

Participatory Design: Tools for Engagement

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In the mid-1960's Brazilian educational theorist Paulo Freire revolutionized the country's educational system by going into communities and teaching the illiterate poor how to read. He equated literacy with an improved life, linked knowledge to power, and wrote of his experiences in his seminal work, Pedagogy of the Oppressed (1968).¹ Freire's ideas developed into a social movement and became the foundation for what we today refer to as Critical Pedagogy. His work with communities was groundbreaking and viewed as dangerous by the government and also the factory and farm owners who feared that educated citizens would rise up and demand better wages and increased rights. His teaching methods, based on participatory engagement rather than the common practice of outside experts dictating the "what" and "how" of a curriculum were extremely effective. So effective, they eventually landed Freire in jail and later exile from his country.

Freire's potent process for teaching one to read utilized visual markers to stimulate engaged conversation. He collaborated with Brazilian artist Francisco Brennand who painted a series of scenes on clay tiles. These scenes, familiar to poor rural communities, depicted humans farming, hunting, and interacting so as to draw out distinctions between nature and culture, various social structures, and the potential for education to empower. By refusing to use coded or professional language he introduced the phrase "democratization of culture" and allowed communities a way to identify and express what they wanted for themselves rather than what they were told they should want.

Do analogies exist to participatory design? Are there lessons to be learned from Freire's process? And, can Brennand's tiles serve as an example of how to convey the needs and goals of a user to the design team when both may communicate in distinct professional jargon?

This paper will investigate these questions through an analysis of the use of graphic cards developed by an interdisciplinary team for engaging schoolteachers in the design process for educational environments. The author met with one of the creators of these cards, called the Learning Spaces Idea Tool Kit, in order to investigate this process. The cards attempt to

provide a common means of communication for educators and architects to more effectively engage in the design or renovation of their schools. They present a number of phrases describing teaching concepts as spatial relationships such as: faculty "scrum space", library as kitchen vs. library as grocery store, and develop self-regulated learners. The flip side of the card presents photographs depicting learning environments that support the learning concepts. The designers are then able to effectively translate the conversations spurred by the cards into floor plan configurations.

This process of engagement through a common language leverages the expertise of educators and recognizes that only those affected by an environment have any right to its determination. Participatory design, like Freire's literacy workshops, empowers the user to be active shapers of the world around us.

INTRODUCTION

The analogy of Freire's educational methodology to contemporary architectural design practice is powerful. The design of our built environment is almost exclusively accomplished by a fee-for-service framework. This ensures that only those with means and privilege are able to commission designers to bring their ideas to fruition. It is even common for this professional client to build the professional services into the financial performance of a real estate venture. The typical model leverages the anticipated return on investment against the upfront costs of completing a project. There exists a clear irony, not lost on those of us committed to participatory design, that this model makes it very difficult for those affected by an environment to have any right to its determination.

This model is even more problematic when those users are a community such as is the case with a school or community project. Participatory development empowers community by giving it a voice through both the design process and by delivering a built environment that reflects the values and mores of the community. When planned strategically, it also reflects transitioning market values. This is one of the primary characteristics of gentrification: it prevents marginalized community residents from participating in the increased valuation of their neighborhoods. It follows then that marginalized community residents may also be prevented from



Figure 1. Counterpoints. Francisco Brennand Plates, 1963. Appendix A. (2011). *Counterpoints*, 385, 321-334. <http://www.jstor.org.www2.lib.ku.edu/stable/42980936>.

participating in the success of their neighborhood enterprises such as schools.

Many designers aspire to practice participatory design in a way that might be categorized as emancipatory. This is usually looked upon by the design community as not possibly being able to yield the same level of design quality afforded projects that are not shackled by the marginalization of “design by committee.”

Design journals that extend the notion of star-power in architecture perpetuate the notion that our true power and influence is solely in the visual and intrinsically embedded in the object. The notion of sole authorship extends to the architecture school studio and even to academia itself where many institutions disincentivize collaboration and meaningful dialog by devaluing co-authored papers and creative works.

This process of engaging user groups, or participatory design, however, has long been understood as an important component of community planning and design. Architects are trained to engage their communities and to draw out the needs, values, and priorities from user groups as integral to their goal of creating spaces where users will thrive.² However, these design workshops or community engagement meetings are time consuming, cumbersome, and often seen as superfluous by clients. They, after all, are paying for this engagement.

In *The Production of Space*, Lefebvre wrote of the idea that space in contemporary society could be produced like a commodity and is therefore inherently politically contested.³ Does participatory design then nullify the possible existence of a cohesive design philosophy? The Viennese architect Ottokar Uhl, in writing of the ‘democratization of aesthetics’, conceptualized the notion of a popularized aesthetics of the many; that participants in the design process could reject the aesthetic standards of others in forming their own environments.⁴

Milestones in participatory design such as Lucien Kroll’s Louvain University Medical Dorm, Ralph Erskine’s Byker Housing, and Giancarlo de Carlo’s Nuovo Villaggio Matteotti do tend to have a nonhierarchical organization that one could argue elevates the individual and provides various if somewhat disjointed ways of living. Put another way, they are messy. Kroll’s “wandering columns” were intended to provide for flexibility in the location of internal partitions and the creation of self-directed spaces. This somewhat loose formal ordering system became labeled as ‘ad hocism’ in Charles Jencks’ seminal book, *The Language of Post-Modern Architecture*.⁵ He described this improvisation and pluralism as intentional and where “disparate parts are unified creatively for a specific purpose.”⁶

Thomas Dutton reinforces this notion,

“Issues of agency, process, and social action are not antithetical to beauty and good form. Often social responsibility is equated with designing for the lowest common denominator, appealing to mass interest unreflectively, without theory. As such, social responsibility is positioned against beauty and aesthetics as the negative other, a hindrance to be avoided because it compromises formal interest and investigation. This need not be the case, as richer form can come through social responsibility.”⁷

Indeed, design education tends to validate idealized form-making through the absence of a user. Of course the student-tutor relationship simulates architect-user engagement, however, the significance placed on disciplinary-coded drawings and language perpetuates the notion that the expert knowledge of the designer is certainly privileged over the tacit knowledge of the user. It negates the design process as a two-way negotiation and would threaten what we believe sets us apart and in fact defines the discipline.



Figure 2. Figure 1. Counterpoints. Francisco Brennand Plates, 1963. Appendix A. (2011). *Counterpoints*, 385, 321-334. <http://www.jstor.org/www2.lib.ku.edu/stable/42980936>.

Giancarlo de Carlo offers, "...the intrinsic aggressiveness of architecture and the forced passivity of the user must dissolve in a condition of creative and decisional equivalence where each – with a different specific impact – is the architect, and every architectural event – regardless of who conceives it and carries it out - is considered architecture."⁸

In establishing the language and tools that allow professional design teams to engage with user groups, one can look to the example of Freire's literacy project for examples. Cynthia Brown's *Literacy in 30 Hours* (1978) outlines Freire's process of using graphic representations to engage students and to instill the power of knowledge and the notion that literacy could make profound improvements to their lives.⁹

Freire commissioned his friend, Brazilian artist Francisco Brennand, to paint a series of scenes that had the ability to stimulate debate on the lives of those he was sent to teach. These plates depicted scenarios from their everyday lives including working conditions, oppressive power hierarchies, and the lack of empowerment many were experiencing. The subject matter of these plates transcended the mere skill of reading, it introduced the notion that becoming literate is, in fact, a political act.

Participating in the determination of our physical spaces is also a political act. Every designer must navigate this duality: working for a client while serving the user group. Much has been written of the citizen-architect. One who selflessly serves his or her community by translating the needs of that community into physical form.

The subject of this investigation, participatory design strategies in educational environments, is a case in which language is critical. Architects must be able to break down the professional

and technical language of architecture and construction to be understood by the building's users. Likewise, the technical language of curriculum and pedagogy must be simplified in order for designers to translate these concepts into spatial configurations.

UDL LEARNING SPACES IDEA KIT

In 2016 architect David Reid with Gould Evans began working with a Professor of Education at the University of Kansas, James Basham, to develop a series of graphic postcards that could be used in the design of educational environments.¹⁰ Universal Design for Learning (UDL) is a general framework for education that recognizes and facilitates individual learning differences. Much like universal design principles in architecture, this framework allows for equity and inclusion in education by supporting all learners. This framework was developed in association with CAST (Center for Applied Special Technology).

The concept of incorporating personalized learning into education environments is complex. It requires a designer to understand not only the goals and methodology for educators using such spaces but also the practicality of ensuring that these spaces be flexible and able to change as student needs and curriculum plans change.

Most relevant to our discussion here are the division of the cards into "student experience" and "educator experience."

Examples of student experience concepts include:

Huddle Space

Collaboration spaces for 2-4 people, quick impromptu teamwork

Embrace Fidgeting

Allow students to move around and fidget when they learn

Cockpits and Enclaves

Spaces to "get away," quiet spaces that support quiet work

Exhibit Spaces

Students are more motivated when their work is shared

Diverse Places

Learning spaces as open address, sit anywhere, learn anywhere

Examples of educator experience concepts include:

Space within Space

Support delivery of co-taught classes, concurrent activities

Equity of Space

Shift from "my space" to "our space"

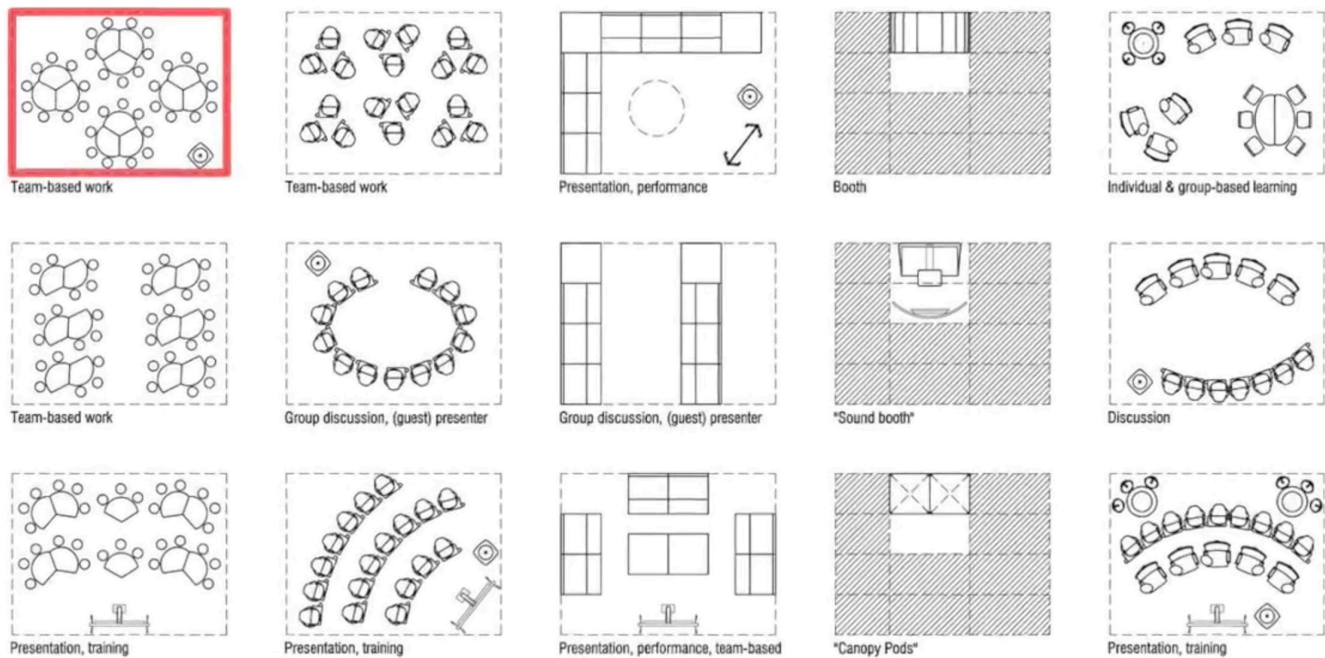


Figure 3. Learning Configuration Prototypes, Courtesy Gould Evans

Scrum Space

Space for faculty to roll sleeves up and dig into messy problems

Design Thinking

Opportunities to redesign the learning environment

Shared Workspaces

Not being confined to classroom supports collaboration

There are two sides to both the student experience cards and the educator experience cards. One includes the type of space and a few short phrases describing the opportunities of such a space. The other side includes photographs of example spaces and in some cases a sketch of the spatial configuration in plan view.

CONCLUSION

These cards critically restructure an educational framework that continues to evolve as new technologies emerge and attitudes about learning shift. Our ideas about school design are unrecognizable compared to those of the last century where control through surveillance and monitoring was the norm. Aisles of identical classrooms emanating from some central point of surveillance, typically the principal's office, and based on a Panopticon prototype was the common school layout in post war school construction in America.¹¹

These projects undoubtedly were the result of closed conversations between school administrators and architects, focused on regularity and discipline, and subscribed to the notion that all kids must learn the same way. Today we aspire to empathize with young people from a variety of backgrounds and abilities. Our educational spaces provide flexibility for customized learning plans and deep student engagement. And, with the scrutiny of student performance and funding tied to standardized tests, it has become even more critical that our educational spaces support the creative and varied delivery of curriculum.

In much the same way Freire rejected educational frameworks from outside sources, the UDL Learning Spaces Idea Toolkit engages both teachers and students to collectively participate in the determination of environments that will affect them. In this way, those engaged in the design process are able to have a role in decision-making and are thus empowered to claim ownership of their community's learning environment. A design process that values input from all users results in a built environment rooted in equity and social justice.

The UDL Learning Spaces Idea Tool Kit is a prototype that could be applied to many different building types and physical spaces: housing, hospitals, community centers, libraries. It facilitates a common language allowing architects and users to engage in a meaningful way and results in spaces in which users feel ownership.

STUDENT EXPERIENCE

huddle space

small collaboration spaces for 2-4 people;
quick, impromptu collaboration




gouldevans |  S14

embrace fidgeting and movement

small fidgeting movements stimulate neurons in the brain that keep us attentive; (6)
allow students to move around and fidget when they learn;
provide options for students to both stand or sit while they work




gouldevans |  S5

cockpits and enclaves

spaces to "get away";
provide support for students who are easily distracted;
quiet spaces or tools that support quiet work;
provide support for students who have sensitivities relating to proximity with other students



gouldevans |  S13

exhibit original work to the public

engage students in authentic projects that will be shared with authentic audiences;
capitalize on the fact that students are more motivated when their work is shared with a broader audience




gouldevans |  S26

create a diverse palette of places

provide varied places to support varied preferences of student learning;
think of your learning spaces as "open address"—sit anywhere, learn anywhere;
support a diverse range of learning activities and processes




gouldevans |  S3

EDUCATOR EXPERIENCE

make space within space

mobile components can subdivide space in creative ways;
mobile storage units, white boards, and furniture can dual function as teaching aids and definers of small group area;
supports delivery of co-taught classes—multiple activities occurring concurrently;
provides comfortably scaled space when hosting large and small classes



gouldevans |  E8

equity of space in the classroom

shift teacher space from "my space" to "our space"—supports student ownership of learning;
create a flattened hierarchy that supports teacher as "coach" versus teacher as "sage of all knowledge";
allocate space for teacher based on the size of classroom; with 30 students, allocate 1/30 of classroom for teacher space



gouldevans |  E9

faculty "scrum space"

a place for faculty to "roll their sleeves up" and dig into messy problems;
support collaborative professionalism in quality space that does NOT double as the faculty break room;
free educators from "solitary confinement" in their classrooms—promote peer mentoring and collegiality



gouldevans |  E1

integrate design thinking

leverage design thinking as a proven process to develop metacognitive skills and foster self-regulation among learners (3);
support the 5 C's of learning and take students through the 6 learning orders of Bloom's Taxonomy (3);
use design thinking as a process to redesign your classroom



gouldevans |  E3

shared work offices

shared faculty studios help to boost camaraderie, collaboration, and professional growth among educators (2)



gouldevans |  E2

Figure 4. Learning Spaces Idea Tool Kit Sample Cards, Courtesy of Gould Evans, UDL and Learning Designed

Like Freire's literacy project, the process presented here allows participants a way in which to identify and express what they want for themselves rather than being told what they should want. They are able to move through and away from these design experiences changed from passive occupants of a built environment to citizens armed with the knowledge and resources to act up on the world.

ENDNOTES

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