

The Role of International Experiences in Architectural Education: Research Reflections from Thailand

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ABSTRACT: In an era defined by unprecedented connectivity and cultural exchange, the role of international travel in shaping architectural pedagogy stands as an unequivocal cornerstone of transformative learning. This autoethnographic paper offers a unique perspective on the impact of self-directed and student-led international research experiences on the mind of the young designer. This paper describes the outcomes of two distinct international student-research experiences in Thailand during the Summer of 2023.

As national identities become blurred and architectural challenges become increasingly global in scope, students desire an enriching curriculum that addresses diverse built environments, traditions, and perspectives. International travel provides a unique opportunity for the next generation of designers to grow academically, professionally, and personally.

In the summer of 2023, two architecture students from the same university embarked on separate research experiences in Thailand. Graduate student, Elijah, explored vernacular masonry construction methods, building upon his work in a previous design studio focused on masonry construction and rural housing in tropical climates. The observational method of research allowed for a connection with Thai people and culture that helped inform their architectural conventions. Undergraduate student, Amelia, worked on an interdisciplinary team funded by the National Science Foundation to study agricultural land use change in Eastern Thailand using remote sensing techniques.

By engaging in international research, these profound experiences transcend the confines of the classroom enhancing student skills of adaptability, cross-cultural fluency, and a deep understanding of the nuanced aspects of different cultures. This underscores the significance of international travel, which is not just important but *essential* for the advancement of future architects and designers. The field of architectural pedagogy serves as a foundational platform through which the integration of international research can elevate the skills and perspectives of young designers, preparing them for a future grounded in global engagement.

KEYWORDS: international, independent, research, pedagogy, student-led

INTRODUCTION

As architecture is continuously defined and refined through culture and learning, the need for continued connection with other cultures and people will grow. Architects must look towards a global perspective. As populations rise to new limits and the urban landscape explodes, levels of pollution increase and easily available resources decrease (Forman and Wu, 2016). Thus, architects and urban planners are needed to create an urban landscape that can withstand the growth and perpetuate informed practices in design. In response to this shift, architecture pedagogy must accommodate these incoming demands for the architects of the future. By being globally informed designers, students will be better equipped to accommodate the rapidly changing world. This is managed through educating the young designers of global perspectives through active participation and hands-on learning. International research provides a platform for this, allowing students to better understand people who live in differing cultures and hold a different set of needs, which builds a foundation of architects that will be able to create a new urban landscape that fulfills the needs of the ever-growing populations. There is a need for new expertise to conform to the evolving landscape. One of well-informed designers who understand ecology, landscape, water, transportation needs, infrastructure, and community (Forman and Wu, 2016).

In the dynamic realm of architectural education, the quest for innovation transcends borders, beckoning educators and scholars to traverse international landscapes in search of transformative insights. As the architectural pedagogy landscape evolves, this paper embarks on an exploration of student-led international research, unraveling the potential for cross-cultural influences to shape the future of architectural education. In the midst of diverse perspectives, methodologies, and environments, we pursue intersections where global collaboration and localized wisdom converge.

1.0 BACKGROUND

Architectural pedagogy includes meaningful dialogue about international architecture often just in a classroom setting. As national identities become blurred and architectural challenges become increasingly global in scope, it is clear that architectural education should evolve as well. To create true global citizens, students require an enriching curriculum that critically explores diverse built environments, traditions, and perspectives. International travel provides a unique opportunity for the next generation of designers to engage in this type of discourse as well as grow academically, professionally, and personally. The field of architecture serves as a foundational platform through which the integration of international research can elevate the skills and perspectives of young designers, preparing them for a future grounded in global engagement. By engaging in international research, these profound experiences transcend the confines of the classroom enhancing student skills of adaptability, cross-cultural fluency, and a deep understanding of the nuanced aspects of different cultures.

Study Abroad programs offer a unique experiential understanding of pedagogical approaches to learning. By immersing students in a country foreign to their own experience, there are often moments of intense growth educationally and personally, especially when looking at it from an architecturally pedagogical perspective (Lyle 2011). Oftentimes there are unique perspectives within the visited country that challenge conventions. This allows them to synthesize their knowledge base and offer contributions they feel are helpful as ways to challenge their assumptions (Macedo 2017). The goal of a study abroad is to continue an educational path in a new place. During their college years, students' travel patterns and preferences begin to take shape. Mody et al.(2017) found that those who accumulate a greater number of travel experiences during this period tend to develop a strong desire for more travel experiences. Additionally, they exhibit a willingness to be more venturesome in their travel behaviors, pushing themselves to be more open to new cultures and ideas (Mody et al. 2017). This travel-inspired level of learning help push the narrative that travel is imperative to supplement education. By encouraging people to understand themselves further and push beyond moments of discomfort allows students to learn. Architecture pedagogy finds itself often teaching about culture and history in a classroom setting that is far removed from the 'place' it is exploring. The concepts within architecture pedagogy persistently center around learning as a form of work, where the sparks of creativity come from ideas of play. (Roquette et al. 2022) By traveling, and experiencing a sense of 'play' through intrinsic research pursuits, students have opportunities to learn differently than they did previously.

2.0 STUDENT RESEARCH GOALS

This paper describes the experiences and outcomes of two students who engaged in distinct student-led international research programs in Thailand during the summer of 2023. Inspired by autoethnographic literature, student observations are recorded both as documentary and narrative accounts. In this case, the paper offers reflections of students' personal journeys and academic discoveries during their research endeavors in Thailand.

In summer of 2023 fourth-year undergraduate student, Amelia, participated in a National Science Foundation sponsored *International Research Experiences for Students (IRES)* program titled *Consequences of the COVID-19 Pandemic on Landscape Change in Tropical Crop Cultivation (National Science Foundation Grant No. 2153579)*. Amelia was part of a diverse team consisting of one graduate student and five undergraduates with varied backgrounds, representing departments such as geography, urban planning, sociology, environmental science, and architecture. The team's interdisciplinary composition brought together a wide range of skills and perspectives. Collectively, the team sought to explore how crop cultivation in Eastern Thailand changed between the years of 2017-2023 due to the economic, social, and political effects of COVID-19? Specifically, research questions included:

1. Which crops have changed and in which locations?
2. Which crops have seen rapid increase in production?
3. Which crops are shrinking in production?

During their time abroad, the students utilized remote sensing techniques and a machine learning model in Google Earth Engine to map crop changes in the Eastern Region of Thailand. The program spanned five weeks and was primarily based in Bangkok, with approximately half of the duration dedicated to collecting samples in rural areas. In the evenings and weekends, students were encouraged to participate in cultural activities and pursue their personal interests. What were the project outcomes?

In the same year, Graduate student, Elijah, participated in an independent travel fellowship sponsored by the local American Institute of Architects chapter. This fellowship offered an opportunity to study architecture in a place of their choosing. Elijah, already interested in vernacular brick construction techniques in rural settings, found a rich heritage of brick construction in Thailand. Using qualitative research methods that "locate the observer in the world", Elijah conducted field notes, informal interviews, conversations, and photographs to create a set of "interpretive, material practices that make the world visible" and "turn the world visible" (Denzin and Lincoln, 2018,43)

As a way to narrow down the broad topic of international architecture research the graduate student composed questions to focus the research. Research questions included:

1. What means and methods are used for housing construction in rural Thailand?
2. How is masonry used in this climate and cultural context?

These questions fueled the travel and conversations with local architects and builders. Much of the research was conducted through visual means, i.e. photographs, sketches, and observation. This collection of documents and artifacts, as well as notes concluding each day's events, were synthesized at the end of the travel experience to be further analyzed. Having stayed with a host family in Bangkok, Elijah was able to communicate effectively with locals about their homes and construction methods. The research took place in Bangkok, Chiang Mai, Pai, and the surrounding rural villages and towns. These days of Travel were essential for observations, and understanding cultural norms. The student researchers did their research over separate times within the country with only one day of overlap when they met in Bangkok. (Figure 1)

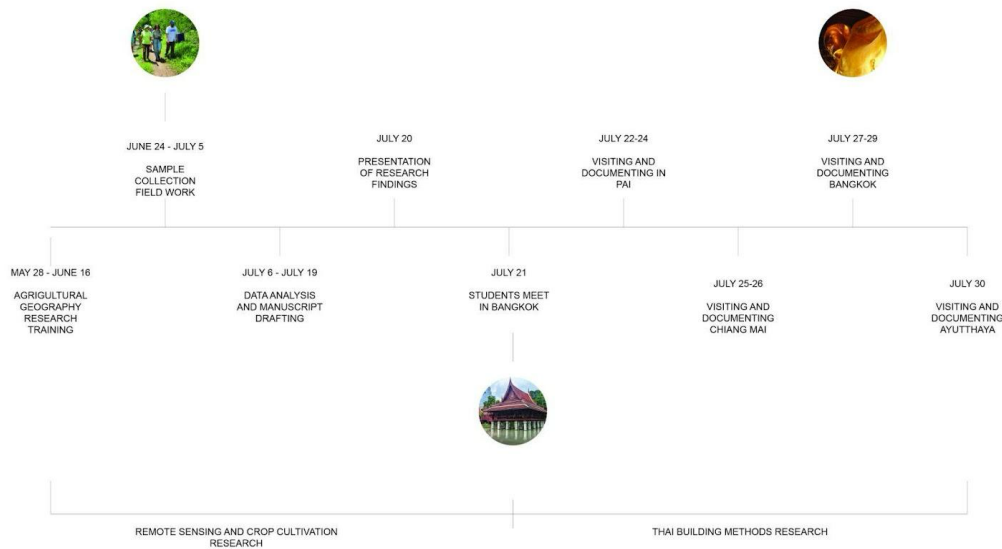


Figure 1: Timeline of students' research in Thailand. Source: (Todd 2024)

3.0 STUDENT OBSERVATIONS

This section will describe the observations and cultural encounters that allowed for introspection and student development. These observations are summarized in three primary categories that can support multi-cultural architectural pedagogy: 1) embracing discomfort, 2) respect for nature, 3) cultural Embodiment in Architectural Design.

3.1 Embracing discomfort

Discomfort is a natural part of growth and development. The discomfort of being in a new place pushes one to challenge their sense of contentment, urging them out of their comfort zones and into uncharted territories. This forces a person to be adventurous and engage with others for assistance and guidance. By reaching out and seeking help, they not only build essential social skills but also become more resilient and confident in navigating new avenues in their life. Through travel, individuals encounter vastly different cultural phenomena that challenge their own systemic social structures and norms. Exposure to these diverse cultures fosters a deeper understanding and appreciation for the uniqueness of others, cultivating a broader perspective and a greater tolerance for cultural differences. This cultural immersion can be eye-opening, revealing the richness and complexity of the world beyond one's familiar surroundings.

The geographic and cultural landscapes of Thailand are the result of a unique blend of external influences and indigenous traditions. Navigating the country alongside locals and studying its architecture and geography provide valuable insights into the cultural development and sense of place within the country. Yet, these insights are often brought about by personal and interpersonal discomfort. Rebecca McLaughlan and Stephanie Liddicoat argue in their 2017 paper that there are two ways a "pedagogy of discomfort", a term coined by Megan Boler in 1999, can be implemented in the architectural education: (1) by disrupting the student's way of seeing, and (2) by disrupting the way of making (McLaughlan & Liddicoat 2017). Experiencing new ways of life can cause discomfort, even in the simplest of tasks, inherently disrupting the student's way of seeing. When the mundane becomes exciting, confusing, or frightening, the observer is forced to consider their own perceptions and norms in a society differing from their own. By embracing the discomfort implicit with being an obvious outsider, students were able to experience Thailand's unique character by understanding their own biases and cultural assumptions. (Wooley and Ayelet)

When discussing cultural discomfort in Thailand, it is important to note the tremendous variety of environments within the country. Bangkok, specifically, is a chaotic and complex urban environment. For many, who have spent their lives in smaller cities or more rural areas, the density itself may evoke a sense of discomfort. Though it was once navigated almost exclusively by boat, roads, and increasingly, rail lines dominate the city today. Navigating the city by foot requires a sense of boldness and confidence. Furthermore, Bangkok is home to a variety of cultures,

languages, and religions, which provides a rich environment for learning and exposure. Despite the appearance of chaos, Bangkok is vibrant and unpredictable, and yet, systematic.

Markets, for example, can be difficult to navigate. They constantly have changing vendors and product variety. They are open only on certain days of the week and may only last in that location for a short period, depending on spatial availability. Though on the surface level it may not appear this way, the ever-changing nature of the Bangkok market is often rational. Markets adapt vendors and variety to the available seasonal product. They open on the days that may receive the most customers, and they close for inclement weather. In this way, the market is regulated by systems of nature, the habits of its people, and the cultural need for flexibility. The market venue typology provides a unique set of lessons for the architecture student.



Figure 2: Truck bed full of salak, ready to be taken to the market. Source: (Todd 2023)

As international visitors to a country unfamiliar, a sense of discomfort is sure to arise. The language barrier, regardless of social adaptability, emphasizes one's foreign status in society. Being thrust into a challenging, unfamiliar environment forces student travelers to adapt and embrace discomfort. Oftentimes, by confronting and embracing the discomfort that comes with travel, students develop a thirst for new experiences. This initial leap into the unknown can spark a lifelong passion for exploration and discovery. As they continue to seek out new travel experiences throughout their lives, they grow into lifelong travelers and well-rounded individuals, enriched by the diversity and knowledge gained from their journeys.

3.2 Respect for nature

From experiences in Western culture, there is often a reverence for the natural world yet often people lack an understanding of what it takes to coexist and understand their place in the natural world as a whole. Historically, in the United States, there is an anthropocentric view of nature, or in a sense of human domination toward nature instead of fostering a sense of oneness with the surrounding land. (Marx) Instead, the students observed that respect for nature, buildings, religion, land, and people rank high in the social norms in Thailand. Oftentimes, out of respect for the spirits that occupy the land, small houses called "spirit houses" are placed on the property so that people may live in communion with the spirits. By feeding them with offerings of food, drinks, and trinkets, these spirits look after the house and the land. Respecting the spirits is often a priority in some households. This ritual of spirituality connects the person to the land, grounding them, and engaging them into a deeper understanding of self regarding the world.

As Amelia's research team moved to more rural areas, it was noticed that there was a persistence of this sort of adaptable lifestyle. In speaking with local farmers she learned that many of them select their crops based on a multitude of factors, including market value, weather conditions, labor intensiveness, and soil type. As these factors change year to year, the farmers adjust to provide for themselves. The COVID-19 Pandemic provided a unique opportunity to study this. Pandemic policy, climate change, and economic demands affected farmers and their crop choices, leading to major shifts in crop selection. This volatility of the Eastern Thailand agricultural landscape is a means of resilience. Smallholder farms stay afloat by being flexible to the environmental and social needs of their locations. According to Amelia,

I was struck by this impermanence. The impermanence of the city and the impermanence of the land. Though the city and the agricultural areas are sacred in their own right, this sacredness accepts and even appreciates change. By choice or necessity, the built environment is not idle. (Todd 2023)

As this country resides in a tropical climate zone, seeking ways to move the hot and humid air through the spaces is vital for people. Most houses contained passive cooling solutions. The use of tall ceilings with vents to displace the hot air. The roof systems have large overhangs to prevent the solar heat gain from entering the living and sleeping spaces. Dealing with the humidity and heat leads to buildings with light materials. Teak wood being a traditional building material is still often used, though harvesting teak is illegal in Thailand many houses are made from pieces of old houses. Many, though, are living in houses that have been around for decades. These homes have additions built from brick and concrete creating a mixed vernacular house. Though there was a desire to find a rural housing typology that was created purely from masonry, it was clear that masonry was not used as much historically for rural homes. This was not totally fruitless as many of Thailand's ancient temple structures were built from brick and plaster. Thailand has an incredible connection to nature through its religious beliefs. According to the Thai Public Relations Department of the government, 93.5% of the population is Buddhist (Thailand Public Relations Department 2022). The religious spiritualism connects people to the world directly around them bringing a sense of mindfulness into their actions as well as how nature is revered. This reverence to nature, especially in poorer rural regions, is shown through their built environment, for example, houses are designed to mitigate flood waters during the rainy seasons by being placed on stilts. These design choices are often centuries-old practices rooted in survival techniques. Understanding how the natural world can impact a region can help develop better building practices. By building with intentions to complement and not dominate the natural setting create a harmony between the human-made and Natural world.

3.3 Cultural embodiment in architectural design

Despite diverse climates and cultures across the United States we often see similar built typologies across the country, Thai architecture is a testament to the enduring legacy of cultural traditions, reflecting a unique blend of history, art, and heritage. The architectural tapestry in Thailand serves as a reminder of the significance of cultural roots, adding depth and meaning to the built environment in ways that differ from the more contemporary and often contextually independent developments happening in many American cities. There are Buddhist temples all over Thailand that have been built over many decades and centuries. While the more recently built temple structures employ contemporary construction techniques, many of the old temples use bricks and plaster for their construction. The Ancient City of Ayutthaya is built from bricks of differing sizes stacked in the general pattern of the object. This technique was seen in the walls, statues, and temple structures. This technique of bricklaying and plastering over the brick (figure 2) was also seen at a wealthy family's house that turned into a museum in the city of Chiang Mai. This house, although not rural, carried a lot of the same properties as other houses built around Thailand. The open-air ground floor space built out of the brick and plaster technique holds a firm foundation. Then teak wood is used for the residential second level. Teak was also used for the kitchen building that resided on that same land. Teak was used for its breathability in the hot, humid tropical climate. The movement of the air to keep people cool was important. High ceilings and roofs with vents allow for this air movement. It is clear that brick was used and has been used in Thai construction, however, the built environment it was used was mostly for wealthy patrons or religious architecture. Though it seems that the housing that used bricks in rural areas was rare, brick masonry has a deep history in Thailand's built environment.



Figure 3: Masonry wall built from clay brick with white and red plaster on the exterior faces. Source: (Rutkowski 2023)

Thailand's rich architectural heritage, which is deeply rooted in cultural traditions, offers valuable insights for architectural pedagogy and underscores the importance of embracing cultural roots in the built environment. The importance of traditional techniques, such as the use of bricks and plaster in [the example above...] can add depth

and meaning to contemporary architectural practices. Additionally, the emphasis on passive strategies provides a lesson for sustainable design in the context of energy consumption and climate change. By studying and appreciating these diverse building styles firsthand, students can draw inspiration to create spaces that resonate with cultural significance, promote sustainability, and promote a deeper connection between people and the built environment.

4.0 PERSONAL AND PROFESSIONAL DEVELOPMENT

As the students delved into distinct subjects within the same country, they not only expanded their understanding of the culture but also gained insights into their own research methodologies. This transformative encounter not only underscored the significance of travel and research in strengthening educational foundation but also illuminated the impact these experiences had on both professional development and personal growth. Delving into distinct research projects across an international landscape afforded an unparalleled opportunity to surpass the confines of our academic cushion and immerse in the vibrant tapestry of another culture.

As they navigated through unfamiliar contexts and engaged with diverse architectural paradigms, their understanding of architecture and its relationship to the environment deepened immeasurably. The exposure to different cultural frameworks challenged preconceptions, fostering a nuanced understanding of the intricate relationship between built environments and societal dynamics. This newfound insight not only enriched them architecturally but also broadened their intellectual horizons, positioning them as architects equipped with a global perspective. The challenges inherent in navigating foreign territories, both culturally and academically, nurtured resilience, adaptability, and an acute awareness of the interconnectedness of the world. These qualities, integral to thriving in the ever-evolving field of architecture, transcend the confines of academia, permeating into every facet of our personal and professional lives.

The experiences of being an international researcher develop growth professionally as well as personally. This holds precedent in the arts with what was known as the Grand Tour. Jean Sorabella, Art historian and writer for the Metropolitan Museum of Arts explains, oftentimes where, starting in the sixteenth century, people who had the means would travel internationally as the culmination of their education. (Sorabella 1) Their learning of the world around them as well as their developing skills helped them professionally. Architects and artists would travel to Rome to learn from antiquity, bringing back skills of design that would help their work in their home countries. This type of knowledge and growth that people experienced during the Grand Tour is parallel to the learning and rigorous analysis that helped them learn skills to bring back to the profession.

During their travels, personal development played a vital role in our research. By being in Thailand, surrounded by people, differing cultural norms, and ancient and new architecture, we began to adapt to the country. When conducting our separate research, however, there was even more growth by understanding how people interacted with each other, and to their settings. This research led Elijah to engage with local builders and architects to understand their built environment. This development helped facilitate a working relationship between Elijah and a Thai Architect and Ph.D. candidate who played a role in challenging the conventions of architecture knowledge and personal biases. Personal growth is just that: very personal. Engaging with people of vastly different backgrounds forced them to question our norms and open up more to the world.

By embracing the transformative power of international research, they not only contributed to the cultivation of a new generation of architects endowed with greater wisdom but also fueled our own evolution as individuals. The fusion of diverse experiences became a catalyst for self-discovery, fostering a heightened sense of curiosity, empathy, and a lifelong commitment to the pursuit of knowledge. In essence, international research emerges not merely as a professional imperative but as an enriching journey that shapes the very fabric of our identities, laying the groundwork for a future where architects are not just creators of spaces but stewards of a globally informed, culturally sensitive built environment. Traveling to new places to research and understand architecture and building techniques builds a well-rounded education in building design. Lyle Culver, a PhD scholar from Florida International University interested in the influence of study abroad programs on students, both graduate and undergraduate, for their future endeavors. In the consequent interviews with these students, Culver found that “this was also the most important aspect of their education as architects because it heightened their interest in architecture.” (Culver 2011) This idea can be brought to other international experiences and research that is not just for architecture studio courses. Traveling to other countries allows one to learn about oneself from a different perspective. This new perspective pushes each person to develop skills they may never have had before traveling.

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Undergraduate Student Testimonial:

This idea of ever-changing spatial environments quickly became relevant in my studies. Upon returning back to my home campus, my Fall studio was entitled “Buildings on Their Own Terms”. Programless

buildings that could be used and reused by a variety of occupants, and for a variety of needs. I often thought about the ever-changing Thai market venue, and of the immediacy of response Thai farmers had to shifting conditions. How might buildings be constructed if they were intended to be in constant states of change? What constraints would we apply to still make them functional? (Todd 2023)

Graduate Student Testimonial:

By pursuing Thailand as the country whose architecture I wanted to study, there was a sense of exploration to learn from different cultures. Returning to campus after the trip allowed me to reflect on the trip and what I learned. By leaping headward into learning about rural Thai architecture, it sparked a fire into the direction of study I want to pursue. Exploring different cultures vernacular building techniques and architecture taps into how to study some of the other factors of international design and appropriate technologies. I learned how to view myself through an international lens to set my intentions and experiences to be diverse, open, and academic. (Rutkowski 2023)

In Thailand, our experiences were designed to grow academic and professional skills. Conducting both quantitative and qualitative research, we honed analysis and comprehension skills to resolve complex problems. The practical skills of resilience for research and the rigor of research will forever influence our design process, drawing from both tangible and intangible aspects. The growth experienced during our time in Thailand will serve as a foundation for ongoing success in future endeavors.

CONCLUSION

Student-led international research opportunities in architectural education offer invaluable lessons in research protocol, contextual design, architectural history, and cross-cultural fluency. Most importantly, it equips students with the tools necessary to solve the global issues facing our planet in a sensitive and multi-cultural way. As students engage with foreign cultures, their curiosity about architecture becomes greater (Culver). When students participate in the development of research protocol they think creatively and collaborate with others.

The experiences gained extend beyond the academic realm, shaping students into well-rounded individuals equipped with a global perspective. Moreover, participation in research empowers students to think innovatively and collaborate effectively, skills that make a good designer. By fostering a deep appreciation for cultural diversity and encouraging creative problem-solving, student-led international research lays the groundwork for a new generation of architects who are not only technically proficient but also socially and culturally aware.

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