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Integrating community engagement and children's voices into design and planning education

Victoria Derr*

Environmental Design, University of Colorado, Boulder, UCB 314, Boulder, CO 80309, USA

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This article shares outcomes from a year-long participatory planning process – one that brought together children and youth engagement, city planning, campus planning, and a university environmental design course to explore child-friendly, dense and affordable housing for a city of approximately 100,000 residents. This process of engagement asked design students to include youth participation and child-friendly cities as an integrated component of sustainable cities. The article shows varying degrees of transformation, views of children as credible participants, and values gained from the project. Many undergraduates changed their thinking about the role of young people in design processes and outcomes.

Keywords: participatory design; child-friendly cities; children and youth; community engagement; design and planning education

Introduction

Community-engaged design studios provide university students with opportunities to consider complex issues, learn from and experiment with approaches to community engagement, and expand their thinking (Sletto 2010). While service-learning courses that involve community engagement are on the rise in undergraduate education, those that include children and youth as active participants in a planning process are relatively few (Derr et al. *forthcoming*). A year-long participatory process integrated the ideas of young people (aged 8–15) into an undergraduate environmental design course to develop master plans and design recommendations for increasing dense, affordable housing while also promoting child-friendly design. While the participatory process was designed to inform the City of Boulder's Comprehensive Housing Strategy, research into the process was designed to understand how the participation of young people influenced undergraduate design education.

Community-engaged design education

Decades of community engagement within the design and planning professions have led to the identification of many benefits as well as many process critiques (Bose et al. 2014). The benefits of campus-community partnerships include higher levels of collaboration, greater reciprocity, authentic dialogue, and contributions to social capital, community capacity, community cohesion and resilience (e.g., Angotti, Doble, and Horrigan 2011; Astbury 2013; Bose et al. 2014; Sandy and Holland 2006). The critiques of campus-

*Corresponding author. Email: victoria.derr@colorado.edu

community partnerships within design have advocated for shifts in the balance of power (Arnstein 1969; Sletto 2010), called for more holistic, inclusive, and flexible methods in design (Hou and Kinoshita 2007) and pushed investment in co-design, where parties equitably contribute to the design process (Schneekloth and Shannon 2011). These critiques reflect a desire for a deepening of the process, from one that views participation as a hierarchical power relation to one that moves the process into a dialogue with mutual benefits and exchange. As Sletto (2010) describes, participatory planning should provide opportunities not only for applied problem-solving but also for students to become reflective practitioners, who can understand how to establish partnerships and communicate with people who hold diverse views.

In a recent volume that examines community-engaged design education (Bose et al. 2014), the editors reflect that while value is often given to tangible outcomes, such as master plans or design-builds, communities often place equal or higher value on the intangible values of dialogue and connection, stating that participatory processes ‘can provide a safe dialogic space for community’s diverse citizenry to come together with university partners to think about their futures and plan their own destiny’ (Bose and Horrigan 2014, 16). In such partnerships, each group expects to benefit from the other. The ability to effectively achieve these benefits depends upon the structure of such partnerships, the feasibility and compatibility of goals, flexibility, and a willingness to contribute resources and to experiment in a co-educational process (Dewar and Isaac 1998; Sletto 2010; Hou and Kinoshita 2007; Winkler 2013).

Young people’s participation in planning and education

Inclusion of children and youth in participatory planning got its footing in the 1970s with Lynch’s (1977) *Growing Up in Cities* work and was extended in the 1990s to many additional countries (Chawla 2002). Youth engagement in planning continues with similar initiatives today (e.g., Derr et al. 2013; Parnell, Cave, and Torrington 2008). Children who participated in the Growing Up in Cities programme consistently sought opportunities to participate in community life and decision-making (Chawla 2002). Subsequent child-friendly cities research has further supported this desire (Malone 2013).

Scholarship on children’s participation in campus-community partnerships for planning and design has more recently emerged (e.g., Derr and Kovács *forthcoming*; Brink and Yost 2004; Hou 2011; Lozanovska and Xu 2013; Winterbottom 2011). While these partnerships have been described with some critical reflection, many publications about children’s participation in campus-community partnerships remain focused on the mechanics of participation for tangible outcomes, such as plans and physical designs, and less on the learning outcomes of participants. This article explores these less tangible outcomes, through thematic analysis of university student work and interviews with community and university partners about a year-long participatory planning process. It also examines university students’ perceptions of children as credible participants, and the challenges inherent in translating children’s ideas into grounded designs.

Methods of engagement

In anticipation of the City of Boulder’s review of its Comprehensive Housing Strategy, project partners initiated a year-long outreach and engagement process. In the first phase of the project, Growing Up Boulder (GUB) – a child-friendly city initiative among the City of Boulder, Boulder Valley School District, and the University of Colorado Program

in Environmental Design – engaged students from two schools in a curriculum to explore what child-friendly, dense, affordable housing might look like for the city. GUB engaged 52 primary school students, aged 8–9, from Whittier International Elementary School, and 16 secondary school students, aged 14–15, from Boulder High School, in the process (Derr and Kovács [forthcoming](#)). The primary school receives federal assistance because it has a higher than average percentage of students who receive free or reduced cost lunch, which is used in the United States as an indicator for income that is insufficient to support a family without assistance (BVSD 2015). The secondary school students were all enrolled in the Advancement via Individual Determinism (AVID) programme, which primarily supports first-generation college students. Both primary and secondary schools serve a higher percentage of low-income and Latino students than the city school system as a whole.

The goal of the engagement process was to ask young people to explore the question ‘what does child-friendly, dense, affordable housing look like for the City of Boulder?’ GUB chose to focus this question at a neighbourhood scale so that it would be understandable to the children involved. Children’s engagement included a series of activities to develop their expertise and competence about sustainable housing design and density using a variety of methods, including field trips, photography, drawings, essays, three-dimensional models, and public presentations. The engagement process resulted in design proposals that children and youth presented to city staff, city council and community members. A separate publication fully describes the project’s goals, outreach methods and outcomes (Derr and Kovács [forthcoming](#)).

The housing site was identified in the fall of 2013 in collaboration with GUB and city staff as well as the two instructors who had expressed interest in teaching an undergraduate design studio and seminar at CU Boulder’s Environmental Design Program (Derr and Kovács [forthcoming](#)). The site provided an opportunity to consider child-friendly neighbourhood design along with issues of density and affordability from both the city and university perspectives. At the time of the project, the site consisted of 40 acres of land that contained existing housing for families and graduate students and 20 acres of riparian corridor with an adjacent bike and pedestrian path. The secondary school was directly adjacent to the site, and the primary school was located a few blocks to the north. Some primary students lived in the existing housing site at the time of the project. All existing housing will be demolished in the site’s redevelopment.

In January 2014, 30 university students in environmental design began their third-year ‘praxis’ semester, an applied seminar and studio, focusing on the same questions for child-friendly, dense, and affordable housing that the primary and secondary school students who engaged with GUB in the fall had considered. For most of the semester, undergraduates worked in teams of 3–5 students to develop a master plan and three-dimensional model that would double housing density, maintain affordability, and strive for child-friendliness. In the companion seminar course, students studied sustainable neighbourhood design, including green infrastructure, materiality, and precedent research primarily from European and US communities. For the final three weeks of the semester, students individually developed a detailed design of an area of interest. Detailed designs focused on housing designs, parks and green spaces, street treatments, and a convention centre at the edge of the site (as requested by both the city and campus). Students also wrote a final reflection paper, in which they responded to the question ‘How did working with community partners influence how and what you designed?’ Final presentation boards included vision statements and metrics for each group’s design goals.

Throughout the spring semester, GUB facilitated presentations and discussions between university students, the primary and secondary students who had considered this work in the fall semester, and city and university planning staff. Primary and university students met twice during the semester: once at the beginning of the semester for primary students to present their ideas and models to the university students, and a second time to critique the university students' design work. Both meetings were held in the primary school classrooms. Groups of university students met with one of three classes and sometimes small groups of primary students during these interactions. Secondary students had three meetings with university students: secondary students presented their work to undergraduates and community partners (city and campus architects and planners) during the first week of the semester; they participated in 'desk crits' at the undergraduates' studio space on campus; and they attended a gallery design review for undergraduates' final work. For the desk crits, small groups of high school students reviewed small groups of university student plans, with university instructors and GUB staff circulating among the groups. For the gallery design reviews, pairs of high school students participated in juries with community members, faculty and GUB staff. In addition to the young people's participation facilitated by GUB, the studio instructors also invited community partners from the university's architecture office, and the city's community planning and housing departments to review student work through informal visits and formal reviews. These visits occurred both together with and independently from those with primary and secondary students. All interactions between different sets of students were facilitated by GUB staff in coordination with the school teachers and studio instructors.

Methods of assessment

Of the 30 undergraduate student participants, 20 signed university consent forms for inclusion in the study. The author analysed a total of 8 undergraduate master plans, 20 detailed designs and 20 reflection papers using thematic networks (Attride-Stirling 2001). This method first codes data as 'basic' themes and then 'organising' and 'global' themes. For basic theme codes, university student data were cross-referenced with young peoples' ideas, as represented in primary and secondary students' physical models and digital presentation slides (Derr and Kovács *forthcoming*). Basic theme codes included items such as 'pizza place,' 'picnic tables,' or 'lighting.' Additional basic codes described aspects of the process specific to university students and children's engagement with each other, such as 'dialogue' and 'valuing children's ideas.' 'Mixed use spaces,' 'safety features,' or 'integration of children's ideas' are examples of organising themes, and 'Transformation' and 'Credibility' are examples of global themes.

Following thematic analysis, the author interviewed community partners (the director of community planning and sustainability, primary and secondary school teachers), one of two environmental design faculty, and 14 undergraduate students. University students who participated in interviews represented all of the master plan groups and reflected diverse design emphases. The author asked all participants open-ended questions about the most effective areas of the project; ways to improve the project; and significant impacts on project participants, including influences on undergraduate's thinking about design and planning professions. The author also asked open-ended questions about the process of participation, translation of children's ideas, and the influence of young people and community partners on the design process. University students also responded to questions about how their master plan and detailed designs were influenced by community partners and young people. This article presents emergent themes from both thematic analysis and

interviews, using a grounded theory approach to identify core themes and issues (Strauss and Corbin 1998).

Results from thematic analysis

Thematic analysis showed varying influences on undergraduate students' learning processes and outcomes and generated global themes of Credibility and Transformation. In their reflection papers, university students expressed a spectrum of views of young people as credible contributors to the design process. The most accepting view of child participation was that children have credible voices worth listening to, and that children can make places more interesting and innovative. This was also the most common perspective. One university student reflected this experience thus:

Working with students who knew little about the guidelines and technical details and requirements of the project allowed them to think in a radically different way than both ourselves and our city affiliates. The students' unimpaired creative thought provided an unimpeded path to the genuine needs and desires of a very present and active demographic within the site.

In the middle of this spectrum was a view held by about half of students that children sometimes have ideas of value, but that it could be a struggle to incorporate these ideas into adult constructs of design:

The elementary students have very pure and unadulterated thoughts on what was right for them. On the other hand, having worked with professionals such as the CU Campus Architect's office played a huge and invaluable role in guiding the final presentation toward something not too farfetched.

A few students seemed to view children's participation and child-friendly design as valuable because the adult community leaders expressed value for this process. For example: 'It was nice to learn how much [the city staff] values making spaces child friendly.'

In their reflection papers, the majority of students described some degree of transformation in their thinking about children and design. Transformation is a frequently expressed benefit of campus-community partnerships, with resultant alterations both in knowledge and practice (Sandy and Holland 2006) that are 'distinctively different from the everyday practices the participants come from' (Brandt, Binder, and Sanders 2013, 148). In this research, some university students reflected that initially they had not thought they would learn anything from children, but through the process of participation, they came to realise that young people positively contributed to the process. Their thinking was thus transformed in seeing a range of values children can contribute to the design process:

Users think about architecture as a series of things, where designers tend to think in a more abstract vocabulary. The concrete way of thinking about design helps a lot... Getting back to a more detailed, concrete and physical way of thinking about design helped create a better plan. The school students helped me see the value of working from the specific to the general, and not the other way around.

I now think that listening to kids can help us become more innovative in our practices, making our built environment more friendly and lively. If we keep doing everything the old way, all the buildings and streets looking exactly the same, we will come into a dull world.

Many described ways that children contributed to the design process through concrete influences, such as having a direct influence on street design or as inspiration for a 'five-senses' play area made entirely of natural materials. At the end of the project, university students also demonstrated a sophisticated understanding of children's needs and desires

as well as more highly developed understanding of the details of a child-friendly city. Students whose reflection papers most positively valued children's participation and child-friendly design also displayed the most congruence with primary and secondary students' visions in their master plans. Two plans in particular seemed to embrace the ideas of child-friendly sustainable design and included many if not most of the core ideas that young people had proposed.

Results from interviews

Each group of participants emphasised different factors for areas of effectiveness, areas of improvement and areas of significant impact (Table 1). In general, these variations reflect the educational goals and values specific to each group. Primary and secondary teachers most valued that their students felt respected and heard by undergraduates. Faculty most valued the sequential flow of the project, from in-depth engagement to studio design, as well as the project's focus on sustainable neighbourhood design. City partners valued the broadening of perspectives that the process contributed to the overall dialogue for increased density within the community. Undergraduate students most valued the broad range of community partners and young people's participation in the process. Undergraduates considered community and youth partnerships to be the most effective aspects of the project as well as those that had the most significant impacts on their learning and experience. Teachers, faculty and the city planning director offered very few areas for improvement in the project. Most suggestions were minor pedagogical shifts, such as grouping primary students into sub-topics to better focus their learning. University students offered critiques of the course based on the size of the studio, project logistics, and desire to work with an even wider range of community partners.

Where global themes and interviews connect

The thematic analysis and interviews show much congruence in how university students describe ideas of young people's credibility and the role of community participation in a transformative process. Interviews with other community partners help to reveal the varying ways participants interpret and gain value from the participatory process, particularly in their reflections on the two themes of credibility and transformation. Teachers and city planners value the process of dialogue over the literal translation of young people's ideas. Young people themselves seem to value this aspect of the project as well, as reflected in their increased perception that the city cares about their ideas, as reported by Derr and Kovács (*forthcoming*). It is in the educational realm of the university students where this struggle – to listen and to design – seems to have the greatest hold, and this reflects an important opportunity in engaged design education. It is often through this grappling with real world issues that students come to new understandings (Dewey 1938).

Authentic projects, genuine listening

Both primary and secondary teachers emphasised the importance of authentic connection between their own students and the undergraduates and faculty. Because both sets of students were working on the same issue, they had shared interests and common understandings that allowed for dialogue and exchange. A respectful attitude and genuine listening were important facilitators of this exchange, with university students and faculty not only listening, but also showing how they were incorporating ideas into design language. In the words of one primary school teacher:

Table 1. Summary of interview results by project partners.

	Primary and secondary teachers	Undergraduate faculty	Undergraduate students	City partners
Most effective?	Authentic connection between students (all working on plan) Respectful attitude, genuine listening Showing how ideas can be translated into plans	Sequential process of engagement, from in-depth outreach to integrated seminar and studio Project of professional interest	Participation with young people and a broad range of community partners	Engaging people of all ages in a co-educational process Longer time frame allowed for dialogue, seeing different points of view
Areas for improvement?	Small-scale curriculum changes Cultural responsiveness	Pedagogical challenges of concurrent studio and seminar	Streamlining process, more time for guidance Additional community partners	Expanding to even more participants
Most significant results?	Kids having a voice and feeling that their work mattered A sense of agency and empowerment Development of relationships over time	Holistic problem solving Idea of duty and stewardship Students start to find themselves Relevance of issue	Learning values and effective methods for participation	Instilling a value, a mindset within young people and city leaders

I loved the way they took the ideas that the kids had and put them into architectural language, and said, “these are your ideas, this is what we took from that, here’s what we did with it. Did we get it right? Did we show your vision?”

The secondary teacher similarly said this was one of the most effective aspects of the project. Over time, the secondary students felt comfortable going to the university campus to review designs and plans; they saw the relevance of the project to their own lives and to university student work; and they felt validated because they saw their ideas in the university plans and designs. One of the university students expressed how this was emphasised within the context of the studio:

[Our instructor] especially emphasised that we should be responding [to the children’s ideas]. That was one aspect of studio that was really pushed, was [to] make sure we were actually responding. It wasn’t, “you’re going to listen and then do whatever you want.” We listened, and we were able to see where there was overlap, things that were mentioned most. There were some things we did end up disregarding, but many of the ideas were woven into our designs.

For the city’s planning director, the most effective aspect of the project was the co-educational process that emerged from authentic listening and dialogue. He describes one primary student who shared in a public presentation that as a result of the project she realised she wanted to continue to be involved in decisions that affect her community:

From the city perspective this is really what we are looking for, engaging people of all ages so that they see that their views, their perspectives matter, but also that they engage in a co-educational process so that it’s a dialogue rather than just coming and voicing *my* perspective, actually listening to the perspectives of others, and in the process maybe changing their perspective, and coming to a richer understanding of the complexity... of all the things that go into creating a community.

This sentiment was echoed by the university faculty who said:

As children, we grow up feeling disconnected from larger decision-making in the adult world, including the built environment. I can see how this praxis made connections between the world of adults, and the world of planning a city, and the world of kids in third grade. And I would imagine it is good for children, to learn some confidence that they are effective participants in larger processes.

Through this reflective process, students reported how they came to see that planning a city can be a partnership, and that they can be participants in the process. Repeated interactions with university students, faculty, and city and campus planning staff all likely contributed to this result.

Diverse and credible voices

Among the university students, the ability to connect with a broad range of community partners, including young people, was the most effective component of the project. Many also stated that they learned much about collaboration, both through community engagement as well as group work among their peers. Students reported that developing plans and designs for a real place in the city, with real people living and thinking about how to make it better, also provided opportunities for students to expand their thinking beyond their own visions of design and to consider the perspectives of others:

It was clear we were designing with someone in mind. A lot of times when you are designing, you realise it’s “too late now” when you get feedback. You forget that this design is going to be real and functional and that you need to design for the user.

It also provided a framework to consider the complexity of problems from multiple perspectives:

I think that we were forced to think outside the box a lot, and I really enjoyed that. I also really enjoyed the community involvement and meeting with city planners and university architects, and the kids, all of it together, it gives you an experience you wouldn't have with most of the design-build studios.

This same student reflected that while the opportunity to work with young people in the design process was one of the most effective aspects of the project, this was not what she had anticipated:

I was not looking forward to the meetings with kids, but when they happened, I was really impressed... I was afraid they wouldn't have anything to offer, and I was really wrong. And I'm glad I was wrong.

Primary teachers also reflected that having students connect with a broad range of community participants and 'experts' – parents or professionals who gave guest lectures on topics within the curriculum – was a critical aspect of the project. The experts informed student thinking over the course of the project: primary students referred back to knowledge gained from these discussions as they made their models and developed their presentations. The entire curriculum enhanced children's capacity to participate meaningfully, building their competence. This is significant in shifting some of the university students' perspectives from one that was skeptical of the value children would bring to the process to one that saw their participation as a strength. As one student reflected: 'I felt that the feedback we got from the 3rd graders was the most helpful. They had way more insight than I had expected, and it was interesting to gain the perspective of unbiased kids.'

Another stated:

I learned a little more about kids' perspectives, how they work. I was really impressed when we presented to them, they had really good questions. I sort of knew before, but I learned through the process that they are definitely worth listening to. They were able to process complex design questions.

Many university students contrasted young people's perspectives with those of city planners and architects. While both gave significant value to the project, the young people's perspectives served as inspiration and unbridled thinking whereas the professional perspective was more grounded in the regulations and constraints of urban planning and design. Many university students spoke of young people's ideas as 'creative,' 'out-of-the-box,' or 'unjaded' and at the same time, 'unrealistic,' 'ridiculous,' 'not feasible,' or 'far-fetched.' Students' initial discussion of children's participation was frequently couched between these two realms of fantasy and feasibility. Yet, as the undergraduates spoke more specifically about the praxis and their work with children's ideas, they revealed layers of complexity in how they viewed children's competence as participants in the design process. Some students maintained the initial concept that ideas were either fantastical or feasible, as reflected in this statement:

It was hard to get all the ideas that would work in the development and that would actually be functional. It's a challenge that I think planners have, in trying to incorporate ideas of kids... because they still don't know what is feasible.

Others described how their views changed over time, as young people revealed more of their ideas. In this context, children's ideas became credible when they were considered to be more adult-like. One undergraduate demonstrates this construct when she reflected that it was the 'influence of a child's opinion' that was most significant in her praxis experience:

When we first went to the elementary school, I thought this was going to be stupid, like we can design this just by observing them, we don't need to talk to the kids... but when we went down there, it amazes me the adult, the adult content of the ideas they can have, and... it really taught me how to glean what would be relevant to the design.

A few talked about how the children transformed their thinking in some way. This was usually in the context that children's ideas helped the university students break away from thinking like a designer, and more like an everyday person, as reflected in the following student's response: 'It's kind of refreshing to see that they aren't seeing it through the lens of an architect. We get this really narrow focus, and it's kind of easy to forget what it's like to be a user.'

Others shared specific details that helped shift their design thinking, from children's interest in berms as flood mitigation, to their desire for colourful housing, to realistic walking distances from school to shops. As university students heard young people's ideas, and then sought to incorporate them, some felt that it made the design process easier 'because we had reasons for doing things,' while others struggled with this same process. Hearing the children's ideas, and beginning to see them as credible contributors to the design process, was an important first step in learning how to integrate complex community ideas.

Translation: from participation to plan

All of the plans incorporated some elements from both primary and secondary students' work. The most common influences from primary students were their desire for nature and unstructured play, street safety, and better access to the creek. The common contributions from secondary students included their desire for mixed-use commercial spaces close to their school, places to 'hang-out' with friends near the creek and multi-functional recreation areas. A few of the university plans also included the original ideas from children, documented under headings such as 'what we heard you say,' in their final presentation boards. Through their interactions, university students heard primary and secondary students express different ideas, concerns and interests. So while the details may vary across plans and designs, all the undergraduates interviewed were able to clearly articulate ways that they had incorporated children's ideas into a complex design process. They did this with a fluency and ease that showed they had internalised the desires of the young people as well as the values and design processes that could support them. This is reflected in the following examples:

What we heard from the kids was that they wanted a safe neighbourhood where they could go from one friend's house to another without having to cross streets, so from that, we created a block with buildings grouped so that you'd have to cross gathering areas such as parks and plazas [instead of streets].

They don't like walking on the creek path because bikes fly by, and also... they didn't want to cross busy roads, and so we ended up putting the majority of the family housing south of the main road so they could be in closer proximity to the creek. And crosswalks on the creek path, with changes in materiality, so the bikers would know kids are crossing here.

We reduced the footprint of the buildings and added more green space. If it had just been for [the university], we would have just kept large building masses because they wanted more housing, but then we toned it down because we had too much... We reduced it, and that was from feedback from the kids.

A few university students were self-reflective in what they had learned about how to better elicit information from students in order to have information that was useful in the

design process. For those who did reflect on this aspect of engagement, they found directed questioning, use of props, speaking in the native language of the children, and location of engagement all influenced their ability to learn from the students and gather useful information in the design process. One student spoke at length about the various approaches to getting meaningful content from the children. One of his ‘successes’ emerged unintentionally when his team member made a wire heart from tree modelling materials. The team gave each of the secondary students the wire heart and asked them to locate the ‘heart’ of the plan as a way to engage them in conversation. ‘It got them interacting more rather than just looking at the model.’ Such ‘a-ha’ moments helped to develop an understanding that effective participation is not just the responsibility of the community participant, but also of the professional. Many students spoke of such moments, when they felt connected and working toward mutual goals or understanding. These seemed to be the types of moments that led university students from simply engaging in an assignment to valuing the process and young people’s role within it.

Other students were self-critical in their ability to incorporate young people’s ideas into their plans and designs. One student in particular described the challenge of effectively incorporating others’ ideas, saying, ‘you try to incorporate them, [but] it doesn’t always look like you took it into account.’ She described the dissonance she felt from this:

We found the time we had with the students engaging. We talked about their responses, on the bus ride back we talked about, “what did your class say, what did they like,” but then when we got back to studio, we had to come up with our vision that we were going to go forth with... So we tried to encompass ideas, but it wasn’t a direct transfer. Things they liked in the model, we tried to hone in on that. [But] it’s hard.

When similarly asked about this process, the university faculty stated:

In a way, all participants, even including the faculty, have a degree of illiteracy in making the built environment. And overly romanticising pre-industrial society, where people who made the built environment knew what they were doing, and children were not very much a part of that. But children do have valuable ideas and instincts about the environment and dwelling or being, but the connection is not scientific or rigorous.

He described the translation of ideas as one where university students developed empathy toward the younger students, and through the process of sharing ideas with each other, ‘it all sank into the subconscious.’ This is a critical point in building an understanding of reciprocity in community engagement and design. While the primary and secondary teachers felt that a strength of the process was the university students’ integration of ideas, the university students and faculty reflect the complexity that comes from striving to design with integrity. This variance in perspective may also reflect different project partners’ values in the process. For the teachers and city planners, having opportunity for dialogue and ‘being heard’ is perhaps the most important aspect of the project. As one teacher stated: ‘My kids gained a sense of agency, and really felt empowered. They felt like they were heard, they felt that their opinion mattered, and the outcome doesn’t necessarily matter at this point.’ From the university students’ perspectives, many came away from the project with an increased sense of the importance of community engagement in the planning process. They understood that community engagement made plans more effective and realistic from the users’ perspective. They also understood the complexity of this information:

It’s definitely beneficial to talk to multiple community partners and community members and see the different views about what people think is most needed... It’s our job to take all that information, and not only listen respectfully to everyone, but then to take that and boil it down through your lens of being a designer.

Influence of young people's participation on undergraduate design education

Both GUB – a partnership that facilitates young people's engagement in urban planning – and two thoughtful studio instructors who valued young people's ideas, helped bridge learning gaps that undergraduates may have had in communicating with young people. While for the most part facilitated engagement was a successful aspect of the project, the variation in university students' perceptions about children as credible participants, and in their own self-reflexivity about how to achieve this, suggest that future projects could do more to enhance dialogue and exchange. As Buur and Larsen (2010, 121) describe: 'It takes a certain attitude to become constructive together, agree to suspend judgment, be honest and try to build on each other's ideas.' Some undergraduates were clearly comfortable in this realm, enjoying the challenges presented by young people, asking questions, thinking about ways to compromise or innovate. For others, this terrain was less comfortable. The primary teachers worked closely with their students to facilitate dialogue during the outreach period so that all students were comfortable expressing their views and discussing differences. All ages of students would likely have benefited from this degree of thoughtful facilitation, perhaps through training modules that support communication or participatory techniques.

Hou (2011) identified reflection strategies based on his experience facilitating university students' engagement with youth in the design of a Seattle night market that include recognising cultural and institutional differences and actively negotiating these differences. Through the process of negotiation and dialogue, many students are transformed. In the case of the praxis semester, environmental design students were immediately aware of the age differences of younger participants. During the rest of the semester, they became aware of less obvious differences, some institutional and some cultural or social. This broadening of perspectives helped thicken their understanding of complex problems. This is an important aspect of understanding sustainability in the context of planning. Students who started thinking about materials and building orientation began to also consider the complexity of the effects of decisions on different users and how these factor into the long-term sustainability of urban spaces.

When children participate in planning processes, they develop increased competence, self-esteem and ability to communicate (Chawla and Heft 2002). Participatory design and planning also allow children to use diverse learning styles (Lozanovska and Xu 2013) and to learn democracy through participation (Hart 1997). Effective participation thus engages children in subjects of personal interest, allows the development of competencies, and provides both dialogue and tangible outcomes (Chawla and Heft 2002). Through participation in local community issues, children come to feel valued for their contributions (Hart 1997). Many of these same benefits and strategies apply to university planning students. In the praxis, students were able to participate in a project of professional interest, to build competencies in this area, and to have opportunities for dialogue while producing tangible outcomes in the form of a master plan and detailed design. The sequential process and layering of experiences helped to produce these final outcomes. Finally, city leaders who valued students' ideas created a framework for meaningful participation (Derr and Kovács [forthcoming](#)).

Conclusions

This article set out to explore a campus-community partnership in order to inform the process of integrating young people into engaged planning and design education. Studies of many service-learning courses suggest that this experience can be transformative. This

project helps to reveal the context of transformation, from how students come to view children as competent and credible participants, to grappling with the complex problems of urban planning. Teachers and city planners valued the collaboration and process of mutual learning, emphasising active listening that helps broaden perspectives. The sequential process helped facilitate meaningful interaction with young people while also allowing for more realistic goals in the university semester timeframe. In addition, the process helped to validate children's ideas in the short term while contributing to a much longer-term urban planning process. The director of community planning reflected that while intangible outcomes, such as dialogue and feeling heard, are important, children respond well to more immediate and tangible outcomes. Because university students considered the same design questions as primary and secondary students, and incorporated these into physical plans and renderings, children felt heard and saw their ideas manifested in a tangible way.

While the Comprehensive Housing Strategy is still in formation, GUB's participatory planning process with children and youth has contributed meaningful perspectives to the process (Derr and Kovács *forthcoming*). Further integration of this participatory process into university education embedded the practice of participation into a new cohort of designers. The students who received this education may carry their view of children as credible and beneficial participants forward into their professional endeavours along with increased skills to facilitate such participation. Children's rights will ultimately be realised when professionals consider children's participation a beneficial and necessary component of urban planning and design processes. Incorporation of children's participation into university design education contributes to this goal.

While engaged citizenry is often a goal of community service learning, the rights of children to be active agents in this process have yet to be fully developed. This project shows that children's participation is a natural ally and potential contributor to community service learning, with potential benefits for all.

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