Designing for Children
- With focus on 'Play + Learn'

Children Leading the Way as Designers

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Abstract: This paper will present how the preschool children at a Reggio-inspired preschool in the US demonstrate their capabilities as designers, researchers and complex problem solvers. The examples challenge the role that designers, educators and parents often assume in making choices and providing materials for proscribed uses before allowing the children to draw on their own inner intelligences and resources. The co-constructive dialogic process demonstrated in this pre-school curriculum is explored as a guide for shifting the framework of design pedagogy at the level of higher education.

Keywords: pedagogy, co-construction, dialogue, meta-cognition

Design Thinking at a Crossroads

This paper looks at how design education begins in early childhood with a closer look at the principals and practices of one educational setting of early childhood learning. It explores how this work can inform a new view of higher education design pedagogy as demonstrated by a seminar class in a university design program. A uniting theme is how the design process is defined less as a problem to solve and more as a dialogue that leads to a process wherein all members are honored as stakeholders. Documentation and reflection of process, another shared theme, provides s a way to explore how the experiences and observations of a group as together they question preconceptions and examine assumptions. This presents a challenge to a view of design as a hierarchical, "role-based" "delivery" of a product or solution. Rather than defining roles as "designer" and "client", design becomes a process of, what is described as, "co-construction", or "co-creation".

There is concern among today's current design educators about how to bring pedagogy up to the task of shaping a new view of design. The buzz leads designers to question our own preconceived ideas of how design is taught, and our role within it. At a recent design conference Richard Buchanan, design educator and editor proclaimed that "design is in crisis" and that designers are currently faced with "the death of design as we know it". Buchanan claimed "graphic designers have been too insular and egocentric". (Poyner, 2008) and that the exclusive role designers played in the process will soon be obsolete.

Buchanan's presentation itself sparked off a flood of debate and dialogue about just went he meant with his pronouncements. Some of us took this as a great opportunity for growth rather than a kiss of death. One blogger writes

> I took Dick's metaphor of conversation as designers needing to reposition their role in facilitating the conversation … where the designed artifacts are tools and mediums that can potentially facilitate such dialogue. It is a role that shifts the designer, who creates and produces the finished product to convey information from A to B, to a role that acknowledges the co-creation of messages by various participants through the design medium (http://blog.eyemagazine.com/?p=73).

Victor Margolin a prominent designer and design educator claims "We need to put design thinking in a much more central position in terms of social policy… [J]ust as you have people like Barack Obama, talking about a new energy economy, we need to talk about a kind of a new social economy for design. We need to put design thinking in a much more central position in terms of social policy. Otherwise, we are missing quite a lot" (http://blog.eyemagazine.com/?p=275).

A broad view of design is a process by which complex sociological, psychological, aesthetic or philosophical concepts—abstract issues that deal with who we are and how we live as groups and individuals—are addressed through concrete means. As an examination and an effort to resolve the current conflicts confronting us—such issues as power and fear, justice, and poverty and the role of government in social welfare—design takes on relevance as a primary human activity. For some it is an unrealistically idealistic stretch to suggest that such fundamental issues as democracy and good citizenry have their place in a higher education professional design program but to see these very same ideals expressed among pre-school children suggests that young children can inspire us in higher education to a new view of design and design education.

Making Learning Visible is a project at the Harvard School of Education working with pre-K up through grade 12, whose stated goal

> …is to create and sustain powerful cultures of learning in and across classrooms and schools that nurture and make visible individual and group learning… (It is) a project about culture, values, and democracy. Learning in groups not only helps us learn about content, it helps us learn about learning in a way that fits with the kind of people we want to become and the world we want to create. Learning in groups develops critical human capacities for participating in a democratic society—the ability to share our views and listen to those of others, to entertain multiple perspectives, to seek connections, to change our ideas, and to negotiate conflict. (http://pzweb.harvard.edu/mlv/)

This philosophy is a cornerstone of the examples provided in this paper.

The preschool at Sabot at Stony Point School in Richmond, Virginia is providing the sort of setting and structure that can lead a generation of designers and visionaries able to test and explore, follow instincts, and work in an environment that fosters respect and recognition of differences. At Sabot one can observe design as not the activity of a single individual but rather a constantly changing and evolving process conducted by children, teachers and families.

The Sabot pedagogy draws deeply from The Reggio Approach, a modern constructivist approach to early childhood, incorporating Howard Gardner's view of multiple intelligences (Gardner, 2004). In this child-centered approach, documentation of classroom activity and conversation through photographs and recording of conversation provides the means for reflection by the teachers to best scaffold the children as they pursue and investigate the world around them.

Introducing the Bigger Issues: conflict, battle, and fear
Rainbow Room, a classroom of 4 year olds, was experiencing tension normally associated with children of this age. Early in the year some of the quieter children expressed anxiety at the energy level and activities of the more physically active children in the group. Also at this time several children expressed interest in the basket of musical instruments placed on a shelf in the classroom as one of many provocations available to the children. At Sabot provocations are materials laid out for the children to explore, often in response to a theme or issue identified by the teachers as they observe children's play. One of the teachers, Page Ghaphery supported this interest by inviting children into an exploration of sound and rhythm. She noted that this study helped the children focus and "come together". In effort to break up the tension one morning before children were permitted outdoors, Ghaphery turned on the CD player without first carefully choosing what might have been an "appropriate selection". John Phillips Sousa's rousing march Stars and Stripes

Forever's filled the classroom. The children began to dance. Some responded to the loud timpani and brass sounds, acting out the role of tigers. Others became alternately birds and kitties in response to the dulcet tones of the flute and piccolo.

Days passed and the children continued to request "The Tiger Music" or "The Bird Music" and soon the "Tiger and Bird Dance" emerged. Sometimes weeks would go by and the children would be pursuing other activities when something would spark renewed interest in "the dance". One day this occurred when a child wearing his "wolf" mask returned from the art studio, where the current interest among children of several classrooms was mask-making.

Ghaphery continued to scaffold the ongoing project as she met with the children, sometimes as small groups in the movement room, sometimes in the classroom where they were drawing or sewing costumes and scenery. A visual score was emerging for the performance, and out of these drawings Ghaphery and I created a storybook to provide continued support and documentation not only for the children, but also for their families, the Sabot community, and the community at large.

Ghaphery worked closely with the studio teacher Anna Golden—in Reggio parlance, the allterista—to gain insight and eventually to construct a narrative of the significance of the project as it progressed through the year. In their documentation titled Tiger and Bird Dance: Rainbow Room, 2009 they wrote:

> This story seems to be an allegory for the Rainbow Room this year. ...In the context of the dance the children take on roles as shy, sweet animals, or bold, fierce animals. As they worked out the choreography for the dance... the teachers began to realize they were telling their story.

> The big issues of dangerous vs. safe, what is good and what is bad, power, nurturing and attachment have been very real for the Rainbow Room children...as they begin to look for their power and their place in the big world.

Recently in a meeting to continue our on-going work of meta documentation as we examine the intentions and activities this year, Ghaphery noted that "Learning in a group is not the same as learning as a group." In the latter all members are active participants in their own way, given their own temperament and strength and intelligences in the process of creation and meaning making. When a group learns "as a group", the process is transformative. Meaning becomes a group construction. We see evidence of the culture at

work, as in Jerome Bruner's view where culture has in place the procedures for absorbing change and "probing into the human condition—Past Present and Possible" (Bruner, 1996).

Meadow Room: Learning as a Group

Every summer Sabot undergoes a thorough cleaning of floors and rugs before the children return from vacation. In Meadow Room, the classroom of 4 and 5 year olds, the teachers decided to begin the school year without furniture and just a few provocations: rocks, a light table, some pillows. The teachers addressed with Marty Gravett, Director of Program Development, their fear that with minimal provocations there would be "nothing for them to do except spiral up in energy." In her first post to the families, Nancy Sowder, one of the two classroom teachers, explained how in Meadow Room they were "planning to invite the children to create the room... On our first full day together we will begin to talk about and plan our classroom." She explained how this would be a radical departure from what children were used to.

> Children are almost always in an environment, which someone else has determined for them, even outdoors on playgrounds. As part of this process we will be talking, drawing plans, negotiating, constructing ideas, looking through materials, forming small groups and going to the studio to draw or make models with Anna.

Especially noteworthy, Sowder wrote in this very first letter to us that,

> "We are hoping that giving them a blank slate and the opportunity to design their own space together will have many benefits including creating a sense of belonging, a strong group, and a sense of ownership for our room and materials."

Building relationships as primary

With just a few materials and the support of the teachers, the children began to explore the space in several realms. Some were quickly drawn to delineating personal spaces out of pillows and blocks. Sowder notes how rather than establishing ownership or defending territories, they were from the start displaying a willingness to work together and support each other's constructions. They built spaces from blocks, and boxes and hoops, large hollow plastic forms. When there were no more hoops children began to construct hoops for each other from paper. One day work with tape and cardboard became a construction that evolved as children joined the activity until by the end of the day it accommodated the group as sometimes a set for dramatic play, for some a house, for others a room, and "at times a Star Wars ship." Sowder remarked in her documentation of the day, "The groups and pairs changed through the day. It was interesting that the typical level of possessiveness around enclosed spaces didn't seem to play out".

Months later they were working with large wooded blocks. The children, rather than agreeing on one project were focused on separate constructions: a dragon, a rocket ship, and a house/castle. Sowder recorded how "before long, all of the blocks had been used up and no (one) project was complete. The next day, the group began again with Sowder's reminder that the day before they had run out of blocks. The children began to offer solutions and before long the rocket ship was connected to the furnace of the house and this became the setting for a variety of fantasy play. In her documentation of the events, Sowder noted how problem solving involved "a mental shift rather than a physical connection".

A Culture of Co-construction

"This is what culture is all about—not just anthropological prose poems about patterns, but a mode of coping with human problems: with human transactions of all sorts, depicted in symbols." (Bruner, 1996).

In the language of Reggio the practice of "negotiated learning" goes beyond just identifying and solving a problem. "The (teachers')… analysis reveals the reasons behind the children's interest, the source of current knowledge, and their level of articulation about its detail. …At a metalinguistic level, the children talk about how they represent what they know. In a co-constructive curriculum, children, teachers and parents, form the community as they "discuss the social and symbolic processes by which meanings are negotiated toward some level of shared understanding" (Edwards et al, 1998). At Sabot, the teachers' support of "meta thinking" engages children in a reflective, documentary process revealing children's vast capacity to integrate knowledge, experience, and intuition.

The democratic and co-constructive process observed at work in the Sabot preschool provides a guide to revisiting our approach to design education at the level of higher education. This paper argues for a shift in emphasis less solely on "making something" and more on raising the value of dialogue and critical reflexive practices in conjunction with craft. Asking students to closely examine what they "know", and how they know it, was a critical turning point in the class discussions of my Fall 2009 Senior Seminar class in Graphic Design. The class project was in response to efforts of The Virginia Poverty Law Center to bring about legislation restricting the practice of predatory lending in the Commonwealth of Virginia. This highly controversial issue in Virginia and other states in the US, is a practice that the VPLC characterizes as "sucking individuals" on fixed or limited incomes trying to meet daily expenses (food, rent and utilities) "into a web of increased debt". Advocates of the industry claim it to be a legitimate business practice.

After my initial meeting with representatives from VPLC, I sympathized with their outrage and brought to the class a selection of taped interviews with individuals trapped in spiraling debt and victim of deceitful threats and harassment from lenders. In contrast I presented an ad from a lender offering the message that getting a pay day loan was easy, non-invasive, and more personal that a "lending institution". Jay and Dana were invited to the class to present to the group much of what they had presented to me. Jay showed one ad, presenting a lender with menacing teeth, suggesting, "these guys were nothing but sinister loan sharks".

The first challenge to the case Jay and Dana presented arose when one student spoke with me after class about his discomfort with the project. He confessed he wasn't sure he agreed with the view of the industry presented to the class. It soon became apparent that he wasn't the only one with conflicting opinions about the issue. Several students began to do some research and question the responsibility of the borrowers. Were they spending money on luxuries and living beyond their means? Were they not educating themselves as to their options? "Why hadn't Dana and Jay told us more about options, when we asked", they wondered. As the class discussions evolved there were varying opinions. Some were concerned that they were being pushed into conveying a message about the industry that wasn't their own view. The discussion became emotional; many of these students were working jobs outside of school to pay for their own education and had little sympathy for those with dire financial situations. At this point I recognized that larger issues were at stake: issues of politics and economics and demographics. The students began to present their own experiences and views of poverty, education, consumption, popular culture and life choices.

Employing the tool of meta-cognition students were asked to more closely discern their personal experiences from universal experiences. We identified assumptions and studied their formation: what factors influenced or informed their point of view. We looked closer at the purpose served by such assumptions as, "people who are poor live beyond their means," and as the group began to look more closely at their own assumptions about both the lenders and the borrowers, the issue of blame came up. One student suggested, "We're blaming either one or the other and there doesn't seem to be any middle ground or room for conversation." This was a turning point for the project.

We were no longer "demonizing the industry", as many students felt they were being led to do. Blaming the lenders and the borrowers was seen as "unproductive" and the class turned instead to looking at how to educate, inform and most importantly promote a discussion. One student put this in the context of politics, and government intervention and regulation. One of the most prevalent issues in the media was the attempt of the Obama administration to restructure the relationship between government and industry to meet the health care needs of Americans. Reaction had become increasingly fractious with the proliferation of misinformation, conflicting views of economic priorities, industry special interests and the lobbying industry, and political ideologies. We discussed in class how the issues of payday lending were reflected in this much larger national debate.

The critical part of the process was to bring this dialogic view back to VPLC and convey the discomfort and concerns of the class. The students led the way to a revisioning of the project, steering it from rhetoric to dialogue. Jay and Dana noted how they brought their own frustrations to this issue and that the students' approach would help inspire fresh discussion with lawmakers. A public showing inviting the media was planned in advance of the upcoming legislative session.

This project exemplifies how design is less about resolving ambiguity and more an opportunity to embrace it and engage in a dialogue. Terrance Carson writes about this with regard to his peace education project, CARPE.

> As participants in a collaborative action research, the CARPE group did, in fact, move toward a deeper appreciation of various dimensions of peace education in practice. In the process we also developed some critical insight into our previously held views of peace. But our view did not become (clearly and unequivocally critical). What emerged was the ambiguity and difficulty of peace education concepts in practice." (Carson, 1992)

In Conclusion

The challenge we face in educating the next generation of designers is how to provide students with the necessary tools in a world in which current practices of industrialization are creating alarming strains on all resources: natural, financial, societal. How can we rise to the challenge of such visionaries as Paul Hawken and Daniel Pink and prepare students to become actively engaged citizens with a conceptual, technical, logical, intuitive and social foundation? Education begins with children, as we are exploring in this conference. How we prepare tomorrows participants in the design process should be a long view from

childhood and adulthood—and beyond into the arena of industry and the workplace. Co-construction as a pedagogical tool leads to the next generation of co-creators.

Core to this view is an emphasis on reflective practice and the dialogic process. As we move forward, the possibilities for learning from current pedagogic practices and theories with children can point us in a new direction. We can look to children not only as undeveloped minds for us to guide, but also as a source of wisdom and intelligence for how to practice a truly co-creative culture. Seeing children as capable designers can remind us of the larger ideals and exciting possibilities for all of us: educators and citizens.

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