

Embracing Organic Architecture through the Practice of Mindfulness- A Pedagogical Framework

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Introduction

Design educators prepare students for the future of the built environment through their connected pedagogical framework. Faced with challenges in their personal life, education, and as they move toward professional practice, providing strategies that help students to manage distractors is paramount. Navigating uncertainty can be exciting for some but unnerving and extremely stressful for others. Mindfulness as an ancient practice, considers being present in the moment, in full purposeful attention.¹ This work explores mindfulness principles to engage students as they experience organic architecture through an immersive studio at Taliesin West.

Background

Research indicates that Americans spend more than 90% of their time indoors,² and that most people are connected to some type of electronic device such as a computer, tablet, or smart phone.³ The advancement of technology has opened opportunities to work virtually anywhere and at any time. This can be an asset, but if not managed, can be a source of unhealthy stress and anxiety; in the case that too much of a good thing can be bad with regard to smart phone addiction.⁴ The practice of mindfulness can help manage unhealthy habits for student's wellbeing.

Recent studies show that high levels of mindfulness, which enhance awareness and attention of present reality, translates to high levels of self-esteem.⁵ Furthermore, mindfulness practices reduce stress and increases focus and creativity while also fostering empathy, and interconnectedness among students in higher education settings.⁶ Mindfulness practice can influence students to design and innovative solutions to enhance our communities in the 21st century.⁷ Scaffolding mindfulness by embracing the present, self-reflection, and spirituality, the practice of wholistic and mindful design skills can transcend a student's formal education. Provided the opportunity to shift from the traditional in-studio practice to an immersive studio environment, students can view the world around them through a different lens.

¹ Brady, Richard. "Realizing True Education with Mindfulness." *Human Architecture: Journal of the Sociology of Self-Knowledge* 6, no. 3 (Summer 2008): 87–97.

² Chakroun, Walid, Soroor Alotaibi, Nesreen Ghaddar, and Kamel Ghali. "Comparing Configurations for Supply and Return Vents in Mixed Air Distribution Systems to Reduce Micro-Particle Indoor Concentrations." *ASHRAE Transactions* 125, no. 1 (January 1, 2019): 206.

³ Alberto Acerbi. *Cultural Evolution in the Digital Age*. Vol. First edition. (Oxford: OUP Oxford, 2020):117.

⁴ Alberto Acerbi. *Cultural Evolution in the Digital Age*. Vol. First edition. (Oxford: OUP Oxford, 2020):118.

⁵ Ainhize Gilsanz, Clare D'Souza, Patrick Hartmann, and Vanessa Apaolaza. "Mindfulness, Compulsive Mobile Social Media Use, and Derived Stress: The Mediating Roles of Self-Esteem and Social Anxiety." *Cyberpsychology, Behavior, and Social Networking* 22 (May 9, 2019): 388–96.

⁶ Christian, C. "Contemplative Practices and Mindfulness in the Interior Design Studio Classroom." *Journal of Interior Design, Volume 44(1)* (2019): 29-43.

⁷ Krause, Caitlin. *Mindful by Design: A Practical Guide for Cultivating Aware, Advancing, and Authentic Learning Experiences*. Corwin, a SAGE Company, 2019.

Research Method

Using a mixed method approach, this Institutional Review Board (IRB) approved project employed Experiential Learning Theory whereby knowledge results from a transformation of experiences which considers experience as a central role in human development and learning.⁸ Applications of biophilic design as a holistic approach considers nature-based systems, engineering principles, and design prompts that promote improved health, well-being, and performance.⁹ Distinguished from other practices, the best examples of biophilic design applications are those that consider the synergistic ability to integrate the building, site, and occupants through the creation of habitat.¹⁰ An example of this philosophy is Frank Lloyd Wright's Taliesin Fellowship. The apprentices worked closely with Wright to build a community which considered organic architecture as the essence of the structures and habitats they created in the Sonoran Desert. In the spirit of Wright's vision, this study considers mindfulness through the lived experience and sense of place associated with an immersive studio experience.

The studio was also framed considering the work of famed biologist, Edward O. Wilson, whose life's work respected nature and humanity's place in it as well as the 14 Patterns of Biophilic Design by Terrapin Bright Green.¹¹ Over an eight-day period, students from undergraduate and graduate programs in architecture, environmental design, interior design, and regional and city planning worked and engaged in mindfulness practice while on site at Taliesin West located in Scottsdale, Arizona.

Research Questions Considered

RQ1: How does mindfulness practice contribute to a student's design practice engagement?

RQ2: How does moving the studio experience away from a university setting and into a nature rich immersive setting change the student's perception of design engagement?

Instructional Method

Serving as facilitators, the professors engaged students in mindful activities such as nature hikes to explore various built shelters located in the desert (Figure 1). Students were asked to document their experiences through sketching and journaling. Students were also assigned two design interventions which considered light and shade/shadow. Each two-person team chose one shelter in which to incorporate one of the design interventions. The students were encouraged to experience their chosen shelter during different times of the day and night and document the various conditions.

Course objectives

- Develop an understanding of the impact of the built environment on human experience, behavior, and performance

⁸ Kolb, Alice Y., and David A. Kolb. "Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education." *Academy of Management Learning & Education* 4, no. 2 (June 2005): 193–212.

⁹ Ryan, Catherine O, William D Browning, Joseph O Clancy, Scott L Andrews, and Namita B Kallianpurkar. "Biophilic Design Patterns: Emerging Nature-Based Parameters for Health and Well-Being in the Built Environment." *ArchNet - IJAR: International Journal of Architectural Research* 8, no. 2 (July 1, 2014): 62–75.

¹⁰ Julia Africa, Judith Heerwagen, Vivian Loftness, and Catherine Ryan Balagtas. "Biophilic Design and Climate Change: Performance Parameters for Health." *Frontiers in Built Environment* 5 (March 1, 2019).

¹¹ "How to Incorporate Biophilia Into the Workplace." *Journal of Property Management* 80, no. 1 (January 2015): 6.

- Demonstrate an understanding of the relationship between the natural and built environment as it relates to the human experience, behavior, and performance
- Through various projects, student will analyze and synthesize human perception and behavior patterns to inform design solutions
- Develop an understanding of the social, political, and physical influences affecting historic changes in design of the built environment
- Develop an understanding of significant movements, traditions, and theories in interior design, furniture, decorative arts, material culture, architecture, and art
- Application of precedents to inform design solutions



Figure 1: Nature Hike to Visit Various Shelters

Photo by Author



Figure 2: Student Prototype Development

Photo by Author

The documented experience informed their design intervention. Working in teams, students made prototypes (Fig. 2), tested, and revised their intervention for final presentation to the class and invited guests (Fig. 3). Emphasis was placed on the process and students were encouraged to explore multiple options and to push their creativity. Each student presented their installed projects and highlighted the challenges and successes along the way.



Figure 3: Student Presentations

Photo by Author

In addition to the studio projects, students also practiced mindfulness through service to others as students were assigned a slot on the “joy list” which consisted of helping with meal preparation, washing dishes, and setting the table for meals. Students, faculty, and guests ate meals together which allowed the opportunity to enjoy conversations, learn from others, and experience healthy eating habits. Creating routines and schedules helped manage workloads and expectations thus alleviating stress. All students participated in each task once during their stay. While this is a humbling experience, it is not unlike what E.O. Wilson discovered within ant and bee colonies in that everything has a purpose and if the process is disturbed, the system can be disrupted.¹²

Outcomes

Desert environment living allowed the students to understand the site, climate (Figure 4), and nature-based systems (Figure 5). While not a requirement, many students chose to spend the night in their desert shelter which resulted in a profound respect for shelter and creature comforts as the shelters do not have utilities and plumbing. Living together, peer learning, service to others, and respect for the fellows, built community and value for personal boundaries. Student evaluations revealed increased understanding of organic architecture through mindfulness practices, reduced stress, and improve self-confidence.



Figure 4: Climate can Quickly Change- Embracing the Storm

Photo by Author

¹² Naour, Paul. *E.O. Wilson and B.F. Skinner: A Dialogue between Sociobiology and Radical Behaviorism*. Developments in Primatology: Progress and Prospects. Springer, 2009.



Figure 5: Gambel's Quail Commonly found Running Around the Campus

Photo by Author

The following are excerpts from student course reflections:

“The original work of Frank Lloyd Wright here at Taliesin West opened my eyes to something I do not think I would have ever experienced. It was not only the impressive buildings that excited me, but the entire atmosphere that he created. His buildings are like no other in how they interact with the surrounding environment all while giving you a strong sense of comfort and uniqueness. By using vast amounts of natural light, the spaces seemed to come alive and for me, they inspired and motivated.”

“The shelters provided a unique way of living on Taliesin West. Studying these structures, I was able to further understand what exactly some of the biophilic designs were. I thought that it was quite impressive that these shelters kept animals out all while providing a safe and somewhat comfortable place to live. I drew a lot of inspiration from these, especially Hook and Brittlebush. After taking more time with Hook, I realized the potential it has to be something even more impressive than it already is and I plan on taking this imaginative skill to my older architecture designs to see what and how I could improve my work. As FLW demonstrated, the level of detail and craft is never truly finished, just stopped by a deadline.”

“The fellowship provided myself and my peers an outstanding experience through multiple lectures, exclusive tours and people. The Dodge House, by David Dodge was breathtaking. The views that were provided by the long strategically placed windows provided maximum natural light but also brought the outside in. The living room was open and airy as well as an outstanding acoustical system. Each portion of the house was carefully thought about and turned into a masterpiece. The one quote that has had me contemplating is that music and architecture are synonymous.”

“Surprisingly, one of the best things that I have been left with is the “Joy List” memories. Participating in these were fun and allowed me to get a more wholesome feel of the environment that Wright and his apprentices lived in. The sense of community there made the campus feel much more like home.”

“This course really broadened my horizon in many ways. My outlook on how architecture and interior design should be approached has changed for the better. Understanding, or experiencing the time, effort and thought that was put into each foot of each building really left me astonished. That is the type of thoughtful design I want to pursue. Not cutting corners and using the land to your advantage. Overall, this course was truly inspiring and such unique experience.”

Limitations

The immersive studio by nature limits the time students have to complete a project. This course was conducted over an eight-day program that included various activities to include lectures, tours on site and off site. The days started promptly at 8:00am and wrapped up around 10:00pm. While some may see this as a limitation, compressing the time pushed student to think quickly. Project exploration was limited to a small budget and readily available materials in which to build the prototypes. Other limitations were student experience with various materials. While this course had students from different design disciplines, and at different levels in their academic career, students worked together to problem-solve. The collective experience produced thoughtful design considerations which may not have been discovered independently.

Future implications

This was one segment of a longitudinal study. Due to the COVID-19 Pandemic, programs scheduled for 2020 and 2021 were canceled. Another immersive studio is scheduled for June 2022 at another Wright property which will build on this and prior studies. The goal is to provide evidence which supports immersive studio experiences for design students. The information gained will help inform future studio pedagogy to enhance the student experience and overall comprehension. Ultimately the goal is that these types of experiences will impact and enhance their approach to design projects throughout their academic career and into their professional roles.

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