Growing Up Boulder’s Report on Child Involvement in Designing Universal Access Playgrounds

2017-18
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Overview

Growing Up Boulder (GUB) is Boulder’s child and youth-friendly city initiative, established in 2009 as a formal partnership between the City of Boulder, Boulder Valley School District (BVSD), and University of Colorado. GUB is a program of the Community Engagement Design and Research (CEDaR) Center, which is housed in the Program in Environmental Design (ENVD). GUB aims to make Boulder an exemplary child and youth-friendly city by empowering Boulder’s young people with opportunities for inclusion, influence, and deliberation on local issues that affect their lives.

During the fall semester, Growing Up staff partnered with second grade English Language Learner (ELL) students at Whittier International Elementary School and their ELL teachers. The primary objectives of the engagement were two-fold: to have students learn about Universal Access Design (UAD) playgrounds to see if they have value as a design concept from the children’s point of view, and then to consider what UAD elements children would recommend to the city for any future playground installations. Students studied three local playgrounds by experiencing them first-hand and then by talking to local experts, who included people with a range of needs and abilities. The children concluded the project by sharing their recommendations for fun and inclusive playground design and equipment in order to help the City of Boulder Parks and Recreation staff improve the accessibility of playgrounds throughout the city.

“I was deeply moved by the power of this project both as an educator and as a human. I genuinely learned alongside the students. Aside from learning about the importance of inclusive thinking and action, I learned the power of service learning. It has changed me as a teacher.”

--Terri LeRose, ELL Teacher

By the Numbers

- 11 ELL students ages 7-8 (1 student from Nepal, 2 students from Korea, 1 student from Bosnia, 7 students from the U.S. or Mexico)
- 2 Whittier ELL teachers
- 1 GUB Education Coordinator
- 1 ENVD undergraduate volunteer
- 1 representative from City of Boulder Parks and Recreation Department
- 6 community members (provided expertise)
- 8 community members attended the Share Out presentation (including a current city council member, Parks and Recreation planner, BVSD directors, and Whittier parents)
- 22 classroom hours
Project Description

During the fall of 2017, Growing Up Boulder asked eleven Whittier Elementary School students to share their ideas on how to make Boulder’s playgrounds more inclusive for people of all abilities. Under the guidance of Whittier English Language Development (ELD) teachers Terri LeRose and Tamar van Vliet, students engaged in the “Roots and Shoots” four-step process for identifying the needs of Boulder’s local playgrounds. Their project included a field trip focusing on site analysis, extensive classroom research, visits from guest experts, building a 3D model, and a class presentation to city representatives, community members and GUB staff.

The second graders started by learning about different ways that young people take action in their local communities around the world. Using a UAD design checklist that the students made themselves, Whittier students had the opportunity to visit and complete a site analysis of Foothill Community Park, Scott Carpenter Park, and their own Whittier playground. Students used red and green picture frames to highlight what they liked about each playground (green to indicate “advantages”) and what they didn’t like (red to indicate “disadvantages”) and looked for elements that were safe, fun, novel, and inclusive.

The students interviewed guest speakers with a wide range of abilities, including Gerry Leary, the world’s only known blind coffee roaster and owner of the Unseen Bean coffee shop, three visitors from the Center for People with Disabilities, a 4th grade student with Sensory Processing Disorder (SPD), and a 5th grade student naturalist. Tina Briggs, a planner from the City’s Parks and Recreation Department, visited the children’s classroom and provided feedback about students’ research and ideas part-way through their study.

After talking with community members with a range of abilities and needs, students conducted research to develop a list of playground recommendations that would be fun, novel, and inclusive, while also incorporating nature play. During their inquiry, students learned essential background knowledge about Universal Access Design playgrounds, acquired new English vocabulary words, and developed skills in group decision making, persuasive writing, digital presentation production, and oral presentation. Students created a 3D model to represent their vision as well as a comprehensive list of recommendations for improving the K-2 playground at Whittier and for improving city parks in general.

Key Terms

**Universal Access Design (UAD):** An approach to the design of buildings, structures, and products in a way that ensures accessibility to people of all abilities.

**Sensory Processing Disorder (SPD):** A neurophysiologic condition in which sensory input either from the environment or from one’s body is poorly detected, modulated, or interpreted and/or to which atypical responses are observed (from the Star Institute for Sensory and Processing Disorder).
Nature Play: Nature Play promotes daily contact with the natural environment and outdoor spaces which promotes healthy development. The aim is to create a greater appreciation for and awareness of the natural environment (from the Boulder Parks and Recreation Department).

Project Timeline

October 19, 2017: Inquiry
Students were asked to brainstorm and categorize their ideas about what a playground should have in order to be inclusive, what they want from a playground, and what they need from a playground. The students shared their ideas by answering the following questions:

- What do you want a playground to have?
- What do you need from a playground?
- What should a playground have so that everyone can play?
- Do you believe Universal Access Design is an important concept to incorporate in playground design?

Students shared their ideas for inclusive playgrounds during the walk-through presentation.

October 26, 2017: Research
Students looked at photos of accessible playgrounds and listed the things they saw and noticed about the different playground designs. They were also asked to list the things they wondered about in regard to playground equipment and certain aspects of the playgrounds. Teachers helped the students email their questions to Emily Griffee, Playground Specialist at Recreation Today (a playground equipment company based in Idaho), who then answered their questions and told them about the purposes of different playground structures.

Students talked about their observations on the playground photos they studied.
November 2, 2017: Synthesizing UAD Elements/Creating Checklist
Using the information they learned from looking at photos of ADA playgrounds and brainstorming ideas about what they needed from a playground, students made a playground design checklist to use for site analysis on a field trip to area playgrounds. Students, teachers, and GUB staff visited Scott Carpenter Park, Foothills Community Park, and their own playground at Whittier International Elementary School. The checklist included important playground elements such as soft surfaces, ramps, slides of different sizes, a spin cup, and high/low monkey bars with overarching goals that a playground be safe, fun, novel, and inclusive for all.

November 13, 2017: Field Trip Day
At Scott Carpenter Park, Foothills Park, and the Whittier Elementary playground, students took pictures of a variety of playground equipment and stated the advantages and disadvantages they observed.

November 16, 2017: Goal Mapping
The students created a map of the Whittier playground and identified safe, fun/novel, and inclusive areas/structures using color coded stickers.

The students were visited by Ed, Aaron, and David from the Center for People with Disabilities, and Gerry, the owner of the Unseen Bean coffee shop. The speakers talked about their experiences with their own disabilities, such as blindness and being in a wheelchair, and students took notes of the suggestions they made about elements they would like to see on a playground. Then, on notecards, students recorded their reflections about the experience.

Students talked with local experts about how to make Boulder’s playgrounds more accessible for people of all abilities.

December 5, 2017: Identifying Most Valued Playground Elements

Adding in the suggestions for playground elements from the guest speakers, the students made a list of playground elements they would like to incorporate into a UAD playground. After creating a list, the students used stickers to vote for the ideas they preferred.

Students shared their poster on which they voted for the playground elements they thought were most necessary.

December 7, 2017: Working with a Parks and Recreation Expert

After identifying the ideas they valued most, students wrote down disadvantages and advantages of the different playground areas and structures with help from Tina Briggs. Using Tina’s feedback, the students established four main categories they would like to see on their playground. These categories included a big, open space, quiet space, structures, and nature spaces. These categories helped organize their ideas into a playground plan, which they used to create their 3D model.

Students made a 3D model of an ideal playground that includes the elements and structures they identified earlier in the process.

December 8, 2017: Taking Action Through Writing

Students wrote persuasive letters to Principal Oswick, the Parent Teacher Organization (PTA), and Tina Briggs about their playground ideas and why they felt their ideas should be incorporated into the design.
December 18, 2017: Partnering with a CU Environmental Design Student

Genna Bartingale, a CU Environmental Design Undergraduate, made sketches of the students’ ideas to share with the school district in January.
January 16, 2018: Share Out Day
Students shared their ideas about UAD playgrounds with school, city leaders, and parents that attended their presentation.

Student present their ideas on share out day.

January 27, 2018: School-wide Assembly
Students were part of a school-wide assembly where a Buddy Bench was donated to Whittier by the organization Resort to Kindness on January 27, 2018. A buddy bench is a bench designated for kids to sit when they need a friend to play with. This way, kids can invite those who do not have friends to play with to play with them. While the school was already planning the buddy bench installation before the GUB engagement, the bench aligned perfectly with the request of the students to have one on the playground.
On-going Work: A group of interested parents and the Whittier PTA will use the students’ research and recommendations to inform an upcoming GOCO (Great Outdoors Colorado) grant application. The children’s recommendations will used as the city designs new play spaces in Boulder.

“Students were able to learn new vocabulary, develop empathy for others, and further their understanding about inclusiveness. We were able to connect to the International Baccalaureate (IB) attitudes and some English Language Development (ELD) standards, such as vocabulary, giving oral presentations, and writing persuasive letters.”

--Tamar van Vliet, teacher at Whittier International Elementary School

Summary of Findings

Students strongly believe in Universal Access Design for playgrounds because they value inclusion and feel that playgrounds should be accessible by all users, including their caregivers. Based on the input from guest speakers about the importance of accessibility for people in wheelchairs, people with blindness, and people with SPD, students concluded that inclusive playgrounds should provide users the following:

- **Quiet Spaces** for kids with SPD to have the opportunity to take a quiet moment from the rest of the playground and to relax.
- **Integration of Nature** as a way to positively immerse all children in natural play. The students learned that due to nature’s relaxing and calming qualities, it is especially useful for kids with SPD.
- **Accommodating Structures** such as ramps, benches, and climbing structures in order to provide fun and safe playtime for children of all abilities.
- **Accommodating Textures** such as soft surfaces or paved pathways to allow for easy and safe mobility for children of all abilities.

Theme Descriptions

<table>
<thead>
<tr>
<th>Quiet Space</th>
<th>Nature</th>
<th>Accommodating Structures</th>
<th>Accommodating Textures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A bench to watch from and calm down</td>
<td>Trees</td>
<td>Spin Cup (low height and ramp)</td>
<td>Soft surfaces</td>
</tr>
<tr>
<td>Place to relax</td>
<td>Open Green spaces</td>
<td>Ramps on structures</td>
<td>Smooth surfaces</td>
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<tr>
<td>Hiding places</td>
<td>Flowers</td>
<td>Low basketball hoop</td>
<td>(no wood chips)</td>
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<tr>
<td>Places to lie down</td>
<td>Tree trunks to balance on</td>
<td>Slides of different sizes</td>
<td>Paved paths to get around</td>
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<tr>
<td>Friend bench</td>
<td>Tree house</td>
<td>Bounce buttons for balancing</td>
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<tr>
<td></td>
<td>Grass to lay down in</td>
<td>Bars to hold onto</td>
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</tbody>
</table>

<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Slides of different sizes</td>
<td>Paved paths to get around</td>
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<tr>
<td>Movement</td>
<td>Cooperative Play</td>
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<td>----------------------------------------------</td>
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<tr>
<td>● Rocks to climb</td>
<td>● Dollhouse</td>
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<td></td>
<td>● A 3D mode/device that describes the playground</td>
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<tr>
<td></td>
<td>● Round curbs</td>
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<td></td>
<td>● Swings with backrest</td>
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<td></td>
<td>● Monkey bars</td>
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<td></td>
<td>● Fidget spinners</td>
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<td>● Music and dance area</td>
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<td>● Pools</td>
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<td>● Zipline</td>
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<td>● Slides</td>
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<td>● Trampoline</td>
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<td></td>
<td>● Swings</td>
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<td>● Something fun to go down</td>
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<td></td>
<td>● Swinging toys</td>
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<td>● Gymnastic pole</td>
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<td></td>
<td>● Spider-web</td>
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<td></td>
<td>● Dog area</td>
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<td></td>
<td>● Big kid and little kid area</td>
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<tr>
<td></td>
<td>● Board games</td>
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<tr>
<td></td>
<td>● Video games</td>
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<tr>
<td></td>
<td>● Spin cup</td>
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<tr>
<td></td>
<td>● A place to play tag</td>
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<td></td>
<td>● Somewhere to talk with a friend</td>
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<td></td>
<td>● Sports</td>
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</tbody>
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“After hearing Gerry speak, it made me think about how Gerry can feel the structures and the stairs of the playground.”

--2nd grade student at Whittier International Elementary School

**Reflections**

**Student & Teacher Reflections**

After being involved in this project, students reported having more empathy towards people with a variety of disabilities and needs. Students also developed a thorough understanding about the many disadvantages and advantages on the current playground so they could make recommendations for a more inclusive playground in the future. The students learned that their ideas matter and will be listened to by our local government.

Teachers noted that involving ELL students (whose voices often are marginalized) in community engagement was powerful. Students learned the value of voicing their opinion in their
community. Teachers noted that visiting the playgrounds to analyze them and inviting guest speakers to broaden the students' understanding were also important aspects of this project.

GUB Reflections

Engaging children is a critical aspect of public participation because children are active members of our community, and, especially in this case, primary users of parks and playgrounds. Community sessions with relevant and current city projects help students understand city decision-making processes and teaches them that they can play an important part by contributing valuable ideas to the city.
Students completed surveys before and after this project to measure their beliefs about their level of civic engagement. While their perception of engagement increased in response to all of the questions that were asked, the students showed an especially strong increase in response to the two questions shown in the charts. In other words, students felt they had little say in community issues before working with GUB, but by the end of the project, they felt they had a much greater say in community issues.

“After hearing Tina (Briggs) speak, it made me think about me being like Tina.”

--2nd grader at Whittier International Elementary School

**Conclusion**

Whittier students feel strongly that Boulder playgrounds should be safe, fun, novel, and inclusive. They believe that Universal Access Design, as a model for designing playgrounds, represents current best practice in the field and they recommend that Boulder City Parks and Recreation planners should incorporate UAD when updating city playgrounds. Through the blended model of Jane Goodall’s Roots and Shoots approach and Growing Up Boulder’s participatory action research methods, Whittier students came to intimately know and respect what it might be like to experience a disability, and they learned how those different needs translate to accessibility in playground design. We believe that the students’ deep investigation led to rich and meaningful project results.

**Partners and Appreciation**

GUB would like to thank our city and school partners who invested their time and energy to make this engagement possible. Our special thanks go out to Tamar van Vliet and Terri Lerose for their exceptional pedagogy and partnership with GUB, and to their students for their commitment to UAD and for sharing their knowledge and recommendations to the city and community:

- Boulder City Council
  - Mary Young, Council member
- Boulder Valley School District
  - Kristin Nelson-Steinhoff, Director of Language Development
  - Carolyn Nohe, Communication Specialist
- City Experts
  - Tina Briggs, City of Boulder Parks and Recreation Planner
- Community Experts
  - Aaron, Ed, and David from the Center for People with Disabilities
Gerry Leary, Unseen Bean, Owner
Lynn M. Lickteig, photographer

Growing Up Boulder Staff
- Aria Dellepiane, GUB, Program Associate
- Nihan Efegolu, GUB, Intern
- Cathy Hill, GUB, Education Coordinator
- Mara Mintzer, GUB, Program Director
- Sara Taketatsu, GUB, Intern

University of Colorado
- Genna Bartingale, ENVD Undergraduate Volunteer, map maker
- Willem van Vliet, Professor Emeritus

Whittier International Elementary School
- Megan Dubofsky, Whittier parent
- Sarah Oswick, Whittier principal
- Kristen Palmer, Whittier parent
- Tamar van Vliet, English Language Development Teacher (ELD)
- Terri LeRose, English Language Development Teacher (ELD)
- 4th grade student with SPD
- 5th grade naturalist

"The students were impacted by how powerful their voice could be and how the Boulder community valued their input. I cannot emphasize enough the importance of having immigrant voices heard and valued in this tenuous moment in the U.S."

-- Terri LeRose, Whittier International Elementary School ELL teacher

An additional report appendix, which includes extensive student-generated data, is available upon request by contacting Growing Up Boulder staff at growingupboulder@gmail.com.