

The Generous Cycle of Exploration and Growth

As Earth's resources dwindle and the human population grows, environmental restoration becomes increasingly valuable. Expanding this study area fuels the ever-developing creativity and ingenuity necessary to restore the climate. Miami University has recognized this, offering numerous courses to enhance its students' understanding of the environment. In following my interests in environmental restoration and exploring the endless opportunities offered at Miami University, I pursued a co-major in sustainability as a first-year student. The sustainability co-major directly informs my knowledge of the social aspects of environmental restoration and allows me to explore areas beyond my environmental earth science major. One exceptionally formative aspect of this co-major was completing the architecture course, Sustainable Design Case Study (ARC 406C), taught by Mary Ben Bonham. During this fall 2023 class, I was exposed to a new area of sustainability: green building. What I did not anticipate, however, was how the research methods and library resources introduced in class would significantly propel my academic career.

As a final assignment in ARC 406C, I developed a mock website, displaying an extensive report of my research on the sustainability of vernacular architecture. This assignment was especially beneficial, as it challenged me to expand my research skills. As a STEM major and undergraduate researcher, the extent of my work has largely focused on lab-based studies and scientific journals. Although I enjoy this research, it can become monotonous. Completing the ARC 406C final project offered an exciting deviation from my established methods, unlocking new avenues for research. As a result, my interest in environmental restoration grew, along with my research capabilities.

Vernacular architecture was introduced early in the course and referenced throughout the semester. This concept involves the incorporation of local or cultural aspects in architectural design, construction styles, or materials. I recognized how the use of native materials and

traditional construction practices would limit a building's embodied energy. In other words, if materials are acquired locally, they require less energy and are more suited for their region. To continue my analysis of this new-found interest, I chose to dedicate my final project to, "The Relationship between Vernacular Architecture and Embodied Energy." However, I could not bring this work to the lab, like other projects, and had to explore new methods of research.

Under my professor's guidance and through the library resources, I utilized three outlets: databases, the course guide, and the Wertz Art and Architecture Library. My initial in-depth analysis began with the databases and course guide, as they felt most familiar. Although I had never used a course guide before ARC 406C, the site was easy to navigate and provided information relative to my project, including access to U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) information. Searching the databases also revealed several relevant papers, relating vernacular architecture to sustainability. Investigating these resources enhanced my project while also broadening my scope of database research to include architectural terms. However, my project could not reach its full potential until I challenged myself to venture beyond online sources.

As the class's projects progressed, my professor encouraged us to visit the Wertz Art and Architecture Library for additional support. Initially, I was skeptical of this approach, as I had not visited a library for research purposes since completing a high school English assignment on classic literature. Furthermore, I doubted the library's capacity to have work related to my niche topic that the databases did not. With this mindset, I had a lack of direction and felt uneasy attempting to locate resources in an unfamiliar setting. Nevertheless, with support from my professor and the arts and humanities librarian, Stefanie Hilles, my discomfort quickly dissolved and my capabilities as a researcher grew. I soon re-learned the excitement of searching for the right book that I had once known as a child. All at once, these feelings flooded back to me, unlocking a new sense of creativity and focus that would refine my research. After disproving my initial worries, and locating numerous books on the subjects of vernacular and

sustainable architecture, I settled on three that offered significant support for my project. Not only did these books provide the necessary information to develop my research, but they also included useful figures I could use to embellish my mock website. Including this information in my project was the final step in solidifying a desirable outcome.

After completing this assignment and earning a high grade, I was extremely grateful for the experience. In dedicating my academics to achieving an environmental research career, I wrongfully assumed I was well-equipped with the research methods necessary for my field. However, it was not until I explored the library resources in ARC 406C that my skills truly developed. I gained a new approach to research and altered my mindset to think outside of familiar, lab-based studies. As my time at Miami University concludes over the next year, I will continue to utilize the library resources and exercise my research capacity. After graduation, this significant learning experience will remain with me as I work to aid in environmental restoration through research. Therefore, I express gratitude for ARC 406C and the library resources for shaping my dedication to research, and I thank the Library Award for Undergraduate Research Excellence for granting me the opportunity to reflect on this experience.