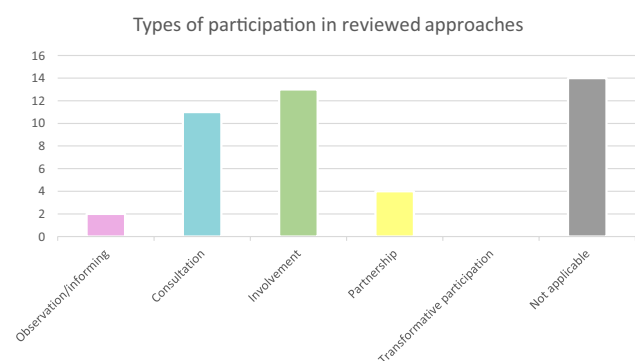

Fig. 2 Numbers of studies exemplifying types of participatory processes with young people in the landscape planning literature

2015) to 2000 subjects (Woolley 2000). Several studies described tiered approaches; for example, starting out with larger scale surveys (170–2000 respondents) followed up by interviews, focus groups, or other interactive formats with a smaller number (10–24) of participants (e.g. Derr et al. 2013; Drummond 2007; Kamete 2006).

The approaches categorised as involvement or partnership typically involved fewer (5–30) young people, for example in focus groups or workshop activities. The larger numbers of young people included (over 40 young people) was found for studies carrying out observations, interviews, digital mappings, and surveys.

Seventeen of the studies describe substantial engagement with young people in various parts of the participatory process and provide at least some chance for them to freely explore the topic, or influence the process or outcomes. These approaches[2] included classical research methods such as surveys, interviews, focus groups, walking tours, or photo-elicitation, and followed these up with public exhibits or discussions. In Kettunen's recent study (2021), for example a mix between observations and in-depth interviews provided a rich ethnography that documented diverse citizenship practices of young people. In addition to the observation of young people during school strikes, the semi-structured interviews in informal settings led young people to reflect freely on their experiences and motivations for participating—or not—in environmental activism. This helped practitioners address young people as political and environmental actors, but offered no distinct way for further involvement for the young people participating in the study.

Several approaches had multiple stages and included participatory planning or co-design, planning games, PPGIS, public participatory art, or community mappings. These frequently included creative methods such as drawing, using picture cards, or photo-elicitation, sometimes combined with more classical research methods such as interviews and focus groups (e.g. Davison and Russell 2017, Strachan 2018, Osborne et al. 2017). These managed to involve young people further by allowing young people's own spatial understandings to be developed, considering differences in social capital, and for institutional attention and resources to be redirected in dialogue with the young participants. Some of the studies described open processes where young people could influence problem definitions, goals, and aims, and be considered partners in the development of processes, plans, and/or outcomes. Two of these applied creative methods—a writing workshop and public participatory artwork (Breitbart 1995; Hill et al. 2018)—and two consisted of long-term, mixed method participatory planning and design processes (Derr et al. 2013; Osborne et al. 2017).

The scale of involvement or partnership approaches in the reviewed studies varied between being limited to the neighbourhood, planning at the city-level, or covering larger urban areas. Only one study (Benze and Walter 2016) described a combined process that related explicitly to both neighbourhood and city-level planning. In all cases except one (Cilauro 2015), researchers and young people were the key actors (see also Appendix A + B). Researchers typically initiated the process, and in some cases connected to existing processes led by larger institutions such as municipalities. In most cases, other actors like local grassroots organisations, artists, schools, university students, or municipal departments played a role in the participatory processes. Local youth organisations or special interest groups such as art collectives served as partners in a range of studies, conducting environmental justice education (Santos et al. 2019), initiating a writers club (Hill et al. 2018), or creating ethnographies of young people's landscapes (van Ingen et al. 2018). Schools were common partners in both more structured and creative approaches among researchers and young people, and often collaborated in processes with an educational focus with more adult leadership. Local municipalities were actively involved in facilitating some approaches. The latter cases most explicitly related to the formal planning system, such as the planning games described by Benze and Walter (2016), and the participatory planning in Boulder (Derr et al. 2013; Derr and Kovács 2017). The majority of processes described the involvement of several actors, speaking to the broad range of actors potentially interested in young people's participation in the urban landscape.

The studies containing descriptions of youth participation in urban landscape planning are more prevalent in North America, Europe, and Australia (see Fig. 3).

The studies represented both small and large cities, but larger urban areas such as state or country capitals were more common than smaller-sized cities, and the result accordingly becomes more indicative of approaches taken in larger urban areas and in more economically privileged countries.

It also became clear that the term 'youth', or 'young people', even in this limited sample, is by no means homogenous. Age groups are mainly reported either as a specific age range (that varies) or with a term. The terms used for the participants included: children and young people (2); children and youth (1); young people (5); youth (2); young activists (1); school-aged (1); teenagers (2); young adults (2); and adolescents (1). Two of the studies did not define the starting age for the group (under 18 (Rigolon 2017) and up to 21 (Cushing 2016)). Overall, 'youth' and 'young people' included age ranges between 8 and 25 years, as shown in Fig. 4. This spans somewhat wider than the primary age range under concern here, but is still included due to the overlaps in age spans for the various approaches with the

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[2] See Appendix for overview-table.

Fig. 3 Location of studies: Blue markers for single cases, red markers for multiple relating to the same urban area/state/region

'older young people' that are often invisible in planning (Johansen 2016). The results of our analysis do not offer a clear picture of how different approaches vary among age ranges. Everything from design, mappings, and to surveys seem to span most age ranges included in the studies. A slight preponderance of the lower age ranges does seem to occur in consultation methodologies, while interactive approaches including action perspectives span all age ranges (see Appendix A).

Contextual factors like varying age-span, poor geographical distribution, number of participants, and time and resource investment from various actors complicate a succinct analysis. Specific methods also span different types of approaches. Focus groups and educational efforts, for example appeared in some cases to be primarily consultation approaches (e.g. Derr 2018; Passon et al. 2008) and in others led to further involvement (e.g. Santos et al. 2019; Šakaja and Višnić 2011). However, it is evident that consultation and involvement processes involving multiple actors are most prevalent in the sampled cases. The methods that facilitate consultation, such as interviews and PPGIS mappings established initial contact and provided baseline information for further involvement e.g. in creating more extensive youth ethnographies or discussing issues pertaining to the urban landscape in focus groups. Despite the contextual complications, these patterns in methodological developments made it possible to pinpoint the 17 studies that described interactive approaches.

4.2 Articulating young people's lifeworld perspective on the urban landscape

All but one of the 17 more interactive studies described some openings for participants to develop understandings of the urban landscape on their own terms, i.e. how each approach allowed young people to articulate their experiential lifeworld (RQ2). A number of studies accentuated

lifeworlds through either the openness or diversity of the methods applied. Several studies took the young people's spatial practices as a starting point for developing lifeworld perspectives on the urban landscape, but also tended to leave the outputs of the processes in the hands of adult professionals (Robertson and Burston 2015; Šakaja and Višnić 2011, van Ingen et al. 2018). Other studies show how processes facilitated by artwork (Breitbart 1995), writing (Hill et al. 2018), and other creative outputs (e.g. Derr et al. 2013; Drummond 2007) led the young participants to discuss the urban landscape in their own terms. Examples of an experiential lifeworld articulation occurred in processes ranging from consultation to partnership, depending on the level of control retained by adult professionals, educators, etc. Derr et al. (2013[3]) describes one large-scale project applying a very wide set of both classical and more creative and interactive approaches. They integrated methods into school curricula, built on young people's informal everyday practices, and allowed them to express a wide scope of experiences, perceptions, and priorities in multiple ways; through artwork, storeys, photos, youth mappings, and community assessments. Breitbart's ethnography (1995) moved from involvement to an actual partnership as the young participants increasingly broke with the adult-defined sequence of events by suggesting research activities that allowed new problem definitions to appear. This created 'a space for mutual learning' and ultimately affected local authorities' decision-making and changed public perceptions about their neighbourhoods (Breitbart 1995, p. 39).

In five of the studies (Benze and Walter 2016; Derr and Kovács 2017; Drummond 2007; Osborne et al. 2017; Robertson and Burston 2015), there were some openings to develop a lifeworld perspective. Follow-up interviews, focus groups, and critical lines of questioning allowed young people to insert landscape questions into broader understandings of their lives, and to express priorities and ambiguities in relation to the urban landscape (e.g. van Ingen et al. 2018, Strachan 2018). However, several of these studies described adult-led methodologies that followed classical research-designs and applied methods like questionnaires and focus groups that allowed young people little say over processes and outcomes. Processes centred around games and artwork (e.g. Cilauro 2015; Benze and Walter 2016; Drummond 2007) also provided pathways for young people to use their skills and experiences to develop new and independent narratives, critiques, and visions for the urban landscape that in some cases contrasted those of adult professionals (Breitbart 1995).

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[3] Derr et al. (2013) and Derr and Kovács' study (2017) describes participatory processes related to the same project, but the former describes the overall project, and the latter a subset of methodologies for neighbourhood planning (mostly with children).

In Breitbart's study, the moment of lifeworld expression and mutual learning occurred when the young participants decided a new course for the walking tour. They traversed a fence (along with the researchers), and while technically trespassing, connected the initial critique of there being very few things to do in the neighbourhood with the landscape. Accessing the barred-off riverfront provided a moment of fun, and nourished a curiosity about the local river and other life forms (pondering about eels, rocks, etc.) that had never been mentioned in initial discussions (Breitbart 1995, p. 39). At this point, the researchers got an image of an urban landscape that, for the young participants, is lacking in amenities and basic access to alluring elements like the local river. They are also afforded with an integrated understanding of how curiosity about the local environment is tied to the ability to engage in playful activities within the local landscape.

Thus, a lifeworld starts to appear (also for the researchers) through the open process that allows diverse factors like the high temperatures on the day of the tour, prior discussions, and spontaneous ideas to integrate. Ultimately, this process along with the creative work with aesthetic forms of expression laid the ground for the young participants becoming partners with a strong voice and sense of authority beyond the pre-defined project. They ended up discussing with local officials, influenced educational curricula, and challenged policy processes related to their own living environments (ibid.). This provides an example of how the ability to influence the research process and freely make connections between topics is crucial to providing full and nuanced accounts of young people's relationships with the urban landscape. In other processes, young participants were awarded substantial decision-making power, but this related exclusively to concepts and categories developed by adults and professional organisations in pre-existing educational material, such as pre-defined lists of preferences or interventions (e.g. Derr and Kovács 2017; Santos et al. 2019).

While the effort to award decision-making power to young people is democratically laudable, the ability to include a lifeworld account that moves beyond pre-defined categories and builds on their experience and active collaboration substantiates the contextualised relationships between young people and their urban landscapes. Overall, the 17 studies showed diverse and robust ways of facilitating young people's lifeworld perspectives, but also shortcomings in moving from the articulation of these perspectives to young people having a substantial say over processes and outcomes.

4.3 Action orientation with young people in urban landscape participation

A few approaches showed openings for young people to take concrete action or make interventions in relation to the urban landscape (RQ3). Two of the studies clearly described young people initiating actions and spatial interventions influencing decision-making in relation to the urban landscape. Derr et al. (2013) describes the progression from initial explorations and analyses to concrete actions with public artwork, youth training, political campaigning, and facilitated discussions with the city-elected officials and administrators. The research design in Derr et al.'s study included action groups for the young participants as a key element, and in this case, both spatial changes and changes in relationships between young people and local authorities came about because of the young people's critiques and activities. The sheer amount and diversity of methods applied secured a situated social learning that brought different groups together. In consequence, policies as well as school curricula were adapted in dialogue with young people's concerns and wishes. The young people's particular concern for homeless people's status in the streets and parks was lifted into the city's overall goals, evidencing the poignant role of young people in combining spatial issues with social justice (Derr et al. 2013, p. 501). In evaluations of the work of the action groups, four years after the project end, the participants and researchers concluded that a key outcome was the participants' sense of being needed and valued in providing change. While the tangible changes showed limited impact in urban policies, they did serve to diversify the range of voices and issues in public discussions dominated by older adults (Derr et al. 2013, p. 502). Meanwhile, Osborne et al. (2017) showed young people's interventions in policy processes related to urban inequality by working actively with notions of diverse social capital in co-design processes. This process showed a change in power dynamics in local policy, but the change had fewer tangible connections to outcomes in the urban landscape.

In the case of Santos et al.'s 2019 study, young people were invited to an after school science programme, beginning with education in environmental justice and resulting in the construction of the young people's chosen intervention—establishing a community garden. While the choice of content in this intervention was more strongly facilitated by adult professionals, this was also one of few studies that described a concrete landscape change and intervention decided by young people. Some studies described processes where young people developed narratives and clarified their identities in relation to the urban landscape (e.g. Hill et al. 2018; Breitbart 1995). Others described community evaluations that protested the lack of influence of young citizens on their own living environments (Kamete 2006; Laughlin and Johnson 2011; Osborne et al. 2017).

The writers' club showed promise in encouraging young people to put into writing individual narratives about a sense of self, connected to their mixed feelings about the neighbourhood, and onwards to community programmes

for neighbourhood revitalization (Hill et al. 2018, p. 160). The few efforts to encourage action also allowed for a wider political discussion about structural obstacles to arise, albeit without further action from the young participants. The action orientations in this sample show relatively few pathways to young people's actions and interventions, and these appeared in creative and artistic actions. Other examples included more direct discursive intervention in planning and policy processes, but only in one case did they directly describe changes in the urban environment as a result of a facilitated effort to articulate young participants' lifeworlds (Derr et al. 2013). Overall, the 17 studies show only a sporadic focus on actions and intervention as an integral part of young people's participation in the urban landscape.

5 Nuancing interactive approaches to young people's participation: literacy, free space, and pathways to transformation

The approaches in our literature review show a field where less-interactive participatory methodologies prevail. When facing new demands to include young people, this leaves urban landscape practitioners' with little support from scholarship to overcome the challenges of tokenistic participation and little real-world impact. The overview (Appendix A) shows a majority of less-interactive or conceptual studies, which testifies to the limited, established practices for including young people in a strongly professionally driven field and discourse. The prevalence of approaches that observe or consult young people might be indicative of the less flexible governance arrangements that often hamper more inclusive processes, as for example those described by Fors et al. (2021) in relation to urban green spaces. This points to the urgent need for methodological developments, especially to avoid the gentrifying effects of green urban planning- and developments (Anguelovski et al. 2018) that push marginalised groups further away from participating in societal developments.

The relatively high degree of conceptual and theoretical works, along with the skewed geographical distribution of studies appearing in the search speaks to the lack of widely dissipated methodologies, and of a prevailing narrowness of participatory vision in the urban landscape field. This resonates with Hart's critique (1992) of a bias towards affluent countries' governance and organisation around participatory practice, and consistent lack of recognition of the myriad of ways in which young people participate in shaping landscapes in less affluent countries. It also resonates with Mercado et al.'s calls (2024) for more open approaches to urban landscape governance that integrate alternative forms of knowledge, and sociocultural forms of organisation in the global south. The methodological

lens outlined here does not solve this bias, but does offer a frame for conceptualising participatory efforts with young people in ways that might reach a wider range of citizenship practices than is currently appearing in the literature. This could lead to increased recognition of young people's citizenship status, and ultimately to landscapes that provide wellbeing for citizens at the margins of current public discussions and decision-making.

Most of the reviewed interactive approaches showed meaningful ways to integrate lifeworld in creating new understandings and informing practice around the urban landscape. Some methodologies, like community mappings (Laughlin and Johnson 2011), or certain participatory planning efforts (Derr et al. 2013), offered ways of working with young people's experiential knowledge and alternative visions in land-use planning, although further implementation of their ideas and visions fell short in formalised processes (ibid.). In several processes, young people influenced aesthetic outputs. Working with young people in creating public art or other spatial interventions seem like promising starting points, but also shy away from allowing engagement in the complexity of basic land-use discussions in cities and neighbourhoods. Along this line, several of the reviewed cases demonstrated a problem of merely 'giving voice', as pointed out by Percy-Smith (2015). Without active collaboration, young people's perspectives falter and the up- and out-scaling remains firmly seated with adult professionals, with the risk of losing the critical and participatory edge that engagement with citizens' lifeworld can provide (Svensson and Nielsen 2006). An action orientation in participatory urban landscape planning helps address the tension between theory and practice that often lies in the complex and fluid settings in which practitioners find themselves, with considerably diverging and ever-changing imperatives from political as well as environmental factors (Forester 2020). In line with Forester's call for participatory improvisation to unique and changing settings (ibid. p. 118), Egmose (2015) eloquently shows how facilitating a free space for citizens to take action in their urban environment can provide practitioners a free space of their own to explore, and redefine their internal and external relationships to better meet the new urban challenges.

However, action-oriented approaches were rare in our reviewed literature, and adult professionals like researchers or practitioners from larger organisations typically defined and steered the actions and interventions. This can also be considered an inherent danger of a more exclusive focus on the processual benefits of hands-on approaches, with little prior investigation of young people's lifeworlds. Co-designing and constructing a community garden or a skateramp might have many benefits for the landscape and the people involved, but do not necessarily offer pathways for deliberating broader questions of what life is like for diverse young people in

urban landscapes. This would seem a prerequisite to unfold the transformative potential of bridging lifeworlds and action in processes of mutual learning between citizens and institutions. Looking across the reviewed approaches, it is evident that contemporary participatory processes tend to initiate with educational components where young people 'learn to participate'. Spirn (2005) has shown the multitude of advantages of building up young people's 'landscape literacy' to overcome conventional obstacles to participation, and work for environmental justice. While building literacy offers many advantages in emerging urban sustainability frameworks, the pre-defined frames of problem iterations and answers can limit the possibilities to engage with citizens' lifeworlds and experientially grounded, integrated understandings (Kiss et al. 2022).

This concern also appears in transformative visions of participation, where the educational relationship is turned on its head. The crux of this methodological lens is to start participatory processes with young people's own actions and iterations, and encourage scholars and practitioners to learn from the young participants' articulated experience of lived, urban landscapes. While 'landscape literacy' seems crucial to build local understandings of landscape, a new participatory ethos might entail scholars and practitioners developing a young people's 'literacy' by engaging humbly with their lifeworld as horizon for change, and courageously with their citizenship practices and actions in new collaborations. This would further substantiate the legacy of progressive landscape architects such as Karl Linn, to truly work *with* communities and subordinating professionalism to the lifeworlds of diverse groups in new forms of practice (Goodman 2019, p. 811). The reviewed approaches show some promise, and some headway to be made in contemporary practice around young people's participation. Figure 5 offers a tentative introduction to ways of thinking about aspects of lifeworld and action in participatory processes by organising existing approaches along two axes.

This is not meant as a succinct mapping of approaches, but as a generative model that can inspire future approaches. It reveals how similar approaches can have different implications. Public participatory art can involve young people without giving them substantial say over the output, or, surveys and focus groups can follow a more or less predetermined course and range of potential answers. Similarly, a relatively small effort like a writing club can eventually lead to substantial action and enable young people to articulate their own perspectives and challenge policy agendas. The 17 studies describing more interactive approaches (involvement: green labels, and partnership: blue labels, see also Appendix 1) can thus be loosely mapped as below. Emphasising these dimensions can hopefully inspire future endeavours to build an action-focus onto processes that emphasise young people's lived experience through the use of creative mappings or other related methods. While none of the approaches reviewed constitutes transformative participation, this should not discourage others from exploring the transformative potential that lies in moving up these axes. If anything, it should emphasise the need for such aspirations, and be a recognition of the structural obstacles to 'participation' that meaningfully link lifeworlds to higher levels of democratic decision-making and governance of urban landscapes (Fig. 5).

Participatory processes in the urban landscape has the potential to scale localised, community driven efforts up and out (Buijs et al. 2016, 2018). This potential is hampered by recurring dangers of projectification of urban change (Torrens and Wirth 2021), such as lacking structures for organisational learning uptake and long-term visions in otherwise meaningful participatory processes. The move towards an increased acknowledgement and collaboration with young people's citizenship practices offers a frame to view participation as an ongoing learning process for organisations involved in urban landscapes, such as municipal planners. Perhaps best exemplified in the Growing Up Boulder project

Fig. 4 Age of participants in studies that specified a range; see also Appendix A

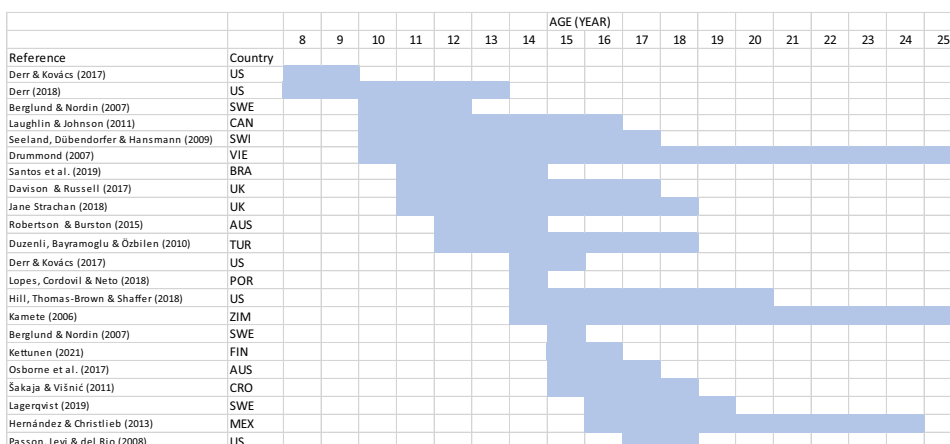| Reference	Country	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Derr & Kovács (2017)	US	█	█	█	█														
Derr (2018)	US			█	█	█													
Berglund & Nordin (2007)	SWE				█	█	█												
Laughlin & Johnson (2011)	CAN			█	█	█	█												
Seeland, Dübendorfer & Hansmann (2009)	SWI				█	█	█	█	█	█	█								
Drummond (2007)	VIE			█	█	█													
Santos et al. (2019)	BRA						█	█	█	█									
Davison & Russell (2017)	UK				█	█	█												
Jane Strachan (2018)	UK				█	█	█	█											
Robertson & Burston (2015)	AUS			█	█	█													
Duzenli, Bayramoglu & Özbilen (2010)	TUR							█	█	█	█	█							
Derr & Kovács (2017)	US					█	█	█	█										
Lopes, Cordovil & Neto (2018)	POR			█	█	█	█	█	█										
Hill, Thomas-Brown & Shaffer (2018)	US							█	█	█									
Kamete (2006)	ZIM								█	█	█	█	█	█	█	█	█	█	
Berglund & Nordin (2007)	SWE								█	█	█	█	█						
Kettunen (2021)	FIN							█	█	█	█								
Osborne et al. (2017)	AUS								█	█	█	█							
Šakaja & Višnić (2011)	CRO								█	█	█	█							
Lagerqvist (2019)	SWE								█	█	█	█	█						
Hernández & Christlieb (2013)	MEX								█	█	█	█	█	█	█	█	█		
Passon, Levi & del Rio (2008)	US						█	█	█	█	█								

Fig. 5 Mapping of interactive approaches (involvement: green labels, and partnership: blue labels, see also Appendix 1) with added lifeworld dimension to the participatory spectrum
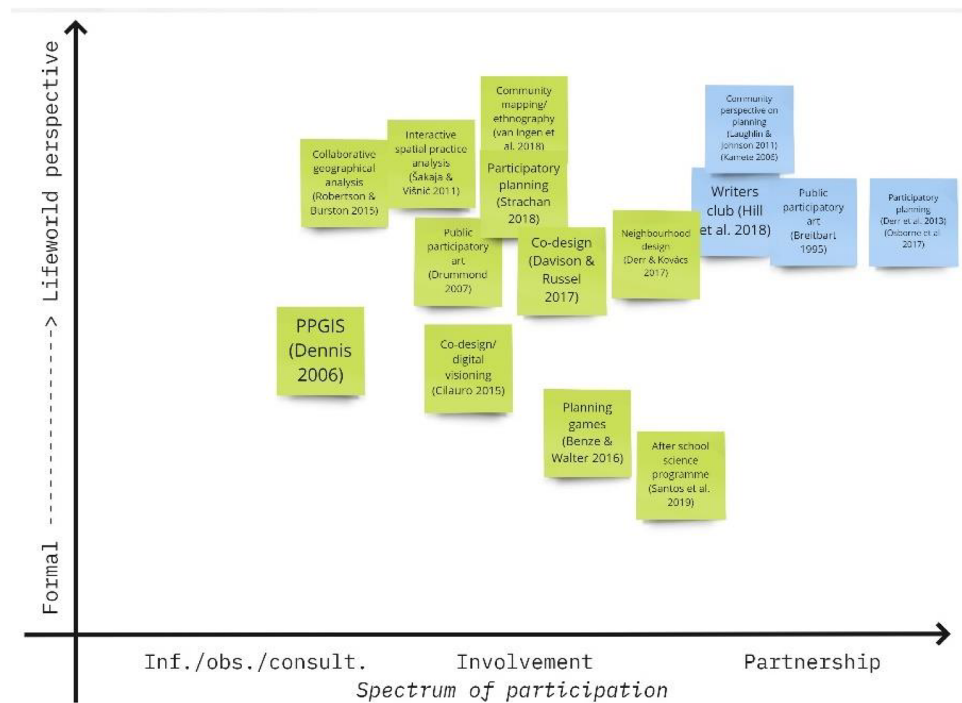
(Derr et al. 2013), which has been gradually worked into public and private institutions over several decades. Arguably, such engagement requires substantial time investments from multiple stakeholders, and its tangible impacts on landscape planning can be ephemeral (ibid. p. 501). However, the relationships built between practice and citizens, not least driven by the action groups based on the initial analyses of participants' lifeworlds, have at times offered pathways for underrepresented groups, and especially for young people, to effect change. They have been shown to have both a meaningful voice and tangible impacts in urban landscapes, and perhaps more crucially, create a culture of inclusivity around landscape planning to meet the challenges of the future in more democratic and just ways.

As recent studies have shown in the case of NBS, even advanced participatory methods tend to be subsumed in instrumental governance processes (Kiss et al. 2022), which bar the transformative potential that a deeper inscription of our cities into nature can have (Remme and Haarstad 2022). Our review of young people's participation in relation to broadly framed urban landscape agendas shows some promise. It also shows much work ahead for integrating the headway made into broader participatory agendas in building sustainable cities, as emphasised by both the European Landscape Convention (European Commission 2000) and the UN (SDG 11.7). A plethora of historical and emerging examples gives concrete guidance to practitioners deliberating about methods for young people's participation (Hörschelmann et al. 2019; Frank 2006). With this discussion, we hope to move from collating examples to building broad and

consistent platforms that strive to always include lifeworld and action orientations in young people's participation. As we have shown, a conceptual lens including these aspects can provide critical nuance, and demonstrate the use of theoretical concepts in practice and vice versa, to work towards a democratic socio-ecological practice with young people in urban landscapes.

6 Advances in current practice and new orientations

Our review deliberates on the existing pathways (and challenges) for young people's informal citizenship practices to enter into dialogue with urban landscape practitioners. The 44 reviewed studies showed well-established tools for more passive forms of engagement in consultations, observations, and other, less-interactive forms of involvement. This, however, does not allow young people a substantial say over problem definitions, visions, and outcomes. The varying contextual factors appearing in the reviewed studies, however, complicate a succinct analysis of the overall sample. More acutely, the 17 studies labelled as 'interactive' showed well-grounded and diverse methods for engaging with young people's lifeworlds in urban landscape practice. The sporadic focus on young people's actions and interventions shows limited possibilities for young people's lifeworld perspectives to actually be developed beyond a project basis, or in tokenistic forms of giving voice that has no further consequence. This hampers

socio-ecological practitioners engaging with young people around urban landscapes. Thus, for young people to play a substantial role in urban transformations towards increased sustainability, practitioners need a continued focus on diverse, creative methods, and to experiment with new forms of action orientation grounded in young people's lifeworlds.

Appendix A

See Table 3.

Table 3 Overall sample

Interactive approach	Spectrum of participation	Number of participants	Age-group	Location	Reference
Participatory planning, multiple parallel processes	Partnership (4)	Multiple cases	'Children and youth'	Boulder, USA	Derr et al. (2013)
Writers club, interviews, focus groups, writing workshops	Partnership (4)	14	14–20 year olds	Detroit, USA	Hill et al. (2018)
Participatory public art	Partnership (4)	30	Teenagers	Holyoke, Massachusets, USA	Breitbart (1995)
Co-design, mixed methods	Partnership (4)	Various, 7 in extended interactive process	15–17 year olds	Sunshine Coast, Australia	Osborne et al. (2017)
Community assessment, semi-structured interviews, focus group, follow-up critique	Involvement (3)	104	14–25 year olds	Harare, Zimbabwe	Kamete (2006)
After school science programme, mixed methods	Involvement (3)	23	11–14 year olds	Sao Paolo, Brazil	Santos et al. (2019)
Community mapping/ethnography, mixed methods, for example walking interviews, follow-up critique	Involvement (3)	14	'Young people'	Redcrest, Canada	van Ingen et al. (2018)
Community assessment, mixed methods, follow-up critique	Involvement (3)	12	10–16 year olds	Toronto, Canada	Laughlin and Johnson(2011)
Co-design, co-programming	Involvement (3)	5 (in focus group)	'School-age'	Melbourne, Australia	Cilauro (2015)
Survey, focus groups, follow-up	Involvement (3)	Approx. 24 in focus groups (645 in initial survey)	12–14 year olds	Melbourne, Australia	Robertson and Burston(2015)
Survey, focus groups, follow-up	Involvement (3)	10 in focus groups (170 in initial survey)	15–18 year olds	Karlovac, Croatia	Šakaja and Višnić (2011)
GIS Mapping	Involvement (3)	6 groups of 4–6	'Youth'	Harrisburg, Pennsylvania, USA	Dennis (2006)
Neighbourhood design	Involvement (3)	16	8–9, and 14–15 years olds	Boulder, USA	Derr and Kovács (2017)
Participatory public art, youth-survey, workshop and art exhibit	Involvement (3)	250	10–25 year olds	Hanoi, Vietnam	Drummond (2007)
Participatory planning, mixed methods incl.: mappings, picture cards, diamond ranking	Involvement (3)	Initial survey of 55 of which some were included in further work	11–18	Newcastle, UK	Strachan (2018)
Planning games	Involvement (3)	Not specified	No specific age-group	Berlin, Germany	Benze and Walter (2016)
Co-design, workshops, mixed creative methods including drawing, photo-elicitation, etc.	Involvement (3)	106	11–14 year olds	Belfast, UK	Davison and Russell, (2017)
Survey	Consultation (2)	480	12–18 year olds	Trabzon Province, Turkey	Duzenli et al. (2010)
Environmental education	Consultation (2)	Not stated	8–13 years	Boulder, USA	Derr (2018)
Mixed methods/conceptual study, quantitative/qualitative, observations, interviews, survey	Consultation (2)	19	16–24 year olds	Pachucha, Mexico	Hernández and Christlieb (2013)
GIS Mapping	Consultation (2)	82 students total (40 / 42)	10–12 year olds, 15 year olds	Stockholm + village, Sweden	Berglund and Nordin (2007)

Table 3 (continued)

Interactive approach	Spectrum of partici-pation	Number of participants	Age-group	Location	Reference
Interviews	Consultation (2)	47	16–19 year olds	Stockholm, Sweden	Lagerqvist (2019)
Survery, focus groups	Consultation (2)	198 in survey / not stated for focus groups	17–18 year olds	California, USA	Passon et al. (2008)
Survey	Consultation (2)	437 students	10–17 year olds	Zürich, Switzerland	Seeland et al. (2009)
Conceptual study, interviews policy role of informal practices,	Consultation (2)	Larger, nondescript group	'Young people'	Hobart, Australia	Stratford (2002)
Survey	Consultation (2)	148 high school students	Teenagers	Toronto, Canada	Van Vliet (1983)
Mixed methods, observations, interviews	Consultation (2)	47	15–16 year olds	Finland	Kettunen (2021)
Survey, SoftGIS, web-based surveys	Consultation (2)	145 6–9th graders	9th graders	Lisbon, Portugal	Lopes et al. (2018)
Conceptual study, observation, social media use	Observation/Inform-ing (1)	278 unique observations, participant number unclear	'Adolescents'	New Orleans, USA	Shirtcliff (2015)
Practitioner outreach	Observation/Inform-ing (1)	Wider population (2000 confirmed in survey)	'Young people'	Several towns, UK	Woolley (2000)
Review, conceptual study	Not applicable	Not applicable	Not applicable	Western societies	Bishop and Aminpour (2019)
Review, co-design	Not applicable	Not applicable	'Young people'	Various	Bishop and Corkery (2017)
Informal landscape practices, conceptual study	Not applicable	Not applicable	'Young people'	US	Carr (2010)
Review, participatory planning, youth master plans, multiple cases	Not applicable	Not clearly stated 41 communities,	Up to 21	USA	Cushing (2016)
Relational space approach, conceptual study	Not applicable	Not applicable	'Young adults'	Zürich, Switzerland	Demant and Landolt (2014)
Review, multiple cases, various (55 projects)	Not applicable	Multiple cases	'Youth'	Germany	Heinrich and Million (2016)
GIS Mapping, digital tool development	Not applicable	Not applicable	Under 18 year olds	Denver, USA	Rigolon (2017)
GIS mapping, park quality index	Not applicable	No youth representation, only professional planners	'Youth'	New York/Denver, USA	Rigolon and Németh (2018)
Review, multiple cases	Not applicable	Not applicable	'Youth'	various	Frank (2006)
Conceptual study	Not applicable	Not applicable	'Children and young people'	N/A	Freeman (2006)
Review, empirical studies of children and young people in planning	Not applicable	No youth representation, only professional planners	'Children and young people'	New Zealand	Freeman and Aitken-Rose (2005)
Informal landscape practices, conceptual study	Not applicable	No representation, only professional planners	'Young people'	South Island, New Zealand	Freeman and Riordan (2002)
Informal landscape practices, conceptual study	Not applicable	Larger, nondescript group	'Young adults'	Oulu, Finland	Kallio and Häkli (2011)
Storytelling/urban activism, conceptual study	Not applicable	Unclear	'Young activists'	Hong Kong	Lam-Knott (2020)

Appendix B

See Table 4.

Table 4 In-depth review articles

In-depth reference:	Participatory approach	Lifeworld-grounding	Transformative action/intervention	Spatial analysis (scale/planning lvl)	Key actors
Benze and Walter (2016)	Planning games	Partly, some games applied more educational, adult-determined	Partly, societal role clarified, but only in hypothetical scenarios, no action/interventions to change their urban environments	City-neighbourhood	Municipality, researchers, youth
Hill et al. (2018)	Writers club	Yes, broad discussions grounding process in youth's experiences with social life in urban public space	Partly, increased writing proficiency, giving 'voice'; strong focus on 'identity', no further intervention described	Neighbourhood	Researchers, local grassroots, youth
Breitbart (1995)	Public participatory art, mixed methods (quest. + fg)	Yes, open research methodology in dialogue with participants, various creative/interactive methods	Partly, initial educational process, supported interventions in urban environment	Neighbourhood	Researchers, youth, art school?
Kamete (2006)	Squatting	Yes, upside-down critical assessment of participatory planning practices	Partly, testing and validating squatters critical analysis of participation in the urban landscape, but action not related to emerging participatory processes	City, urban planning system	Researchers, students, squatters
Derr et al. (2013)	Participatory planning	Yes, large-scale project, multiple interactive methods such as photo-elicitation, interviews, mappings, community assessments and storytelling	Yes, some examples of youth-led actions/interventions towards societal change: collab. artwork, youth-trainings for research, political campaign oriented towards local businesses	City	Researchers, students, municipality, schools, politicians,
Derr and Kovács (2017)	Participatory planning	Partly, integration of creative/educational methods for city planning into school curriculum, questions decided by adults. Several occasions for open discussions	Partly, providing interactive space for YP to meet high-level officials/decision-makers, no possibility for making tangible changes	Larger urban area (60 acres)	Researchers, students, municipality, schools, politicians,
Cilauro (2015)	Planning games	Partly, method inspired by already-existing practices of local YP	Unclear, new relationships between YP and libraries, only digital change	Library, digital space	Librarians, youth

Table 4 (continued)

In-depth reference:	Participatory approach	Lifeworld-grounding	Transformative action/intervention	Spatial analysis (scale/planning lvl)	Key actors
Dennis (2006)	Participatory GIS	Yes, individualised input from journals, photo's, etc. and subsequent collective discussions and narratives	Partly, GIS process shows some indications for supporting youth in taking action, but little concrete change and data mostly filters into adult agendas	Neighbourhood	Researchers, students, local youth org. workers, youth
Drummond (2007)	Public participatory art, mixed ethnographic methods	Partly, artworks took direction from survey responses, experimental methods interacting with artwork added to lifeworld-substantiating dialogue	No, decision-power for youth to guide artists, but little processual power or control over outcomes	City	Researcher, artists, museum-workers, youth
Laughlin and Johnson (2011)	Mixed ethnographic methods (quest. + fg)	Yes, multiple explorative methods to draw out youth's lifeworld perspective on youth life in the neighbourhood	Partly, developing shared understanding/vocabulary for youth perspectives on neighbourhood, but no pathway to taking action, and no control over outcomes for youth	Neighbourhood	Researchers, youth
Osborne et al. (2017)	Mixed ethnographic methods (quest. + fg + mapping)	Partly, strong methodological guidance from adults, but some openness for youth to describing the maps drawn on their own terms	No, classical data collection, no attention to youth's process around engaging in the research, all outcomes researcher-controlled	Neighbourhood	Researchers, school, youth
Robertson and Burston (2015)	Mixed ethnographic methods (quest. + fg)	Partly, open, collective, longer-term focus group discussions but little method description	Partly, facilitated presentations and giving voice, no described pathway to taking further action for youth	Larger urban area	Researchers, schools, youth
Šakaja and Višnić (2011)	Mixed ethnographic methods (quest. + fg)	Yes, extensive survey + focus groups with participants draws out lifeworld perspective ie. sets the urban area in context of the youth' lives	No, classical data collection, all outcomes researcher-controlled	Town	Researchers, schools, youth
van Ingen et al. (2018)	Mixed ethnographic methods (interviews, mappings, walk-alongs)	Yes, extensive collaborative exploration to explore and define neighbourhood on youth's own terms	No, classical data collection, no attention to youth's process around engaging in the research, all outcomes researcher-controlled	Neighbourhood	Researchers, students, youth organisation, youth
Santos et al. (2019)	Env. justice education, community gardening	No, educational focus, teaching youth/assessing knowledge focus of initial discussions	Yes, youth-elected actions, related to societal challenges	Neighbourhood	Youth centre, researchers, youth

Data availability The data that support the findings of this study are available from the corresponding author, [FAH], upon reasonable request.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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