

Boston Architectural College

Design for Human Health Article

MAIN ARTICLE

The Healing Power of Design

Tectonic shifts are occurring in the design field that are changing the way professionals think about what makes for a “great” building. With visual appeal, quality construction, and utility as givens, buildings’ impact on the environment and human health are becoming crucial to design success. At first this meant curing “sick” buildings by removing noxious materials, and reducing buildings’ carbon footprints through greater energy efficiency. But more and more, buildings are seen as *active* contributors—it’s not enough for them to cause no harm, they must help heal the environment and improve the health and happiness of their users.

The introduction in 2014 of WELL Building Standards is witness to this changing perspective. WELL includes seven factors in their standards (air, comfort, fitness, innovation, light, mind, nourishment, and water) that address how the design and operation of buildings influence human health.

“WELL is where LEED was ten years ago,” says Dak Kopec, director of the BAC’s Design for Human Health graduate program. “To bring this into the mainstream the way that LEED certification is today, we need people with specialized training—designers who are looking at the built environment from the perspective of health and well-being.” Kopec believes widespread media coverage of issues like treatment-resistant bacteria are making the public more aware of the impact of buildings on their own health. “We spend 87 percent of our time indoors, where diseases can spread rapidly,” he warns. “Limiting the need for touch in public places can help to mitigate the problem.” Increased attention on psychological disorders is another reason to consider the impact of design on health. “Things you might not think of, like carpet patterns that can cause

hallucinations in Alzheimer’s and schizophrenic patients,” explains Kopec, “and the effect of public space noise levels on children on the autism spectrum—these are things we can easily fix—but first we need designers who understand these problems!”

Kopec, who is nationally recognized for his writing on this topic, felt a new master’s program in this area would benefit the public, the design field, and the BAC. “Very few schools have awoken to this need,” he says. “The BAC saw an opportunity to pioneer it. With our practice and evidence-based approach, we can train professionals and prove, through their work, how design can positively impact human health around the world.”

The BAC introduced its new Masters of Design and Human Health program three years ago. The program, which is offered through a hybrid of online/on-site intensive classes, is four semesters long, and includes courses such as “Environmental Health,” “Health Conditions and Design,” and “Advanced Theories in Design for Wellbeing.” The curriculum mixes academic learning with studio work, with a strong focus on research into the health conditions of building users.

“One of my first projects was to redesign a home for someone with glaucoma,” says masters candidate Chloe Garcia. “Through research I learned about the progressive nature of the disease, and the importance of introducing non-visual sensory clues—things to touch along the walls and creaky floor boards—that would help her learn new ways to navigate her home before her vision completely deteriorated.”

Fellow student Adrienne Brumfield studied a very different population. In a project to redesign a homeless shelter, she learned that the shelter users were turned off by the sterile feel of the old facility. “Many of the residents were working hard to turn their lives around, and found the shelter demoralizing.” Her solutions: create a more positive, encouraging environment through bigger windows that would bring in more morning light, and plants and pictures of people in the city that would remind them of the communities they want to reconnect with.

During their 10-day intensive studies in Boston, students put learning to practice through projects with real clients in the area. Last year the student teams worked with a residential facility for seniors operated by Bay Cove Human Services, and the McCormack Middle School in Dorchester. With limited financial resources to implement, these two projects stretched the students' ability to ideate in order to find affordable ways to accomplish their goals.

The Bay Cove facility serves people with developmental disabilities and early onset Alzheimer's. Through research on the health issues of residents, BAC students discovered practical ways to calm and quiet the environment, including acoustic panels, ambient lighting and deeper pile carpeting. While carpeting has received negative publicity, it does have its benefits, and was recommended where it was appropriate and safe from issues related to tripping and balance.

"We had one resident who tended to 'vocalize' in the evening. Not only did she disturb the residents, the neighbors were frightened that something terrible was happening inside!" explains team member Janet Roche. The problem, Roche and teammates discovered, was related to cooking smells—the resident thought everyone was being fed and that she would be left hungry. The students' solution—install much stronger exhaust fans in the kitchen.

Bay Cove was impressed by the students' recommendations and put these into practice. "We hoped they'd have affect over time," recounts Roche, "but were surprised to find the vocalization ceased almost immediately after our solutions were implemented!"

The McCormack Middle School, like most in the inner city, has many students who've experienced serious trauma. While day-to-day school life can be stressful for everyone, it can be much worse for them, and dealing with it in exposed public places can make things much worse. Noise can be a significant contributor to stress. Understanding this, BAC students conducted sound level tests throughout the school, and found those in the cafeteria during lunchtime were off the charts. "They were getting noise levels that were equal to a subway arrival on a crowded rush-hour platform,"

explains Louise Packard, executive director of Trinity Boston Foundation, the agency that provides social services for the McCormack School. The BAC team came up with an ingenious solution—a ceiling made of sculpted sound-dampening material that would bring noise levels down to tolerable levels, and improve the appearance of what was a drab, industrial space.

Packard is pleased the BAC students came up with innovative, low-cost solutions for the counseling offices, such as punching bags to help students release aggressive energies and shower curtain circles that can give students in the waiting room instant privacy. “We really loved working with the BAC students on this project,” says Packard. “Their passion and the professional way they presented their recommendations was impressive.” Packard feels they offered many great ideas. “We can’t do them all now,” she adds, “but we have a roadmap for improvements to work on.”

Faculty and students agree that the field, which is still in its infancy, is starting to take off. “This is going to be much more than design for healthcare facilities,” says Kopec. “I think we’re going to see it incorporated into all aspects of the built environment, from office buildings to residences, parks and airports.”

Caroline Repard, who will complete the program next spring, has already incorporated its principles into her design practice in British Columbia. “It’s changed the way I think about materials in condominium public places, like softer flooring when there are many fall-prone seniors. I’ve found research helps my clients understand and accept why I’m making these recommendations.”

Brumfield and Roche are working on starting their own practices in Texas and Vermont, respectively. Garcia wants to build a network of specialist and design firms who can help her provide solutions for clients.

Kopec is pleased with the early success of the program, and believes it will evolve over time. “We’re following trends in health and design and will enhance the curriculum to reflect changing industry needs.”

To meet students in this program, visit www.the-bac.edu/design4health

FOR THE WEBSITE: BRIEF STUDENT PROFILES

Adrienne Brumfield

Adrienne Brumfield has been working in the health field for over 20 years. In her time off from nursing, she found herself always drawn to interior design. After much consideration, Brumfield decided she had to find a way to combine her two loves—design and health—into one practice.

Brumfield is completing her first year in the program, and has found that design work demands the same interpersonal skills she had with her nursing patients. “When people are comfortable in the relationship—they connect with you, they know you’re listening to them and not imposing your views—they’re much more willing to open up and share their needs.”

Brumfield is planning to start her own design business. “I have friends who’ve turned to me for design advice in the past.” She says, “Now I’ll have the professional skills to make a difference in their lives.”

Chloe Garcia

Chloe Garcia, who has a background in psychology and art, was drawn to the BAC’s Design for Human Health program because she saw an opportunity to apply her creative talents to the design of environments that have therapeutic value.

As an artist, Garcia is impressed by the contribution science can play on design. In a residential project for a client with pulmonary and vision problems, she and team members learned that particles in dry environments can aggravate health such issues. Their solution? Construct a series of landscaped mounds around the property to trap wind-born particles.

Garcia has learned that teamwork is critical to successful design. “Each team member brings a different perspective to the project.” She says, “I’d like to create a consortium of specialists I can turn to who can help me create healthy environments for clients.”

Caroline Repard

Caroline Repard owns her own interior design business focused on refurbishing public spaces in multi-family residential properties; she also teaches at the British Columbia Institute of Technology in Vancouver. Through her practice, she came to see that buildings had many different users, and one design solution might not address their different needs. The BAC’s Design for Human Health program offered her a way to deepen her understanding of the health needs of clients and use that knowledge to create more effective designs.

“This program has exponentially opened my mind!” Repard says, “There are so many aspects of health to consider throughout the research, design and construction process. For example, in creating a healthier environment for clients, we don’t want to damage the health of construction workers; that’s why a pre-construction HASMAT report is essential.”

Repard thinks it’s important to educate everyone in the industry. She’s developing courses for designers and those in construction trade schools on how design can improve health.

Janet Roche

Janet Roche has been involved in creative businesses for almost two decades, as multi-media producer and interior designer. As a self-taught designer, she felt she needed professional training to take her business to the next level. Bringing together the psychological, biological and sociological aspects of design is what attracted her to the BAC program.

“Of all that I’ve learned in this program, what’s struck me most is how research helps designers identify problems and find solutions.” Says Roche, “I think we should do more to measure our work and report on successes—more people in the field need to see the power of evidence-based design.”

Roche graduated in December and is already looking at ideas for designs she can market herself. She believes design for human health will be a major force the field in the years to come, and is eager to help shape and promote it.