

Learning by Design

BY CATHY LANG HO

Design is a process of exploration. That's why K–12 schools are making it part of their curriculum—and why designing its new headquarters set Bain & Company on a path of discovery.

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When Bain & Company, a management consultancy, embarked on designing a new headquarters in Boston, they used the opportunity to investigate their culture and work styles. Design is another form of learning, as Bain's **Gerard du Toit** can attest. This same insight led **Dorothy Dunn** to spend the last decade developing a design curriculum for K–12 students through the Smithsonian's Cooper-Hewitt Museum. Gensler's **Tom Vecchione** has a foot in both worlds. With Gerard, he led the design of Bain's headquarters. He also worked with Dorothy for close to a decade, helping to shape her curriculum and teach design to K-12 students. In December, we met with them in Manhattan to talk about design as a learning process.

How does design foster learning?

Dorothy Dunn: Design connects students to their everyday lives and the world that surrounds them. By the time a kid has gotten to school, he has already looked at a clock or a watch, taken some form of transportation, touched a dozen different materials. We can say to them, "It's 10:30 a.m. How many chairs have you experienced just today? How are they different? *Why* are they different?" Most kids don't know that they are experts on chairs. It's just that no one's ever asked them about chairs. We're really teaching them analytical skills—how to gather clues and evaluate, critique, and connect them.

Tom Vecchione: We always try to focus on a real issue. With one high school class, we talked about gentrification. We just start out with this big blue-sky conversation, asking, "What's happening?" The kids talk about the streetscape, buildings, billboards, community, the availability or lack of resources. It's amazing what they reflect on. When kids are literate about design and its processes, they become so much more aware

of what's going on around them. A design education gives them the ability to think critically, to differentiate things, to understand—as media targets—how they're being marketed to. It helps them get their arms around everything.

We did an interesting project with elementary school students in which they studied the block where they lived. They went out and researched the history of the buildings, measured sidewalks, documented the materials of the street, and recorded the voices of neighbors. Gradually, they come to understand the place, learning not just about history, preservation, urban planning, and so forth, but also about how that place is connected to them. All these design elements start to make sense to them.

DD: I have an old clipping on my desk, an article in *Boston Globe* written by Howard Gardner. It's about educators from Singapore who came to this country to understand how we taught. And American educators responded, "Why are you looking at us? Your kids test higher." The Singaporeans told them, "We don't care about testing. Your kids gain through failure, though trial and error." Our programs aim to help kids understand that learning happens when you try out ideas, whether or not you succeed the first time around.

So, it's the *process of design that enables learning*?

TV: Yes, design is often regarded as an end product, but in fact the process of design is just as important as the result. "Design thinking," which is what we teach K–12 students, is present in every design project I work on. We define a situation, gather information, observe and question. We analyze, revise, and formulate solutions. Then we present, reflect, and go back and start the whole cycle again.

Gerard du Toit: Designing our new headquarters taught us a lot about ourselves, and led to some very good results for the company, not just with the office, but organizationally and culturally. It forced us to look down deep within ourselves and think about how we work, what our culture is about, what elements we want to reinforce and nurture.

So the design process helped you set priorities?

GD: Yes. Moving into a new space prompted us to talk about our priorities and how we might push ourselves to the next level. We do a lot of this anyway, given the nature of our business. As management consultants, Bain's fundamental approach to a problem is to gather the right facts, figure out what we're trying to achieve, and then make choices and tradeoffs. It's very similar to what architects do.

DD: It's easy to be daunted by the complexity of the world and the issues we face, but designers can put any issue on the table and break it down. They have the tools to address it. They see problems as opportunities. Now, where in society don't we need that? We don't intend our programs to turn everyone into designers, but if they understand the design process better, they can appreciate what it takes to make a better workplace or a public space—and ultimately, learn how to make better choices.

How important are teamwork and shared learning?

DD: Design isn't all about the people who are the most visually creative—there are also team leaders, project managers, good communicators. These are skills that should be on a par with reading and writing. We get a lot of kids who say, "Oh, but I can't draw." We teach them that there are many different ways to communicate an idea.

GD: The idea of shared learning is interesting. Even Thomas Edison had a whole team of people working with him. The idea of the brilliant individual, who comes up with new ideas completely on his own, is long gone. The world is just too complex.

TV: We want our clients to be part of the design process. Bain set up a planning team that was truly invested in it, deeply analyzing what they could gain and learn from the experience, and attaching their own culture and business agenda to it. And the design team learned a lot from Bain's process. Our approach changed based on what we both learned about how they worked.

GD: Yes, and asking each other hard questions is one of the most powerful ways to learn. Gensler's design team understood where we were coming from, and yet they were willing to ask us, "Why don't you try it this way?" We learned things about ourselves that we wouldn't have without Gensler's tough questions.

DD: So you each educated the other—a shared learning experience.

GD: We regularly ask ourselves what we want the future of the business to look like, and how to get there. The design of the headquarters absolutely fit in with that, but with a building it's all much more visible and tangible. When you're talking about the design of an organization, it's harder to get your arms around it.

What did Bain learn, and how is this reflected in your new headquarters?

GD: We learned a lot about what makes our community work. One of the important things in a consulting firm is to share ideas as much as possible. We have a bunch of systems and processes to facilitate this, but the informal catching-up between two people bumping into each other is just as powerful. At our old office, we noticed a natural meeting point at the top of the stairs by our cafeteria and office services. So we asked, how can we encourage this form of interaction? We wanted the modern equivalent of a water cooler, where people have this sort of accidental, non-systematic communication.

Our old office had very small windows, and the interior spaces, including meeting rooms, were all closed up so you couldn't see across the floors. When we surveyed the staff, they told us clearly they wanted to be able to "see what the weather's like outside." They wanted outside views and access to natural light. Another critical design element was having space where the whole office—400 or 500 people—could gather for town hall type meetings, which we could never do before without going off-site.

So all these ideas contributed to the decision to have a grand central stairwell and atrium. Because the shared services—the library, cafeteria, and travel department—hang off the space, it has the sort of traffic that fosters the communication and connections we wanted.

TV: Those things are very important to Bain's culture.

GD: That's right. It's important for us to feel like a community. We also had an eye on recruitment. We want potential employees to come here and think, "Hey, this is the sort of place I'd like to work." Some of our competitors have a different style—people behind closed doors, offices walled in mahogany paneling. You don't see anyone. Our culture is open, transparent, and direct, so our new headquarters has a lot of glass walls and doors that allow people to walk by offices and meeting rooms and see each other.

Does such an engaged design process require more effort?

GD: It took more time because we included a lot of people in the design process, but that's not unlike how we work with our own clients. And it was definitely worth it. Several months after we moved in, we surveyed the entire office. People told us that things are absolutely better and the space makes a difference in their day-to-day work, productivity, and satisfaction. The feedback has been phenomenal.

Cathy Lang Ho is the editor of *The Architect's Newspaper* and an editor-at-large at *Architecture*. She writes for *Domus*, *Frame*, *ID*, *Metropolis*, and *The New York Times*.

Since this article was written, **Dorothy Dunn** has left the Cooper-Hewitt and joined the American Institute of Graphic Arts (AIGA) as its Program Director.