

Connecting Curriculum

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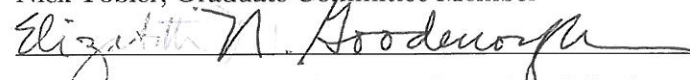
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Connecting Curriculum

Documentation of a Child-Designed Playscape

by Laura Amtower

With Special Thanks To

My Thesis Committee

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TABLE OF CONTENTS

Abstract	5	Connecting Curriculum	30
Introduction	6	Exhibition	30
Contextual Information & Literature Review	8	Conclusion	35
Arts in Schools	8	Bibliography	37
Engaged Pedagogy in Public Education	9		
Playscape Curriculum	13		
Gaining Understanding	13		
Participatory Research	18		
Shared Learning Experience	21		
Design for Peers	25		
Design for Public	26		

Abstract

Connecting Curriculum is a reflection about my involvement in a yearlong playground redesign with the students and community of Ann Arbor STEAM @ Northside elementary. This socially engaged project lies at the nexus of child-centered design, participatory research and curriculum development as it connects public classroom learning, collegiate studies and public engagement. This paper examines the balance of arts integration and community engagement in public education through a particular set of case studies throughout the project, and concludes with the Connecting Curriculum exhibition as a method of creating an accessible language for the public to experience the classroom learning and results.

Keywords: agency, arts-integration, child-centered design, curriculum, community, education, engaged pedagogy, experiential learning, participatory research, pedagogy, playgrounds, public spaces

Introduction

Throughout the 2014-2015 Ann Arbor public school year, I co-facilitated the development of a child-designed playscape at Ann Arbor STEAM @ Northside Elementary with collaborator Rachael Van Dyke. This multi-faceted project connected classroom learning to real-world affairs, providing students with the opportunity to engage in the transformation of their school and to impact their community.

Rachael works as the art & design educator at Northside, teaching students in Kindergarten through 6th grade. Only knowing each other for less than two years, we got together one sunny afternoon in early September to converse about our experiences in art education and other common interests. We quickly discovered our desire create a more engaged art experience for children than is typical in most public school curricula.

Rachael expressed interest in applying these methodologies to the current circumstances regarding Northside Elementary. She

explained that A2 STEAM was a brand new school functioning within an old system. For several years Northside Elementary had been operating at only 25% occupancy and was on the brink of closing. The Ann Arbor Public School Board of Education faced the decision to either eliminate Northside from their list of schools or to pilot an entirely new approach in Washtenaw County; the incorporation of a STEAM (Science, Technology, Engineering, Arts & Math) module into their existing framework. Choosing the latter, officials overhauled Northside Elementary, hiring an entirely new roster of teachers and staff. This transition from the student's familiar learning environment to a project-based school was particularly difficult for those returning students. Only being familiar with roughly $\frac{1}{4}$ of their classmates, these students faced circumstances requiring them to adjust to a project-based instruction methods, new classmates and unfamiliar teachers.

I learned that the conversion to a STEAM school, would replace the current gymnasium with a multipurpose laboratory. Architects involved in the school's renovations chose the Kindergarten & 1st grade playground as the best location for the new gymnasium. In addition to Northside's major social and structural shifts, the children were heartbroken upon hearing news that the Kindergarten & 1st grade playground would be demolished and possibly not replaced.

Simultaneously, Rachael and I agreed that involving the children in this transition would not only help them feel a sense of agency among these momentous changes, and also provide an opportunity to share their desires with school officials and community. We thought that elementary students could establish a form of democracy in decision-making, and we as educators could promote their ideas through a learning experience connected with the classroom curriculum. We designed a yearlong curriculum to accomplish three goals: The first, to create a learning experience that

would develop the children's capacity to think about the cultural and social aspects of playgrounds and connectedness to community. The second, to involve the children in participatory research so they could come up with their own questions. And the third, to create a curriculum that combines individual expression and collaborative work.

The initiation of a child-designed school playscape was difficult and arduous. Implementing play related lessons proved to be much easier than convincing of school officials and community to embrace such a seemingly wild idea. Operating this project on an art and design platform resulted in a large body of research, drawings and visual representations that proved a valid case for proposing the collaboration among architects, students, teachers and community. In mid-October, after close to one month of rigorous art and play-based school projects, Rachael and I began negotiating with the Ann Arbor consulting firm renovating the school in order to incorporate

aspects of Northside students' designs. What follows is a description of the process, and the significance of what we did.

Contextual Information & Literature Review

Arts in Schools

A key feature in the development of art education in America was the Picture Study Movement, which appeared in the late 1800s and began to fade in the 1920s. (Smith, 1986, p. 48) As young children and families immigrated to America, educators faced great difficulty in teaching through the various written and spoken language barriers. They noticed that speaking through a visual language helped establish an accessible methodology for teaching children in each of their school subjects. (Smith, 1986, p. 48)

In the 1980's, when art served as a curricular staple in education, Discipline-Based Art Education (DBAE) emerged to

divide artistic learning into four categories: aesthetics, studio production, art history and art criticism. (Delacruz, 1987, p. 135) DBAE operates under a very strict assumption about learning outcomes and learning approaches, leaving little room for experimentation or cross-disciplinary exploration.

Creativity in contemporary education diminishes each year as emphasis on standardized testing increases through Common Core State Standards. Common Core is implemented in 43 states and the District of Columbia. It's goals focus on six elements:

1. Research- and evidence-based
2. Clear, understandable, and consistent
3. Aligned with college and career expectations
4. Based on rigorous content and application of knowledge through higher-order thinking skills
5. Built upon the strengths and lessons of current state standards
6. Informed by other top performing countries in order to prepare all students for success in our global economy and society (2015, Common Core State Standards Initiative)

The outcomes of each of these goals are measured through quantitative test scores of each school. Each state creates their own

goal set to ensure each child meets the specific, numeric regulations. (2015, Common Core State Standards Initiative)

While this approach may have good intentions, it does not permit flexibility in accommodating students of different learning abilities. Children attending public education from a low socio-economic status background suffer because they start school with a disadvantage, often unable to retain information through a learn, test, repeat process. Common Core State Standards hinders flexibility in classroom instruction. In this system, teachers are held responsible for the students' test scores, placing too much emphasis on the teachers while ignoring the environmental factors that influence children's learning. With such an emphasis on measurement, teachers have little room to invent create ways of learning for their students.

As political focus shifts to the evaluation of these testing scores, funding in public education has been appropriated to accommodate standardized tests. While little new funds are

introduced, the remaining funds are stripped from what are perceived as extracurricular activities such as art, music, theater, and physical education. Researcher David Gullat advocates for the integration of arts into standard subjects such as English, math, science and social studies to enrich classroom learning and as a way to establish sustainable creative practice in public education. He notes that skills taught through the arts are transferred to skills in other academic areas. (Gullatt, 2008, p. 14) As though the concept of arts-integration seems to fall under the ideal notions of "progressive education," its implementation dates far back to the philosophies in the late 1800s.

Engaged Pedagogy in Public Education

Philosopher, psychologist and educational reformer, John Dewey was instrumental in the evolution of progressive education. He believed in the benefits of educators individually addressing the social interests of students. (Dewey, 1938, p. 5)

“In the case of education, modulation means movement from a social and human center toward a more objective intellectual scheme of organization, always bearing in mind, however, that intellectual organization is not an end in itself but is the means by which social relations, distinctively human ties and bonds, may be understood and more intelligently ordered.” (Dewey, 1938, p. 83)

This concept of intellectual organization can relate to the multi-faceted teaching approach in connecting students with real world learning experiences. In this approach, the focus lies more on the experience of learning and curation of pedagogy than a quantifiable end result.

Dewey describes what having an experience is all about, particularly in relation to whole body learning by doing. “As we manipulate, we touch and feel, as we look, we see; as we listen, we hear. The hand moves with etching needle or with brush. The eye attends and reports the consequence of what is done. Because of this intimate connection, subsequent doing is cumulative and not a matter or caprice nor yet of routine. In an emphatic artistic-esthetic experience, the relation is so close that it controls simultaneously both the doing and the perception. Such vital intimacy of connection

cannot be had if only hand and eye are engaged. When they do not, both of them, act as organs of the whole being, there is but a mechanical sequence of sense and movement, as in walking that is automatic. Hand and eye, when the experience is esthetic, are but instrument through which the entire live creature, moved and active throughout, operates. Hence the expression is emotional and guided by purpose.” (Dewey, 1934, p. 54)

These ideals in integrating multi-faceted experiences with learning methods fall under the contemporary terminology of engaged pedagogy, or project-based pedagogy. Elizabeth B. Moje expands on their effectiveness of project-based pedagogies in her 2000 essay, “*Maestry, What is ‘Quality?’*” *Language, Literacy, and Discourse in Project-Based Science*. Though her article emphasizes the implementation through science, the arts may substitute as another hands-on method of investigation in the classroom. She explains that the features of a project-based pedagogy include (a) questions that encompass worthwhile and meaningful content anchored in

authentic or real-world problems; (b) investigations and artifact creation that allow students to learn apply concept, represent knowledge, and receive ongoing feedback; (c) collaboration among students, teachers, and others in the community; and (d) use of literacy and technological tools. (Moje, 2000 p. 469) The article later explains that such a method of experimentation and investigation enables specific discourse needed to conduct authentic inquiry. (Moje, 2000 p. 469) Providing a framework where students conduct their own methods of discovery tend to develop a stronger connection with content being taught. (Moje, 2000, p. 482)

By issuing purpose to a learning experience, particularly public school curriculum, students are able to integrate real-world experience with new skills. The teacher-student exchange in experiential learning fosters a unique collaboration in developing a new set of knowledge. In 1961, Brazilian educator and philosopher Paulo Freire developed his critical pedagogy which addressed modes of communication that recognize creative ways in which teachers

and students may share a collaborative, nonhierarchical experience in learning from one another. (Helguera, 2011, p. 52) Freire's model proved successful when he taught 300 sugarcane workers in Pernambuco how to read and write in just 45 days. (Helguera, 2011, p. 52) He developed a reciprocal model of learning among himself and the farmers by creating a game where they each proposed a question about a topic they most likely knew nothing about. (Helguera, 2011, p. 52) Freire describes his role in this project as not telling his students what they didn't know but instead helping them discover their own expertise and deciding for themselves what they needed to know. (Helguera, 2011, p. 52)

Artists, designers, educators and activists of all backgrounds are now collaborating to integrate experiential learning with communities, using creative application as a platform of operation. In 2014, the Ripple Effect Program in New Orleans, third party organization connecting teachers, designers and students, launched a place-specific project connecting classroom instruction with local

water issues. This project focused on redesigning Kipp Central City Primary's underused playground (see figure 1) into a water literacy campus. Students learned about their school's flooding issues, and studied ways in which they could design a space to solve the large areas of stagnant water that frequently prevents outdoor recess. Students and teachers together proposed rain gardens, trees, and grass mounds to help distribute the water overflow and create an aesthetic and playful environment (see figure 2).

Projects like the water literacy campus are gaining more popularity among schools, as they give purpose to classroom curriculum. Connecting new content being learned with real-world issues in the students' environment provides a more meaningful schooling experience.



Figure 1. Kipp Central City Primary Courtyard Project



Figure 2. Kipp Central Water Literacy Proposal

Playscape Curriculum

Gaining Understanding

Mid/Late-September, 2014

Before starting the playscape curriculum, each class grades K-5 completed a two-part series of playground drawings. These functioned both for the students as a method for understanding playground design and for the teachers as an assessment tool to learn about the students' interests, skills, and intentions. Children first created outdoor observational drawings of the current, soon-to-be-demolished playground. Following this assignment, they drew many playscapes in which they did not consider money, safety, or practicality. Both observational and many drawings provided students a point of comparison among feasible designs and conceptually driven play spaces. This pre-assessment series helped create a platform of mutual understanding between both Rachael and me and the elementary students.

Observational Drawings



Figure 3. 3rd Grade Observational Drawing



Figure 4. Kindergarten Observational Drawing



Figure 5. 4th Grade Observational Drawing Sample

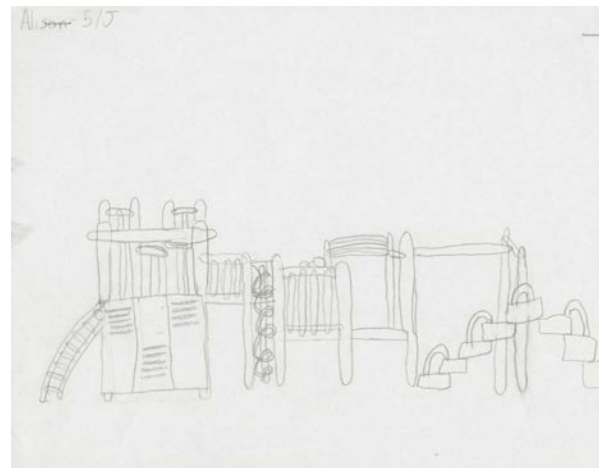


Figure 6. 5th Grade Observational Drawing Sample

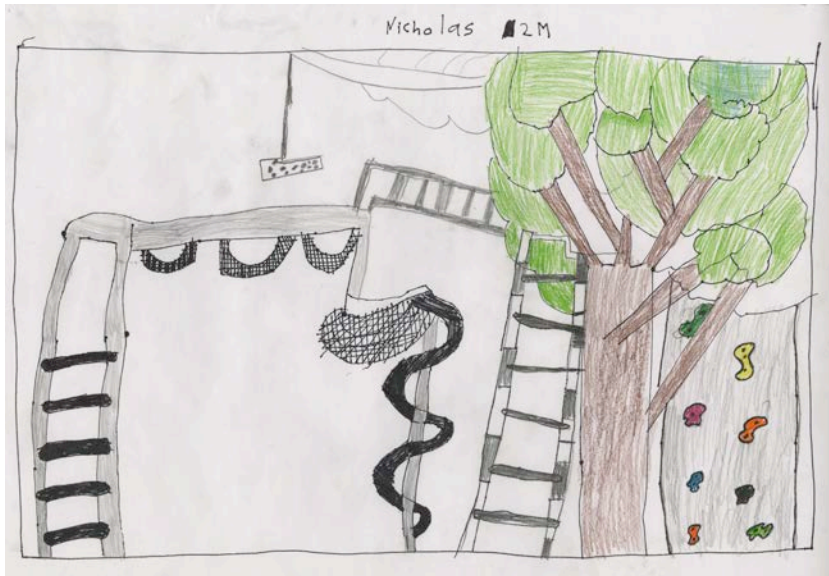


Figure 7. 2nd Grade Observational Drawing Sample

This series of drawings occurred over three, forty-minute sessions outdoors. In these observational drawings, students chose which area on their playground to focus on based on personal preference. Before going outside, we held a class discussion to gauge the range of interests the children demonstrated in thinking about the current play structures. When asked to talk about aspects they wanted to focus on in their drawings, the children typically responded with structures such as slides and monkey bars. Students

in grades Kindergarten through 2nd grade typically drew large structures with broad areas of negative space (see figure 7). Students in grades 3 through 5 collectively included more lines and overlapping to depict their playground representations. Younger students tended to include more attention to vegetation such as trees and grass, while the older children almost strictly studied the architecture of each play structure. Almost all drawings demonstrated a distinct, flattened horizon line with no imagery in the foreground.

Some drawings were in the corner or right along the edge. Some were smack dab in the middle. Some of the lines were interestingly long and wobbly, but we tried really hard to push for confident and solid structures. They had the chance to draw anything on their playground. Almost everyone incorporated a slide and the climbing structure attached. Few drew the swings or seesaw, and only one drew the basketball court. This really indicated to us, the facilitators, what the children were interested in and what they felt connected to.

Zany Drawings



Figure 8. 2nd Grade Zany Drawing Sample

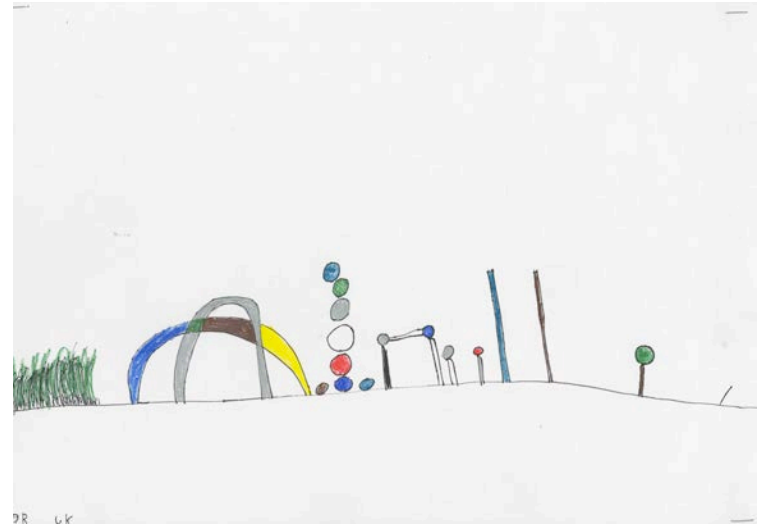


Figure 9. Kindergarten Zany Drawing Sample



Figure 10. 2nd Grade Zany Drawing Sample



Figure 11. 2nd Grade Zany Drawing Sample

Before beginning the zany drawing series, we again held a class discussion to understand how students would describe their ideal play setting. We wanted the students to consider the range of aspects from life observations to a conceptually driven play space. Rachael and I prompted the students to design their ideal space considering aspects like financial limitations, safety regulations, and logistical issues could be foregone.

Students demonstrated a very broad range of designs in their zany drawings. In verbally describing their drawings, students focused more on qualities in play than particular structures. Students of all demographics expressed a deep interest in risk-taking outdoors through their two-dimensional drawings (see figure 11). They contextualized familiar structures like slides in expressing ideas such as, “We would use the ladder to climb up to the tree house then go down the slide real fast.” Many of the drawings depicted a course-based pattern, where the participant would be encouraged to travel from point a to point b to point c. Many Northside children drew imagery in response to particular experiences, to ways their current playground could be improved. Girls in grades Kindergarten through 3rd grade in particular proposed more sheltered areas for imaginary play, while boys of the same age bracket featured more physically challenging climbing structures. Both girls and boys in grades 4 and 5 demonstrated interest in social or athletic settings.

Participatory Research

Ongoing- September, 2014-February, 2015

After completing the two-part drawing series, Rachael and I noticed how fostering dialogue around the students' personal interests increased the level of classroom engagement. In mid-September, we decided to try proposing one question a week for each class to collectively discuss. This routine quickly gained interest not only among students, but also with teachers and parents who could read the results posted outside the classroom in the Northside hallways.

After proposing two of our own questions, we provided the opportunity for students in one class to propose one question to the entire school each week. Every art class began with the weekly question, followed by a brief dialogue on the proposer's intentions. Students then voted on their preference by a hands-up, hands-down method, all to be tallied by the end of each week.

Data Charts

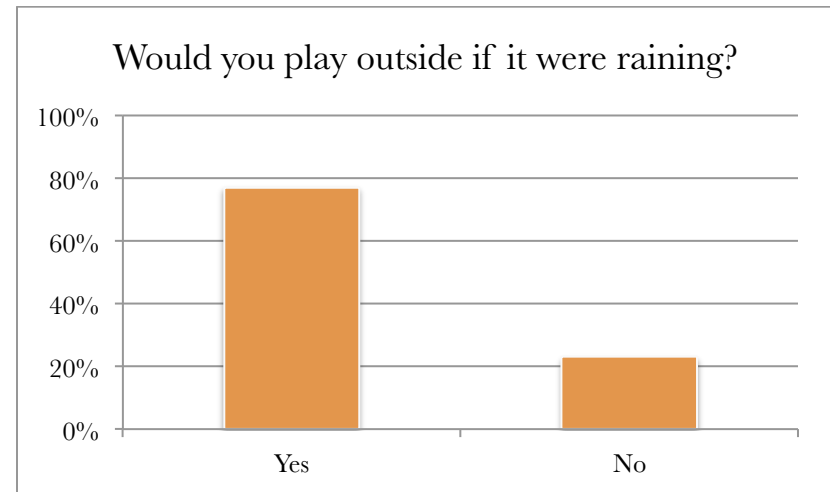


Figure 12. Question Proposed by Kindergarten

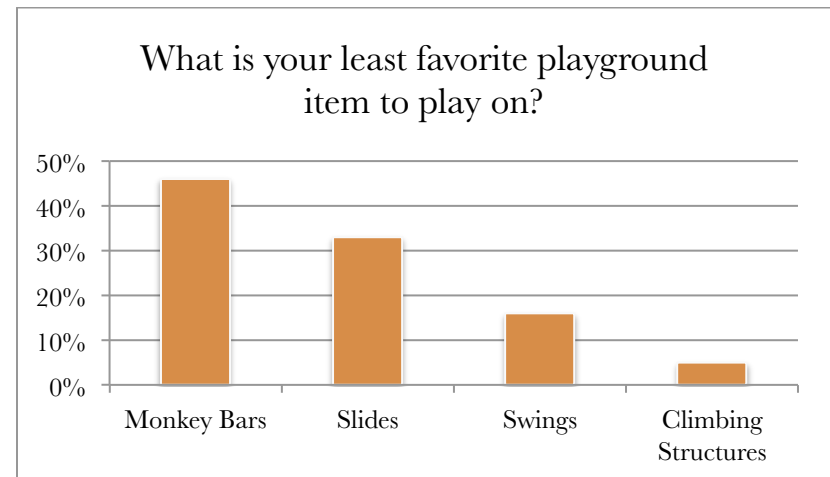


Figure 13. 3rd Question Proposed by 3rd Grade

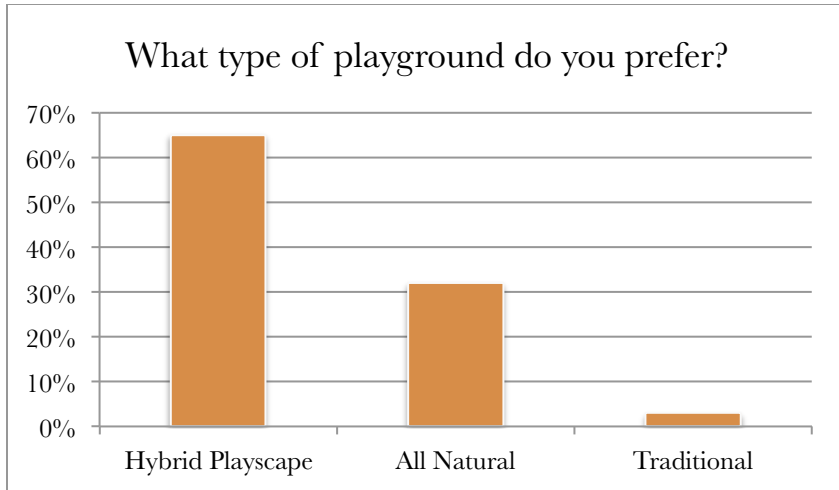


Figure 14. Question Proposed by 5th Grade

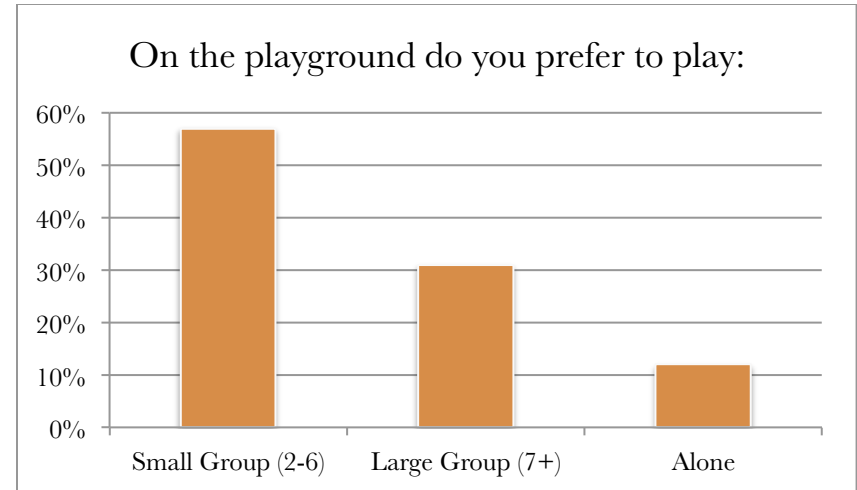


Figure 16. Question Proposed by 4th Grade

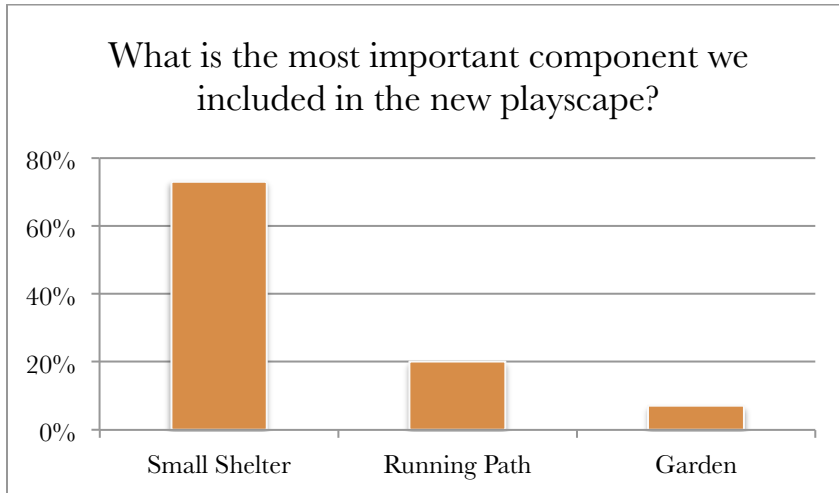


Figure 15. Question Proposed by 4th Grade

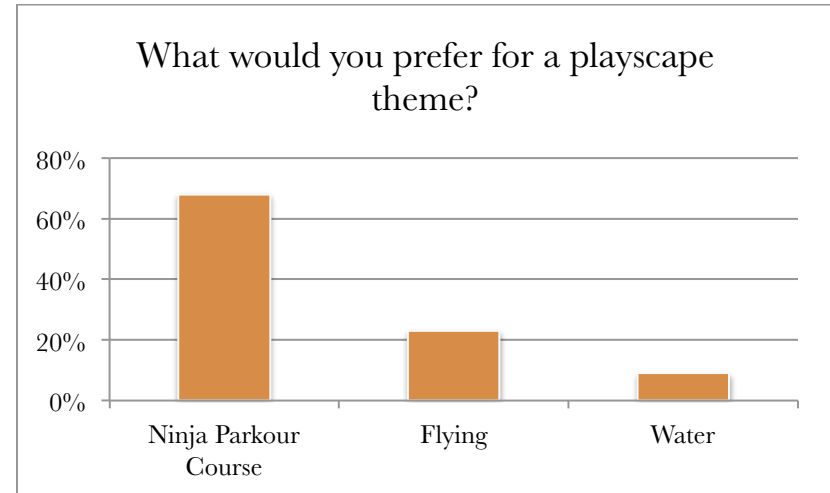


Figure 17. Question Proposed by 3rd Grade

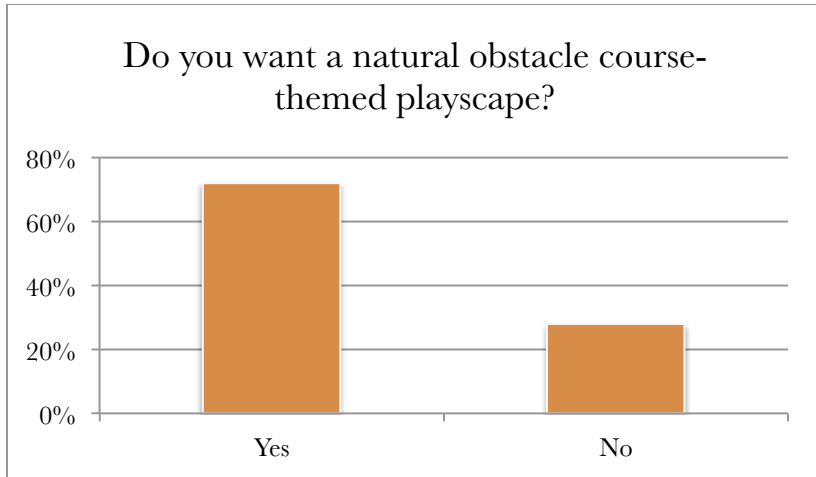


Figure 18. Question Proposed by 1st Grade

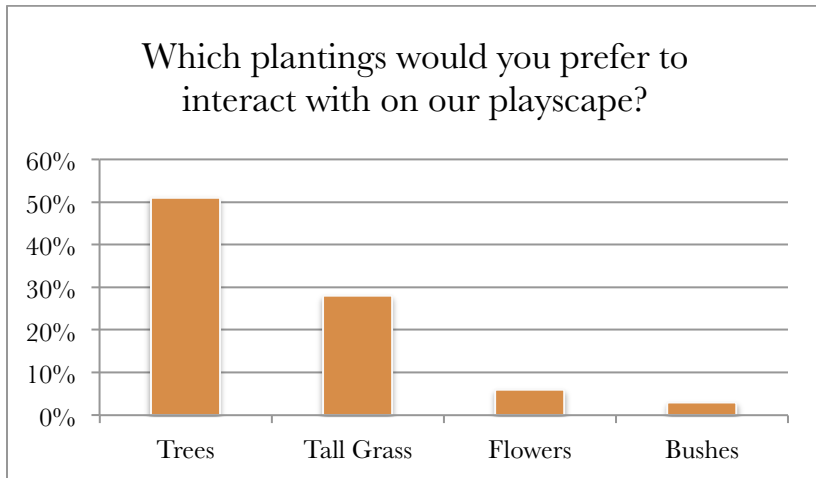


Figure 19. Question Proposed by 1st Grade

Each week's questions correlated with particular school events. For example, Kindergarten chose to challenge notions of indoor recess upon hearing the news it had been cancelled due to rain. Students in Kindergarten, first and second grade showed strong preference for aspects of the natural world and the ability to play freely outdoors. Their questions incorporated aspects of particular textures and natural plantings like trees, tall grass, flowers and bushes. Grades 3 through 5 proposed questions operating on a deeper level of critical thinking and ranking of multiple subjects. They demonstrated awareness in social interactions, thematic comparisons, and structural elements.

Shared Learning Experience

Early/Mid-October, 2014

In the second phase of this curriculum, Rachael and I co-curated a shared learning experience as a platform to launch the project. After studying the children's drawings and dialog, we recognized that each student brought to Northside a very unique and specific insight to notions of play. We thought that providing children with an opportunity to engage in a shared experience by physically and virtually studying playgrounds could enhance the development of their own theories and designs later in the year. In early October, students in grades K-5 began to research various types of playgrounds across the world. This investigation created a point of mutual understanding across all grades and students, promoting a rich conversation in our future designs. Students researched collaboratively in their eight table groups and presented their findings to their classmates using an overhead projector and microphone, enabling a collaborative element of participation.

Field Trip

In early October two delegates from each class, grades 2 - 5 participated in a local field trip to physically research play areas around Ann Arbor. Rachael and I chose three locations differing in natural and architectural features in which the children could play freely. We wanted to see how students would interact in each space and how their interests would be expressed through their drawings and dialog. All of the students explored Washtenaw County Park, Maya Lin Wave Fields and Matthaei Botanical Gardens, and presented written reports and images to classmates. Each of the visits occurred within a 30-minute time frame. Within each visit, students explored the play spaces for approximately 10 minutes. During this time Rachael and I observed the individual and social interactions among the children. After free play, students engaged in 10 minutes of small group dialog verbally answering planned prompts (see figure 20). The remaining ten minutes allowed a window for transition time between activities.

QUICK QUESTIONS FOR SMALL GROUP DISCUSSION

COUNTY FARM 2013 *Big Slides, Tunnels, Rope To Small love garden. Really love the looking swings*

What do you think?

What was your favorite area to interact with? *- Climbing ropes*

What other activities besides play goes on here? *The ropes*

What other people besides children use this space? *Animals*

How has the designer designed for other people to use beside children?

What would you like to see in the new STEAM playscape that you experienced here?
 -- is it the item itself, or is it the color, is the size, is the movement, is that you can experience it with a friend? *more areas, closer garden, fake grass was good.*

How could we make this a STEAM concept?

The Wave Fields by Maya Lin 1995 (she is known for the Vietnam Veterans Memorial in Washington DC)

What do you think? *It's awesome... but needs more. It would be nice have a small section of waves on the playscape next to structures.*

How did it feel to have the space completely absent of play structures?
Gets tired of waves after awhile needs more to do

How did your body move through the space?
Run, Roll, Hide, seek; but also got tired quiet and was losing for more to do.

Botanical Gardens Playscape

What do you think?

How would you compare and contrast this natural playscape with the mounds?

What would you like to see in the new STEAM playscape that you experienced here?
 -- is it the item itself, or is it the color, is the size, is the movement, is that you can experience it with a friend?

How could we make this a STEAM concept?

Figure 20. Small Group Discussion Sample

YOUR CLASS GRADE and TEACHER 5 -- Mrs. Johnson

YOUR NAMES Leo and Alison

BUS QUESTIONS

COUNTY FARM PLAYGROUND

Why do think they chose the farm theme for this location?

"Because the park is called County Farm Park the main playground had barn door like walls and there was a tractor and barn mini structure

How do the materials work with the landscape?
pretty good

What spaces are large group oriented?
The middle area and playstructure

What spaces are small group spaces?
everything on the right ~~except for the~~

What spaces are private experiences?
none, really

Are there areas of shelter/shade/rest for individuals and families? How?
There is shade at the butterfly and sunflower and rest at the pavilion

What area/structure did you go to first? Why?
Leo - the rock wall / Alison - the rope climb

taller than usual *it looked taller than normal*

Figure 21. Questionnaire Worksheet Sample



Figure 22. Image of Washtenaw County Park Exploration

Washtenaw County Farm Park was the first location on our field trip. We chose this playground because it was similar to many of the students' descriptions of what they felt a standard playground should be like. In early discussion, students showed interest in bold colors and identifiable themes. After exiting the bus, the children explored every corner of the playground. However after the first few minutes, they grew uninterested in the large play structures and only wanted to climb.

YOUR CLASS GRADE and TEACHER 5 -- Johnson
 YOUR NAMES Leo and Alison

Maya Lin, WAVE FIELDS

How could we combine our own favorite playground items with natural land forms to make a playscape?
on the front hill you could dig into it

Did you interact with your friends on the Maya Lin mounds? Why do you think this space allowed for that to happen?
Yes we did but you could do these games anywhere but the hills

If no, what made you explore and play by yourself?
no comment where more fun

GARDENS

How did you find yourself interacting with nature and the structures?
Leo - I climbed on the rocks
Alison - climbing

How did you feel in the playscape area at the Gardens?
You just ran, there not really a

WHAT ARE TWO NEW IDEAS THAT YOU WOULD LIKE TO SEE IN THE A2 STEAM PLAYSCAPE?

Leo - Rope climb, trampoline structure
Alison - trampoline structure, climb structures!

"thing to play on"

Figure 23. Questionnaire Worksheet Sample



Figure 24. Image of Maya Lin Exploration

Our next stop was the Maya Lin Wave Fields, located just a few miles away on the University of Michigan campus. This public space consists only of the grassy repetition of dirt mounds. This space, absent of structures or loose parts, encouraged the most social interaction out each of the three locations. Upon exiting the bus, the children almost immediately initiated imaginative games like hide and seek, soldiers and tag. The children tested their bodies in and around the repetition of hills by jumping, rolling, tumbling and falling.



Figure 25. Image of Matthaei Botanical Gardens Exploration

Our field trip concluded at the Matthaei Botanical Gardens, a University of Michigan affiliated outdoor play space. This site intentionally fosters creative play for children by featuring an array of movable natural materials, a large maze, and a climbable log cabin. Within the 10-minute free play allotment, students became deeply engaged in exploring the outdoor space. The abundance of loose materials such as sticks, pinecones, and rocks encouraged collaborative experimentation in temporary assemblage.

Design for Peers

Late-October/Mid-November, 2014

Self & Families at Play

In the United States, we tend to think of the term accessibility as only referring to the Americans with Disabilities Act (ADA). However while public space designs need to take more than wheelchair accessibility into mind, they do not always provide sufficiently for disabilities such as lack of hearing or sight, and as well as cognitive and physical impairments. (Solomon, 2014, p.76) It's also important to consider individuals of all ages as well when creating a playground.

First grade students were learning about families in their home classroom, so we decided to tap into this concept by asking them to consider four members of their family, such as a grandfather, grandmother, parent, sibling, aunt, uncle, cousin, etc. Students began this session by drawing a particular family member and focusing on the individual traits that made each person special. They

were prompted to draw everything from Mom's date jewelry to baby sister's pajamas. They then filled out a worksheet questionnaire asking what each of the four people does on a playground. Typically the children mentioned they would play while a parent would watch. A large majority of children mentioned their parents would read their iPhone screens while the kids played. Some recalled playing sports or having picnics together.



Figure 26. Sample of 1st Grade Designs Considering Family

Design for Public

Early-December, 2014/Late February, 2015



Figure 27. Image of 3rd Grade Playscape Model

In mid-November, Rachael and I learned more about the schedule with the architects, and their plans to begin designing a playground. We had to start creating the models much sooner than anticipated, but began tinkering with ways in which we could build large-scale models for each of the eleven classes.

Every class, grades 2 – 5 created one playscape model to be used as the actual proposals for Northside’s new play space. These models were a culmination of classroom learning, experience, conversation and intentions. Rachael and I created one PowerPoint presentation to show each grade from Kindergarten through fifth grade. The presentation showed playgrounds of various kinds around the world, as well as artists like James Casebere who creates professional models (see figure 29). Some images demonstrated a broad view of an entire playground while others focused on particular concepts of play and play structures. We facilitated a ten to fifteen minute class discussion after each presentation and allowed the children to project their own play-related theories and conclusions onto the featured playgrounds. Students identified key characteristics they felt were successful and unsuccessful as well as inspiring and playful.



Figure 28. Image of the Magical Bridge Playground in Palo Alto

International playground images shown in the presentation reflected a wide range of design aspects. We considered public spaces such as the Magical Bridge Playground, (see figure 28) as it is separated into seven categories, to encourage zones for physically challenging play, quiet relaxation for those feeling overstimulated by typical playground noise, wheelchair accessible areas, clusters of imaginative shelters, open space for large group activities, and more traditional equipment such as swings. Specifically, this outdoor space

aims to establish a public park inclusive to individuals of all abilities and interests- something lying at the heart of Northside's new design.



Figure 29. James Casebere, Landscape With Houses (Dutchess County, NY #9

Due to the eight-table room layout of the Northside art classroom, we divided the students up into eight collaborative groups consisting of two to four children. Within those eight groups, students collectively chose the top three concepts they would like to focus on in their large-scale model. Using a lottery system, each table had a turn to assert their chosen category and included ideas such as

mounds and tunnels, obstacle courses, running paths, landscaping, climbing structures, shelters, interactive stations, swings, sporting fields, and slides.



Figure 30. Image of 3rd Grade Playscape Model

Rachael and I used the Italian Reggio Emilia approach to rearrange the classroom to be conducive to a child-led curriculum. In response to the Reggio theoretical framework, we arranged the classroom to operate as an environmental third teacher. All of the children's artwork in each grade remained visible throughout the duration of the model construction, as they hung above the windows,

sat along the window ledge and underneath the wall cabinets. The wall featuring the large windows (see figure 30) was designated as the supply area. We placed roughly two-dozen bins filled with found objects such as cardboard tubes, miscellaneous plastic objects, Styrofoam balls, moss and natural materials, wire, and tubing. Students in all grades had full access to tools such as hot glue guns, wire cutters, X-acto knives and scissors.



Figure 31. Image of 5th Grade Playscape Model Climbing Structure



Figure 32. Image of 3rd Grade Playscape Model

The eleven models were completed in mid-March. Rachael and I had negotiated with Ann Arbor consulting firm, Beckett & Raedar, that if we coincided our project trajectory with their construction timeline, they would lead a public workshop to discuss aspects of the children's designs that could be incorporated in the new playscape. Approximately 200 individuals of various relationships to the school attended the meeting. Families of STEAM students, neighbors, teachers, and educators from other local schools came to share their support in hearing the children's design concepts.

Rachael created eight congruent voting categories for each model for every individual to vote on their favorite: Swings & Zip lines, Slides, Climbing Structures, Shelters & Seating, Landscaping, Mounds & Tunnels, Pathways, and Interactive Stations. Each individual voted for 8 of their favorite categories demonstrated in the children's models. No particular model was chosen as a winner, nor was a specific category. Rather the Beckett & Raedar landscape architect used highly popular concepts as definite aspects to include in his designs.



Figure 33. Image of 3rd Grade Playscape Model

Connecting Curriculum

Exhibition

Late March/Early April, 2015



Figure 34. Image of 3rd Grade Playscape Model

In late March, just days after our public model workshop, I celebrated our project through an exhibition entitled *Connecting Curriculum: Documentation of a Child-Designed Playscape*. The exhibition featured the five elements of our pedagogical framework,

showcasing the children’s artwork to engage viewers with our experiential process.

Pablo Helguera, Curator of Public Programming for the Museum of Modern Art in New York, describes this multi-faceted approach blending together educational processes and art-making as “transpedagogy.” (Helguera, 2011, p. 77) These hybrid transpedagogies offer an experience that is different from conventional art academics or formal art education. (Helguera, 2011, p. 77) Each of the five artworks featured in *Connecting Curriculum* featured my personal experience through this transpedagogical lens, and were accompanied with didactic text describing the teaching framework and narrative throughout the project.

Portraying instructional methodologies through creative representations allowed viewers to understand our curriculum as a multi-faceted work of art. The gallery layout allowed our linear, real-world project to exist in space. Each piece appeared in chronological order, with the participatory component located in the center.



Figure 35. Gaining Understanding

The first piece in *Connecting Curriculum*, titled *Gaining Understanding*, showcased three drawings from the first teaching unit in the playscape project inside suspended orange boxes. The color orange alludes to the repetitive notion of risk-taking demonstrated in the children's artwork, and the grass inside highlights their strong connection to nature. Similar to our intentions in facilitating this drawing series, viewers were required to situate their bodies in order to properly view the work.



Figure 36. Gaining Understanding Detail



Figure 37. Gaining Understanding Detail



Figure 38. Shared Learning Experience

The second piece in the exhibition titled, *Shared Learning Experience*, was displayed in order of the pedagogical timeline. Each of the field trip reports hung on the wall next to a digital screen showing images taken from each of the three field trip locations. A small bench inspired by the children's seating designs could be moved to accommodate individual viewers while they read the worksheets. Much like our intentions in fostering a shared social experience, the bench represented the multi-purpose function of play, problem solving, and rest, while the curvature invited conversation among one or more individuals.



Figure 39. Shared Learning Experience

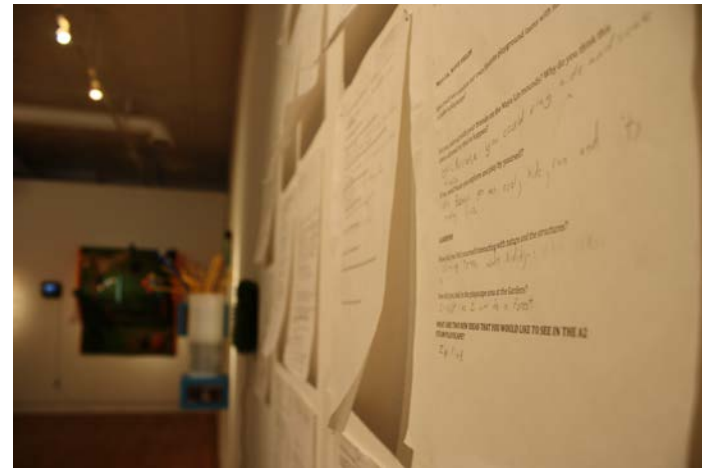


Figure 40. Shared Learning Experience



Figure 41. Design for Peers

Design for Peers displays photographs, artwork, and loose parts involved during the third phase of our learning process. The two glowing blue boxes each share one project implemented while the students studied ways in which their designs could impact the social aspects of playground culture. The backlit vellum photographs convey the significance of the individual impact developed during this process. Artworks accompanying each of the two ventures rested above the suspended cubes.



Figure 42. Design for Public

Design for Public concludes as the fourth of the chronological projects in our curriculum. Two 4' x 4.5' x 3.5' models, created by third and fifth grade classes, hang vertically against the wall along with a grass-covered digital screen sharing images of their construction. Each of these models were chosen to be shown in Connecting Curriculum as ones that demonstrated overall strong popularity in the public voting workshop.



Figure 43. Participatory Research

The work *Participatory Research* lied in the center of the gallery, acting as the rotating axis for the other four components. This wooden structure represents a culmination of the children's designs and participatory research. In the center lies a digital screen rotating each of the eight weekly questions and results. The high monkey bars draw attention to their surprising lack of interest, and the slanted orange roof reflects the open shelter for children to play while remaining visible. The underside of the paneling is coated with grass, highlighting the student's desire to incorporate elements of nature.



Figure 44. Participatory Research



Figure 45. Participatory Research

Conclusion

This project-centered curriculum fostered children's capacity to think about the social aspects of playgrounds and community by involving them in the process of their school's transformation. Students discussed, studied, and created artworks investigating what it means to play alone, in a small group and in a large group. Their final models represented areas of an ideal playground where individuals could participate in activities away from groups of people such as reading, napping, studying, thinking or relaxing. They examined the differences between large group, meaning more than seven individuals, and small group, meaning two to six individuals, play activities and designed spaces accordingly. Large group spaces were represented through large areas of open grass where students could participate in organized sports and games. Students agreed that small group play could spontaneously occur just about anywhere and did not need a specific design. Rather this type of social interaction focused more on the imagination of the group involved.

Students also applied these three social aspects of play to their community outside of Ann Arbor STEAM @ Northside. The children discussed groups of people who utilize the school playground during the weekends, afternoons and school holidays, and agreed their designs should also invite play for parents, grandparents, toddlers, and people of all abilities.

Similar to the Picture Study Movement, these artworks acted as a tool in translating conceptual ideas across four layers of discourse among peers, teachers and community, architects and the University of Michigan academic community. The children's portfolio created over the past year permitted a form of nonverbal communication in expressing their ideal playground designs. For example, the Northside student body expressed strongest interest in creating a Ninja Parkour-themed playground. The Ninja Parkour title reflects their discourse expressing a strong interest in taking more risks outdoors, which was also reflected in their drawings (see figure 11). These drawings acted as modes of translations to teachers and

community by demonstrating the necessity for loosening the children's restrictions in potentially risky exploration. They helped the landscape architect understand how to design a space and structures that enable more room for physical exertion

Involving children in participatory research enriched their capacity to design, and also the discussions we had with the contractor and the architects who designed the playground. So often the imaginative and design capacity of children go ignored. Roger Hart, the codirector of the Children's Environments Research Group at the City University of New York, proclaimed the limitations of asking children to design a playground. He states, "Children are imaginative, but they can draw only what they have seen. Asking children to 'design' a playground will therefore keep the status quo." Hart suggests that we should instead asking children questions that will illuminate their basic fears, hopes, and desires. The questions are almost always indirect. (Solomon, 2014, p. 144) Through this

playscape redesign at Northside, the student body proved Hart's theory to be inaccurate; this project and may draw awareness to children's proficiency when given the chance to learn. This element of participatory also emphasized the significance of engaged pedagogy in public schools, as it demonstrated direct correlation to student's learning and the democracy of community outcomes.

This yearlong project fostered a sense of individual expression and collaborative work among peers at Northside Elementary and in the surrounding community. Students understood this playground as a space they used during a 30-minute daily recess, as well as a place where they could visit with families on the evenings, weekends during summers. In reciprocation, the community demonstrated more interest in the children's voice. Parents, teachers, neighbors, architects, university academics and professors, local press, and community residents have taken the student's tenacious efforts seriously and have responded with full support.

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