



Woodland Hub_Culture + Contingencies for Creative Learning, Buckingham Primary + Elementary Schools_Dillwyn, VA. VMDO Architects | Photograph(s) ©Alan Karchmer

CREATIVITY BY DESIGN: ARCHITECTURE + EDUCATION'S NEW TERRAIN

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People of all ages delight in great design that is responsive to their needs. Think of what the Lego brand or the Apple ecosystem provides for creative content makers and curators, for example. While these products and brands are obviously consumables and architecture is not, the point about great design being responsive to creative needs should act as a cleaver to the old paradigm that school architecture is first and foremost pragmatically functional and secondly, reduced to a visual experience.

In fact, to leverage the transformative power of both school architecture and learning – digging deep into the dimensions they share offers the most potential for architects and educators to build upon a common language for more robust design outcomes; experiential, multi-sensory, inherently social and ecological, conveys relevance, reflects cultural value systems, affords interpretations of meaning, where open and bounded conditions shape and influence attitudes, behaviors and outcomes. (In our recent research, we are finding that school architecture, by default of the typology and intent of the design is another important ‘reflexive teacher’ of children).

So let’s harken back to the Steve Jobs adage that “design is not just what it looks and feels like. Design is how it works” and spend more time exploring, collaborating across disciplines and researching the complex connections between school architecture, pedagogy and the relational possibilities for responsive design to drive education toward an ethos of creativity.

Should creativity be the next revolution in learning,

which I believe it will be, we should focus our attention and find the means to research how creativity functions as a profound human learning instinct and how places and spaces of learning can enhance the capacity for creative endeavors. We can lean on evidence of the impact school design can have on learning and health outcomes, but very little evidence exists on the connection between school architecture, learning and creativity (let’s assume the health imperative is already embedded in these conditions). How and what kind of responsive learning contexts will nurture individual and collective creative capacities? What qualities and characteristics do places, people, practices and opportunities need to have in combination – to constitute a culture of creativity by design?

Creativity Will Be The Next Learning Environment Revolution. This is a powerful, humbling and intriguing big picture declaration for industry consideration. More and more, school architects and designers are charged with proposing solutions for learning environments that foster collaborative, interdisciplinary, project-based, hands-on pedagogies. Buildings and nearly every type of formal and informal learning space also need to be flexible, agile, adaptable, multi-use, multi-purpose, technologically seamless, but also intentional and certainly healthy for everything from constructivist classrooms to STEM labs and all varieties of spatial combines; neighborhoods, pods, clusters, etc. All of these (and more) are indicative of functional solutions for emergent teaching methodologies, configurations to increase student engagement and spatial organization patterns that optimize small learning

communities for positive social cohesion. They are also indicators of our mutual disciplines' adaptive reactions to a transitory, speculative phase shift from 20th c. fixed and stable systems to 21st c. dynamic, emergent networks and the impact the reality of rapid change has on education, school architecture and what we know and don't know about how people learn best.

So, when it comes to school architecture, learning and creativity, with such little experimental research, where do we start? "Given that classroom design has an impact on teaching methods, instructor behaviors, and student activities" [Painter, S., et al] the design studio, a familiar domain for architecture students and professionals, acts as a powerful socio-ecological model for creative capacity endeavors requiring a wide variety of individuals to ideate efficiently within differing capacities; from the aesthetic to the material to the technical to the managerial. In education, the ever shifting pedagogical and programmatic changes are pointing more toward learning ecosystem models in which personalized, individualized and differentiated teaching responses coexist within the context of collective teaching and learning modalities [group and team work] all situated within the social learning context of the greater community. The high demand for teacher-to-teacher collaboration, peer-to-peer networks and the slow dissolution of strict adherence to the siloing of disciplines and grade level sequestration has also created an unprecedented demand on limited instructional time. Translating these change agents into conceptual design proposals can yield a wide variety of results, some of which rely on current evidence based strategies and others that strive to future-proof a school for unforeseen decades ahead.

One simple first step is an empathetic proposition from designers who already inhabit the domain of 'the studio' and have collective support from a creative culture. The spatial domain of 'the studio', in which early 21st century technologies have been effortlessly co-opted and assimilated alongside the traditional 20th c analog tools, is a place in which design proposals at every scale and phase of development are conceptualized and realized. 'Studio' is not only a place, but a creative 'maker' culture that thrives collectively around iterative, collaborative processes and design thinking methodologies utilized throughout all phases of design practice. Factor in community engagement and diverse stakeholder workshops, strategic consensus-building meetings and a concurrent need for intense focused production time and you have a robust metaphor for a resource-rich learning environment in which disciplines cross, critique and discourse are encouraged and knowledge sharing is commonplace. Studio culture, the creative imperative and 'making' are symbiotic connective operations in architectural

practice. Translated to a learning modality, "when we build, we do more than create content. Thanks to new technologies, we also create context by building within a particular environment, often providing links or creating connections and juxtapositions to give meaning to the content." [Thomas D, Brown J S.]

We can empathize with educators and the need to have a facile resource-rich environment conducive to both ad hoc, impromptu and planned creative endeavors for both individuals and groups. Going one step further, and using the studio as an socio-ecological archetype, we can impart the value of having a variety of space types (choice architecture) to foster a vibrant, ready-mix 'studio culture' in which the holistic relationships between design features, spatial linkages and creativity-promoting resources offer a responsive, co-creative socio-environmental model. In this model, a learner would be exposed to an enriched environment that provides cultural opportunities and contingencies (a variety of materials external to the individual) at his/her disposal readily available and in support of divergent thinking skills. While "in divergent thinking we find the most important ingredients in creativity" [Arieti, S] without the contingency context, creativity would be limited or hindered for the individual or group. If within the ready-mix studio culture design, policies and practices allow for disparate and seemingly unrelated connections to be explored, diagrammed and tested at multiple scales at any given time, then such an intentionally designed, holistic studio model can actively contribute to the creative imperative while also promoting connectivity and a sense of ownership for next generation learners. The "positive buzz" you feel when you walk into a vibrant design studio could be the same "positive vibe" you feel when you walk into a creative learning studio made vibrant by engaged, connected learners who feel that they own and are empowered by their space(s). Positive buzz asks the question; how do learners access and utilize available resources that allow for the unfolding of the creative process in a learning studio? Can the learning studio itself be designed as a framework for contingencies in support of the creative process?

Creativity Is One Functional Aspect Of The Instinct To Learn. So too are experiences of wonder and curiosity expressed through playing, exploring, making, discerning, discovering, testing, failing, iterating, sharing, and processing as natural displays of our extraordinary human capacity to forge connections and relationships. As such, the creative imperative underscores the value of learning and developmental processes that are complex, non-linear and 'dynamic' and in this way, creativity operates as an individual capacity in response to cultural conditions that enhance or hinder its expression. Within each

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EDspaces
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Dina Sorensen | VMDO Architects

Designing Schools For Obesity Prevention:
A Collaborative Model Of Architecture And Public Health
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individual “all creative activity grows, first, out of the relationships between an individual and the objective world of work and, second, out of the ties between an individual and other human beings.” [Gardner, 2011] In other words, creativity does not reside on one side of the brain and only result in ‘artistic’ tendencies, the capacity resides in each person and it is our responsibility to recognize the cultural influences that will help new learners rise to the tasks of their future.

Now Is The Time To Take The Lead As Collaborative Industry Partners. Re-establishing schools as an enriched context for creativity means identifying the physical features, aesthetic characteristics, pedagogical practices, people and policies that shape and influence school culture. We, as architects, designers, educators, planners, parents and mentors, should be insatiably curious about what it is going to take to capture the creative capacity of all new learners and engage their curiosity with the places, people, practices and opportunities in combination that will constitute a new culture of creativity for the 21st century. The design studio is only one metaphor among many non-school precedents that had the right contextual mix of culture and contingency to effectively launch innovative

leaders in nearly every industry. Why not make school culture a setting for routine innovation, an everyday experience for new learners.

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THE MARKET IS CHANGING

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databases of districts and schools that most of us employ offer up to a dozen different funding selections including such criteria as expenditure per student, book budget, Title I funding, special ed funding, and more.

Some of this data is collected at the school level and some is collected at the district level and assigned to the school. Data collected at the district level and assigned to its schools may or may not be accurate. Some selection data is more complete and captured for more districts and schools than others. All of this can create an incomplete, even incorrect evaluation of which prospects are likely to have discretionary funds.

Focus On Where the Money Is

In my experience, the most consistent measure of a district or school’s degree of discretionary spending is the affluence of the community in which the school is located. This is particularly true of public institutions, not so true for private and Catholic institutions. I consider all private and Catholic institutions to be capable of discretionary spending regardless of their location.

By redefining the market to focus on districts and schools in affluent communities (and private and Catholic institutions), we change the dynamics of promotion return on investment (ROI). The costs go down (less institutions

ergo less promotion volume) and the sales go up (schools and districts in affluent communities spend more than the overall average). Promotion media that doesn’t work on average for the whole market can work for the upper segments of the redefined market based on affluence.

The key to success with this concept is the accuracy of the data that is used to determine the true measure of the affluence of the community in which a district or school is located. If you can be confident of the data, you should be able to enjoy a healthier ROI as you work through these difficult market conditions.

Over the next five years, we anticipate significant enrollment growth. This will cause growth in facilities, supplies and materials, and staff. The teachers of the future will be even more technology savvy than those of today resulting in more change during the years ahead. It’s time to embrace change.

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