

Designing with Children

Great, Green Neighborhoods (Growing Up Boulder)

Growing Up Boulder (GUB) is a child friendly city initiative that began in 2009. GUB's work is based on the principles set forth in the 1989 United Nations Convention of the Rights of the Child and UNESCO's participatory planning programmes from the 1970s and 1990s. Two of GUB's founders were part of UNESCO's 1990s Growing Up in Cities action research with children in low-income communities across the world: Louise Chawla, now Professor Emerita at the University of Colorado, and David Driskell, the Executive Director of Community Planning, Housing, and Sustainability with the City of Boulder.

Growing Up Boulder is an on-going partnership between the City of Boulder, Boulder Valley School District, and University of Colorado, whose mission is 'to empower Boulder's young people with opportunities for inclusion, influence, and deliberation on local issues that affect their lives.' Growing Up Boulder (GUB) consistently partners with schools and youth-serving partners to help bring some of Boulder's least heard voices to city planning. For the City of Boulder, this includes children from low-income and ethnically diverse neighbourhoods and the schools and programs that serve them. GUB has engaged children in a variety of projects, including physical planning and design of public spaces and parks, action research for child-friendly businesses and nightlife, and housing policy changes for teenage mothers. Projects generally emerge from the planning needs of city partners. GUB staff then identify project-specific partners, including schools or other youth-serving organizations.

The 'Great, Green Neighborhoods' project was conceived at a time when the city was considering how to increase density as well as the affordability of housing for its Comprehensive Housing Strategy. At an early phase of the process, David Driskell wondered

What

University Housing (Athens Court) and Boulder Comprehensive Housing Strategy

Where

Boulder, Colorado, United States

Age

8-15

Group Size

52 Primary School Students and 16 Secondary School Students

Project Stage

Concept

Children's Roles

Advocates for Change, Expert Consultants

Timescale

Academic Year 2013-2014

Partners

Tom Goodhew, University of Colorado (Architect)

Michael Tavel, University of Colorado (Environmental Design Faculty Member and Architect)

David Kahn, University of Colorado (Environmental Design Faculty Member and Landscape Architect)

Mara Mintzer, Growing Up Boulder (Coordinator)

Victoria Derr, Growing Up Boulder (Faculty Coordinator (conceptualization and evaluation)

Nathalie Doyle, Growing Up Boulder (Intern,

how children might increase density and affordability while also increasing child-friendliness. Growing Up Boulder first initiated a three-month outreach project with primary school students (aged 8-9) and secondary school students (aged 14-15) to explore this topic. The effort then transitioned to an undergraduate design studio at the University of Colorado Environmental Design (ENVD) Program, which asked design students to include youth participation and child-friendly cities as an integrated component of sustainable neighborhood design. City and university partners participated throughout the entire project.

Motivation

In the conceptualization of this project, GUB wanted to inform the city's Comprehensive Housing Strategy but also to draw on faculty expertise in sustainable neighborhood design. All partners collaboratively considered two potential sites, one on city property and one on university property. Partners felt the city property was too advanced in its planning stages to allow much influence, whereas the university property was in the master planning phase for renovation of family and graduate student housing, allowing more opportunity for participation. The housing site chosen was in need of renovation, flood protection from the Boulder Creek, and increased density.

The participatory process thus had multiple goals:

- to influence the city's thinking about dense, affordable, child-friendly housing;
- to influence the university's master plan, which also had goals for increased density and sustainability;
- to facilitate Growing Up Boulder's mission to empower young people with opportunities for inclusion, influence, and deliberation; and
- to influence undergraduate design student thinking and skills in designing with young people.

The Great, Green Neighborhoods project brought together diverse partners in considering how the city should be shaped through a neighborhood design process. The process included principles of sustainable design, from materials and energy production to the active engagement of Boulder's young residents.

Children's involvement

GUB wanted to focus on a single site because it would be easier for the primary and secondary school students to understand. The site included 40 acres of land for potential development and 20 acres of floodplain along Boulder Creek. Primary and secondary school students lived in multiple housing types within the city, including single-family homes, a mobile home park, a large apartment complex, a co-housing site, and public housing. Some of the students from the primary school also lived in the existing housing site being considered in the project. School partners were thus chosen both because of their proximity

outreach and implementation)
Martufi Flaminia, Growing Up Boulder (Intern, outreach and implementation)
Department of Community Planning, Housing and Sustainability, City of Boulder (Partner)
Planning and Design Advisory Boards, City of Boulder (Partner)
Boulder Housing Partners (Partner)
Environmental Design undergraduate students, University of Colorado (Student Architects)
Young people and teachers from Whittier International Elementary School (Participants)
Young people and teacher from Boulder High School (Participants)

to the project site and because they helped diversify perspectives about the topic.

Another factor in school selection is that the partners' curricula were sufficiently flexible and aligned with the project so that it was meaningful for the teachers, students, and the city. Due to time constraints, the secondary school curriculum was slightly abridged. Primary students considered their existing neighborhoods through drawings; learned about exemplary neighbourhoods through independent research, presentations by experts, films, and a field trip to an award-winning neighbourhood; and developed recommendations for the Athens Court housing site through drawings, three-dimensional models, and presentations using PowerPoint software. Following their presentations to city and university leaders, students also wrote reflection papers about what they had learned. Secondary students also visited the housing site and analyzed it using photovoice, learned about sustainable neighbourhood design through films and expert presentations, and developed recommendations for the city and university through Prezi presentations.

In the spring of 2014, primary and secondary school students presented their ideas to undergraduate students. Over the course of a university semester, primary and secondary school students met with undergraduates multiple times. At the first meeting, the goal was for the children and youth to share their presentations and recommendations with university students. As the university studio progressed, the goals shifted toward having the young people critique the ideas of the university students and to help shape their design work so that it reflected their ideas and needs. Secondary students also came to the university twice to provide desk critiques and to participate in a gallery-style review of the design students' final work.

In addition to project-specific work, the primary and secondary students completed pre- and post-project assessments from the *Child-Friendly Cities and Communities Assessment Toolkit*. Pre-tests were administered on the first day of the project, and post-tests after the final presentation to city officials. Students ranked the following three statements on a scale of 'mostly true', 'sometimes true', and 'never true':

- 'I help with projects to change my community';
- 'I am involved in planning or decisions for the community'; and
- 'the government (city council, mayor, etc.) asks me my opinions about my life or my community.'

Outputs and outcomes

Primary school students reflected that their favorite part of the project was making the three-dimensional model of their desired neighbourhood. This was also the most challenging aspect of the project because it required cooperation and dialogue. As one student described, '*My favorite [part of the project] was when we made the Athens Court model because you got to share ideas and build the model, and you had to cooperate because everybody helped.*' Indeed, one of the strengths of the process was the number of different opportunities for dialogue. Both primary and secondary students had opportunities to discuss issues with Growing Up Boulder's interns and staff, design students, housing planners, architects and managers, city council members and city planners. Participatory planning frequently emphasizes the importance of physical features as tangible outcomes, yet the young people in this project also liked having opportunities to be heard and to talk to

each other as well as to a variety of partners. Primary school students showed significantly higher responses to all assessment questions. Both primary and secondary students showed significantly higher responses to the statement, 'The government asks me my opinions about my life or my community.' Secondary school students did not show significant change in the direction of their responses for the other questions. These questions also were less directly linked to project outcomes in that students did not have opportunities to make tangible changes to a place.

In terms of the impact on physical plans, both primary and secondary school students provided many overlapping recommendations. These included diverse natural areas, play and recreation spaces, sustainable features (including greenways, alternative transportation, renewable energy), mixed use, and safety features. Both children and youth wanted to see these elements integrated throughout the neighbourhood rather than having discrete zones for singular activities. This reflected a desire for all ages to be part of the community. All features in their designs were within walking distance without the interruption of roads.

Both primary and secondary school students demonstrated an increased understanding of density and the diverse needs within a city. This is important when contrasted with adult citizens' controversial response to increased density. The city's director has reflected that he wished many more young people '*and adults*' could have participated in the process, so that people would spend more time listening and learning from each other than advocating solely for their own needs.

In an analysis of the undergraduates' master plans, design students included the majority of recommendations from children and youth. This included specific park designs; using hills and berms for play and flood mitigation; incorporation of green spaces in or on roofs, courtyards, gardens, and wild zones; integration of affordable mixed use into housing area; specific housing arrangements; separation of bike and walking paths; and creation of greenspaces and greenways for walking without the interruption of roads. In their final presentation boards, some of the university plans also included a section with 'what we heard you say', directly acknowledging the influence of children's ideas in their thinking. While the details vary across design students' plans, all the undergraduates were able to clearly state ways they had incorporated children's ideas into their final plans.

In undergraduate students' reflection papers, many expressed some degree of transformation in their knowledge, skills, and interest in including children in the design process. In the project evaluation, many undergraduates stated that initially they had not thought children would make meaningful contributions to their designs, but in the end, they did. Design students said that young people infused more creativity and 'out of the box' thinking while also grounding their designs in the everyday lives of users.

In the fall of 2014, undergraduate design students and GUB coordinators presented results of both stages of the project to approximately 20 city representatives, including those from Community Planning, Housing and Sustainability, and the city's planning and design advisory boards to further integrate ideas into the Comprehensive Housing Strategy. One of the design advisory board members reflected that the young people's ideas were so new and refreshing that the greatest challenge will be to maintain that character when designs are rendered by adults.

While planning is still underway both within the university and the city, young peoples' participation has had an influence in broadening design students, architects, and city

leaders' thinking about density and design within the city. As with all its projects, Growing Up Boulder will continue to work with the city and project partners to advocate for continued inclusion of children's ideas into relevant plans and processes so that the ideas are carried forward even during long time frames that extend beyond a single group's participation.

Quotes

'Thank you for picking Whittier for this awesome project! It was the best thing I have ever done in 3rd grade! The whole class worked their heart out working on Athens Court. I really enjoyed the whole process of making Athens Court because I am a mini architect and I love building.' (Whittier International Elementary School Student, Age 9, Boulder, Colorado, USA).

'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.' (Boulder High School Teacher, Boulder, Colorado, USA).

'The praxis semester has changed how I think about things. At first I thought, 'what are we going to be able to learn from 3rd graders building toilet-paper-tube models?,' but it was so cool seeing through their eyes what all this means. I could tell they care a lot about their community and the future of it. It was really cool getting their perspective on things. They changed the way we were thinking about designing. It is hard to break away from the norms of how we've been designing. Working with the kids has helped us to do this.' (ENVD Undergraduate Student, Boulder, Colorado, USA).

'When one designs in our era, the designer brings their own baggage about who the design is for, who is the audience. The audience might be the fraternity of cutting-edge architecture, or some subculture of that, and the desire to cement one's membership in that cultural community. . . [But by] starting with [the GUB] work done the semester before, it kind of naturally shakes you out of that. And the work is for other people, and so once created, it sinks those personal self-absorbed desires; they are infected by the participants. And it's easy to connect with kids because they communicate passion, and it's less threatening than listening to other adults with competing interests and realities.' (ENVD Faculty Member, University of Colorado, Boulder).

'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 coeducational process so that it's a dialogue . . . and coming to a richer understanding . . . of all the things that go into creating a city.' (City of Boulder, Executive Director of Community Planning, Housing, and Sustainability).

Acknowledgements

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Resources

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Boulder High School Students Present Their Ideas to Environmental Design Students, Boulder, CO. Courtesy: University of Colorado Boulder. (photographer: Lynn M. Lickteig).



Faculty and Architects review a Whittier International Elementary School neighborhood model, Boulder, CO. Courtesy: University of Colorado Boulder. (photographer: Lynn M. Lickteig).





A second Whittier International Elementary School model, showing greenery, mixed use, and multiple housing types. Boulder, CO. Courtesy: University of Colorado Boulder. (photographer: Lynn M. Lickteig).



Boulder High School students provide desk critiques to Environmental Design students at the University of Colorado, Boulder, CO. Courtesy: University of Colorado Boulder. (photographer: Lynn M. Lickteig).