

Teaching, Research, & Design Outreach
A Self-Sustaining Philosophy for Teaching
Campbell ♦ 2019

Considering the growing stress on our world's natural resources as well as the rapidly aging population, it is prudent to train future designers to design to positively impact these changes. I believe introducing more socially and environmentally conscious designers into the design and planning fields will improve future building users' lives, conserve natural resources, and enhance the value of design and planning services. With this, I strive to combine teaching, research, and design outreach in my approach toward university design education. In addition to guiding the



Campbell's junior I.D. student presenting her evidence-based studio project to residents.

development of design skills needed for practice, also this strategy introduces future designers to the value of making research-based design decisions, known as evidence-based design. Since evidence-based design practice is critical for producing more consistent design outcomes – meaning designed buildings are used for the purpose and at the level they were intended – this suggests understanding evidence-based design practice is key to creating socially and environmentally responsible designs. Also, this teaching approach integrates my research program with expanded learning opportunities for students. While this teaching approach is apparent in each course I teach, representative examples are discussed below.

Hands-on Learning

I believe the most effective teaching gives student designers practical, hands-on opportunities. Accomplishing this through design outreach with the local community is a way of modeling socially conscious design as well as serving beyond the university. To achieve this, I integrate hands-on experiential-learning in both theory and studio courses. One example is a collaborative partnership I formed with Plum Creek, a national development company. The partnership's goal is working towards developing design criteria to support aging in place in traditional neighborhoods. In a newly developed graduate-level environment and behavior course and also a subsequent junior-level interior design studio course, I utilize this partnership to drive service learning in those course teaching models.

Within the graduate course, master's and Ph.D. students conduct environment and behavior design research to inform design recommendations for the real-life client. From these findings, students make evidence-based design recommendations to inform the future development of a neighborhood social center intended to actively support aging residents.

In the undergraduate commercial design studio, integrating this project offers several benefits to students. First the project provides a 'real-life' client experience and teaches students how to conduct their own practice-level, pre-design research then to use findings to guide schematic plan development. Since these two courses focus heavily on using research to make well-informed design recommendations, these are strong examples of unifying teaching, research, and service to create student understanding of the value and practice of evidence-based design in finding solutions for social issues.

Multi-disciplinary Learning

In addition to hands-on learning, I believe the importance of drawing together various design disciplines in a learning environment is integral in successful design education. In particular,

creating cross-disciplinary learning opportunities teaches an 'integrative approach', the movement supported by the green building industry emphasizing communication and connections between professionals throughout a project's life. One way I have been able to implement this strategy is through creating a new Sustainable Interior Environments course. By bringing together majors from across campus, this course culminates with integrated student teams executing a sustainable design evaluation and consultation for a real-life client.

Also, this multi-disciplinary integrated approach is apparent in my Designed Environment and Human Behavior Interactions course. In this, multi-disciplinary student teams learn to apply environment and behavior research to critically assess existing building designs. This is a central building block for evidence-based design practice.

Further, in order design in a socially responsible way, students must recognize the value of understanding and empathizing with client needs. To accomplish this in the context of designing for older adults, another experiential learning activity this class incorporates is an opportunity to encounter building design with the equivalent of common older adult physiological challenges. This learning exercise utilizes age suits researched and developed for this purpose. The age suit designs were based on those developed by Ford Co. and other organizations seeking to improve designed products for use by the aged.



Campbell's Environment & Behavior students experience a building with the restrictions of age suits.

Research Supervision

Supervising student research programs is a valuable component of this self-sustaining scholarly agenda based on this arrangement of teaching, research, and outreach. Qualified as graduate faculty, I supervise student research. Beyond experience as a committee member or committee co-chair guiding student dissertations/theses from conception to completion, the connection between teaching, research, and outreach is apparent even before the dissertation process begins. For instance, through my new, year-long independent study research course, Ph.D. students without a research background learn how to use fundamental research tools so they may conduct their own applied design research dissertation.

Even at the undergraduate level, success teaching research and evidence-based design practice is apparent. For example, in guiding a junior-level interior architectural design student's research and consequent evidence-based facility design, the student's work successfully



Campbell's undergrad. I.D. student collecting interview survey

navigated academia's peer-review process for presentation at the Environmental Design Research Association conference.

Conclusion

By uniting design outreach, teaching, and research a well-rounded program of teaching, giving, and learning is created. From this, students experience hands-on and multi-disciplinary learning in order to make well-informed design decisions based on their own and existing research. With this, I believe students have a broad base from which to grow into exceptional, socially-conscience designers.