

Intentional Inclusion in Teaching Place and Health

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This paper presents the first results from a pedagogical research project designed to diversify the content in a required Place and Health course in the School of Architecture curriculum. The design and implementation of this endeavor relies on culturally inclusive pedagogy (Yu 2018) in which students use cultural anchors to connect themselves to unfamiliar subjects. We created and collected new content from a diversity of geographic contexts, particularly architects from the global south. We then used short essay reflective responses to reinforce the cross-cultural learning. When evaluating these responses, we found that the students were the most articulate about their cultural understanding of people, material, form, and program when they could compare multiple contexts with their own. This demonstrates the importance of extensive inclusion of resources from many cultural and geographic contexts.

INTRODUCTION

We know from pedagogical scholarship that creating inclusive content for the architecture core curriculum is a priority because a culturally inclusive pedagogy serves many of our students directly through the documented benefits of representation (Milem 2003), particularly the students who are immigrants, first-generation Americans and students whose ethnicity or ancestry is from the global south or Asia. At the University of Illinois our undergraduate architecture major cohort exhibits significant diversity: In our junior class, 20% of students self-identify as black or African American, and 20% self-identify as Latinx, Hispanic, or Boricua. Many of the students identify as immigrants or first-generation US citizens, and the students in the course discussed in this paper listed forty-five different ethnicities on the introductory questionnaire at the start of class.

The purpose of this effort is not solely to provide students with the ability to see themselves in the content. The purpose is also to expand assumptions about who belongs in our profession, which benefits all architecture students. This objective is about normalizing, not about celebrating, the diversity of our profession. It is a corrective action for a profession that does not reflect the races, cultures, ethnicities, nor genders of

the people it serves. This pedagogy serves the white students through exposure to multiple perspectives and cultures and by disrupting the dominant paradigm that architecture is solely in the domain of Europe and North America. This belief that a culturally inclusive pedagogy serves all students is grounded in Octavio Villalpando's study, "The Impact of Diversity and Multiculturalism on All Students: Findings from a National Study." He writes: "Without exception, every group of students in this study was positively affected by faculty's use of content on ethnic and racial issues, though it had an especially strong effect on the overall level of college satisfaction for African American and white students" (p. 139, Villalpando 2002).

For "Architecture, the Environment and Global Health," a required course for juniors in our pre-professional architecture program, creating inclusive content is particularly important because the course addresses topics such as the social determinants of health, designing for vulnerable populations, and equity and justice in the built environment. We saw a need to be culturally inclusive throughout the course, not just in the sections detailing social determinants of health, or equity in the built environment building on pedagogical theory from Christine Sleeter She writes: "Cultural celebrations are not antithetical to academic learning. It is substituting celebrations for academic learning that is the problem" (p. 568 Sleeter 2003). In this way, we sought to normalize racial and cultural diversity in the context of place and health, and to celebrate the architects and their buildings along the way.

The project is also grounded in the theory of culturally inclusive pedagogy (Yu 2018), in which students use "anchors" to connect themselves to unfamiliar subjects or contexts. By diversifying the content, a greater number of students will be able to associate with any given source and its content, and this connection will scaffold their learning. Simply including diverse content is not enough: we must also create intentional opportunities to reflect through writing or drawing. This reflection allows the students to connect the content to their own experiences of place, especially their own homes and their own cultural contexts. This reflection may also result in students articulating their connections to their first homes or their ancestral homes. For students in touch with multiple cultural contexts, either through first-hand experience with immigration or through extended family, the breadth

of inclusivity enhances the potential to connect their current experience to the past. The connections students draw between current and ancestral homes bolster the argument for breadth of representation in the course content. They are able to see themselves and their future as an architect, and also to connect to their collective histories.

In this paper, we describe the process by which we created the newly inclusive content; detail the strategy for assessing student learning; and present the findings from an evaluation of students' responses. We conclude with a discussion of additional content inclusion and appraisal of the impact on students.

COURSE BACKGROUND

Since its inception, "Environment, Architecture and Global Health" has been divided between weekly asynchronous online content -- curated videos and recorded lectures -- and a weekly in-class active-learning workshop. (Prior to 2020, the workshop took place in flexible, active-learning classrooms; in 2020, the workshop took place in small break-out rooms within Zoom.) The online content serves the activity, and the students are quizzed on it and the readings. Prior to 2020, the quizzes were 10 multiple choice questions; this year, because of the detachment students were experiencing online, the quizzes were two short essay questions. This change was fortuitous, as these quiz answers are the data set for the evaluation of the impact of the culturally inclusive content.

The course has three sections: Tools for Research, Health and Wellbeing Principles, and Building Types (Table 1). Our initial intention was to focus on the Building Type modules for the course. These modules are Housing, Health Care, Education, and Workplace. However, the number of videos we were able to collect meant that we were able to diversify much of the Principle Module content as well, including the Modules on Equity, Social Interaction, Connection to Nature, and Environmental Health.

This project was motivated by an audit of the video and text resources in the course. The audit showed that despite the intention to share a diversity of projects and perspectives, the geographic scope was narrow. The University's Institute for Global Studies (IGI) offered competitive summer funding to enhance online resources for students. Our application proposed commissioning short videos about specific buildings, directly from architects in South and Southeast Asian and African firms. IGI granted 4,000 USD to pay for the graduate student assistant's time and for the honoraria to the architects creating the videos.

METHOD: SOLICITING AND COLLECTING VIDEOS

The research team started with the sources that our students start with: ArchDaily, Dezeen, DesignBoom, and other glossy architecture websites. We also used a similar website focusing

on projects in Africa, ArchiDatum. Our primary criterion was centering and amplifying the work of architects working within their lived context. Accordingly, we did not include a project in Dhaka designed by an architect in London, nor a project in Addis Ababa designed by an architect in Venice. For similar reasons, we did not include firms like MASS Design Group doing pro-bono work. This first pass at researching buildings and architects resulted in several leads. We then used the architect's websites and LinkedIn to contact architects to gauge their interest. We offered a 200USD Honorarium for a 15-minute video about the health and wellbeing goals of a single building. Our budget allowed for 12 such videos, and we initially had commitments for 12. However, due to various external factors (including reluctance to complete the required US Internal Revenue Service forms) we finished the project with seven commissioned videos.

Initially, the sole intention of the project and the funding was to commission videos directly, but as we explored the buildings and architects, we encountered many pre-made videos that were relevant to the course work. We introduced 17 pre-made videos to the course and replaced less inclusive content. Thus, the funding ultimately provided for a diverse pool of 24 videos describing architecture from the global south as well as providing for a method for creating more inclusive content in subsequent years.

The newly commissioned videos are from architects working in Pakistan, Indonesia, Ghana, Vietnam, and Nigeria; the buildings presented are schools (4), housing, a hospital, and an office building. Five of the videos were created by the architects and uploaded to our server at the University; two of the videos were Zoom recordings in which the architects presented to us and to a group of interested graduate students. The graduate assistants captioned all seven videos so they could be accessible to all students (Figure 1). The newly added premade videos are from architects working in Iran, Bangladesh, Malaysia, Djibouti, Vietnam, China, Burkina Fasso, Sri Lanka, Ivory Coast, Sudan, and Thailand; the buildings presented are hospitals, libraries, schools, housing, religious buildings, and offices.

METHOD: EVALUATING OUTCOMES

The primary purpose of the current phase of this pedagogical research is to evaluate the impact of culturally inclusive content on students. This evaluation is intended to move the overall project forward by adjusting to feedback from students, and then, by enhancing and increasing the culturally inclusive content.

The data for this phase of the evaluation are the quiz answers the students submitted each week. Because of the size of the course, each quiz had two questions selected at random from a pool of between four and ten. Generally, each question pool had two or three questions that addressed the Global Studies

funded videos. There are two types of quiz questions in the course: 1) Knowledge/Synthesis questions that ask students to apply a reading to the evaluation of a video, or to compare two videos through the application of the principles to the building type; 2) Knowledge/Reflection questions that ask the students to frame the content within a comparison to their own lived experience. In this paper, the evaluation is limited to analysis of the Knowledge/Reflection answers because the research question is focused on the impact of the content on the students and does not query the students' abilities to apply or synthesize this specific knowledge.

These criteria result in the answers from seven questions for evaluation, with between 33 and 51 short essay answers for each question. These questions were asked during the Principle Modules of Equity, Social Interaction, Connection to Nature, and Environmental Health, and within the Building Type Modules of Housing and Hospitals. The questions are:

For each video-- 'Apartment No. 1,' 'Tulou Collective Housing,' and 'Post-Tsunami housing'-- what are the differences between the highlighted project and housing you see in the Midwest of the United States? Would this project be possible in the Midwest? Would it be culturally appropriate?

First, read the HUD/Stanford Housing Report and watch the Issa Diabaté video:

- A) According to HUD and Stanford, what are some of the neighborhood scale issues that affect people's health and wellbeing?
- B) According to Diabaté, what are neighborhood scale issues that affect Africans living in urban areas?
- C) What are some cross-cultural similarities between these two contexts? What are some differences?

In the video, Ayesha Batool refers to the Bukhsh hospital as both a building and a project. A) Based on her explanation, how are these two different? B) If you could be an architect or stakeholder in a project personally important to you, what would it be? Why is it important?

How would Vin Varavarn's Post Disaster School be different if the context were YOUR home country? Tell us a little about your home country, and then tell us about the differences you can imagine for a Post Disaster School. A) How would the process be different? B) Is the likely disaster different? C) How would the building look different?

How did the relationship between public and private space ("the in and the out") drive the goals of the American International Staff Housing project in Lagos? Discuss: A) The goals of the project B) Describe two elements of the program that supported these goals. C) How could this project support your health and well-being if you lived here during the COVID-19 pandemic?

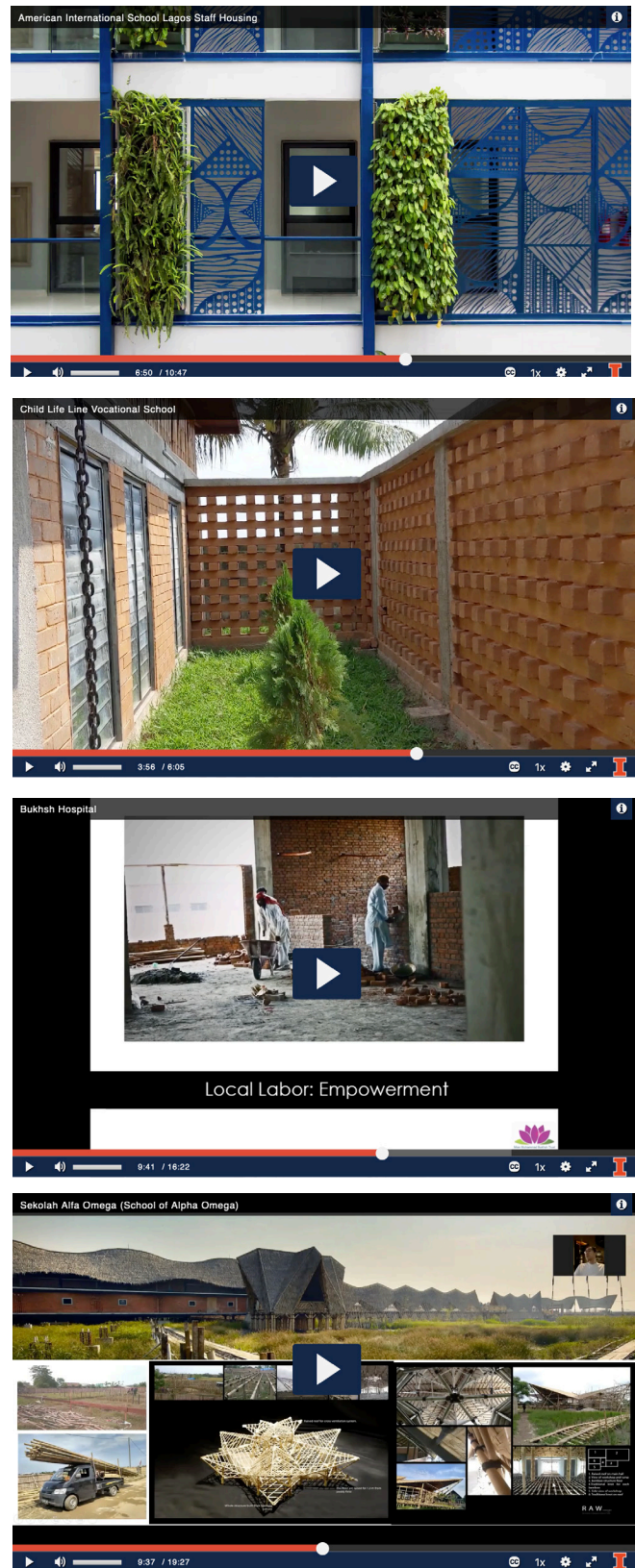
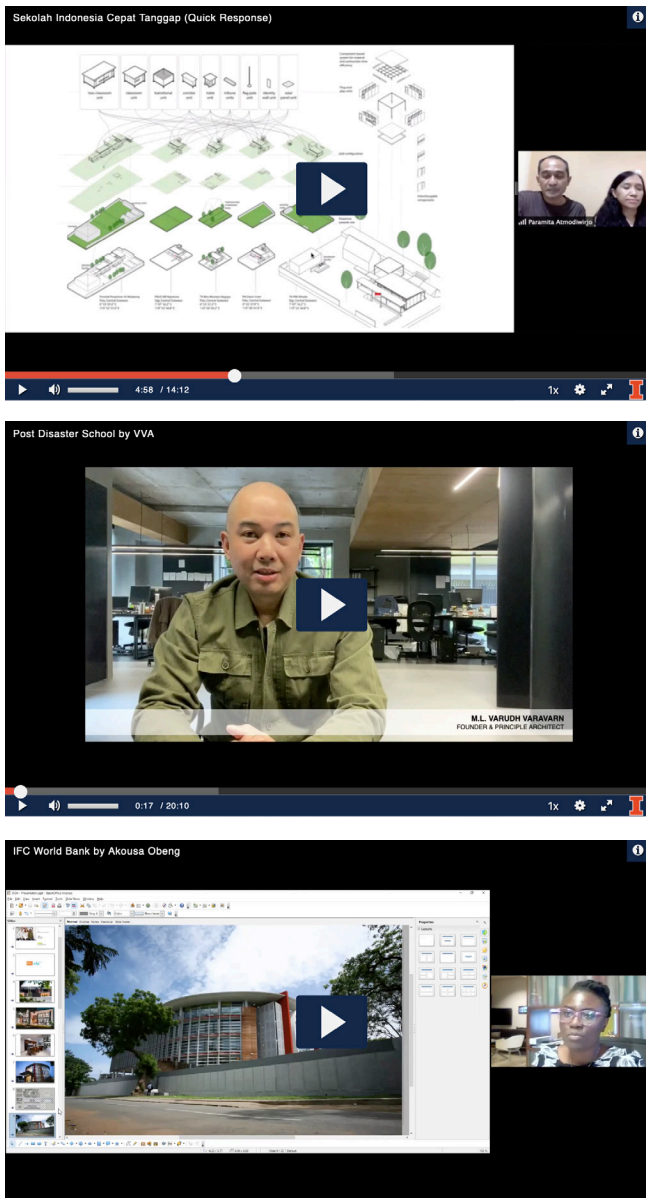


Figure 1. Above and next page. Stills from commissioned videos.



Ken Yeang uses nature as his design inspiration. A) Name two design strategies that Ken Yeang implemented in the Mesiniaga Tower design that resonate with the idea of “climatic responsive design” as discussed in Katharine Logan’s article “Work Globally, Design Locally.” B) Do you think you can replicate the same strategies for high-rise buildings in Chicago? Why/why not?

The buildings featured in these videos -- Vo Trong Nghia-Greening the city, Bridge School, and Green School -- are using local and natural materials like bamboo and leaves. A) For each project, what are the advantages of using those materials? B) Have you ever used or thought of using natural materials in your design project? C) Can you think of a building in your home context that uses locally sourced materials?

There are 275 answers across these questions for a total of 38,075 words. The students’ answers are downloaded without identifying information attached and uploaded to the qualitative analysis software package, MAXQDA.

The qualitative analysis method for this phase of the research is Grounded Theory in the Constructivist tradition (Charmaz 2006). The data analysis process uses emergent coding: codes were assigned to words or lines of text directly from the textual analysis, as differentiated from pre-assigned coding, or in vivo coding, in which the exact words from the text are the codes. The Grounded Theory process of memoing follows the initial coding. Through the memoing, themes emerge, and the quiz answer text is coded again, searching for more emergent themes.

FINDINGS: CODES AND THEMES

Grounded Theory Analysis reveals unique codes for each set of quiz answers, as well as a group of codes and themes that crossed answer sets, tagged as “Common Codes.” This Findings section will focus on the Common Codes list, below:

- Climate Differences
- Cultural Appropriation
- Cultural References
- Equity
- Formal Differences due to Culture and Place
- Material Differences due to Culture and Place
- Motivation: Altruism
- Motivation: Responsibility
- Motivation: Very Personal Story
- Place: Family Origin
- Place: Family’s Immigrant Community in U.S.
- Place: Other Developing Country
- Place: My Developing Country
- Place: My U.S. Community
- Place: Rural Setting
- Place: Urban Setting
- Positive Cultural Association (vs. Midwest)
- Social Interaction

The “rural setting” and “urban setting” coding led to a theme entitled, “same setting, cross-cultural.” Students often used a similarity in setting to access cultural differences. This is most obvious in the videos of rural settings. Students who grew up in similar rural settings were more able to see the cultural similarities and differences between the rural Midwest and rural China or rural Pakistan.

The number of videos affected the quality of the students’ answers. The Environmental Health question only asked for an understanding of a video that featured Ken Yeang’s Mesiniaga Tower. The answers revealed evidence of understanding of the difference in climate between Malaysia and Chicago, but only three students wrote about the cultural similarities and

Module	GSP Commissioned	GSP Pre-made	Knowledge Synthesis Quiz Question	Knowledge Reflection Quiz Question	Video Goal for 2021	Quiz/Reflection Goal for 2021
Introduction	-	-	-	-	Non-charity example	Priming Question for Pre-test
Architectural Research	-	-	-	-	Research/Researcher from Global South.	Architecture in different contexts
Health Research	-	-	-	-	Research/Researcher from Global South	Health impacts of vulnerable communities
HWB Principle: Equity and Agency	• Vin Varavarn Post Disaster Schools	• Sandbag Shelters (Aga Khan)	Yes	Yes	Low-cost solutions in developing countries to give Sandbag Shelters more context.	Building types that benefit from low-cost solutions in your community
HWB Principle: Social Interaction	• MOE+ International School Lagos Staff Housing	• Chandgaon Mosque (Aga Khan)	Yes	Yes	Housing and mosque are good: find library, school and park examples	Differences in Social Interaction across cultures.
HWB Principle: Multisensory Experience	-	-	-	-	Need more buildings for this module Library for the blind in Mexico City.	Sense of touch across buildings
HWB Principle: Physical Activity	-	-	-	-	Physical activity spaces in South Africa	Crosscultural differences in utilitarian and recreational movement
HWB Principle: Connection to Nature	-	• Green School • Bridge School • Vo Trong Nghia Greening the City	Yes	Yes	Same as this year for comparison.	Same as this year for comparison.
HWB Principle: Environmental Health	-	• Primary School, Burkina Fasso • Ken Yeang Mesiniaga Tower • SOS Children Village Djibouti	Yes	Yes	Add Child Life Line Vocational School.	Same as this year for comparison.
Building Type: Housing	-	• Apartment No. 1 • Tulou Collective Housing • Post-Tsunami Housing • Issa Diabaté on designing the future of urban Africa	Yes	Yes, (2)	Same as this year for comparison.	Same as this year for comparison.
Building Type: Health Care	• Ayesha Batool Burksh Hospital	• CBF Women's Health Center • Salam Center for Cardiac Surgery	Yes	Yes	Same as this year for comparison.	Same as this year for comparison (project vs. building question very strong)
Building Type: Schools	• Sekolah Indonesia Cepat Tanggap • Realicjh Sjaref Sekolah Alfa • MOE+ Omega Child Life Line Vocational School	• Guelmim School of Technology	Yes	No	Move earlier to capture more student interest. Move LifeLine to Environmental Health. Consider moving one of the Sekolah. But which? Or leave them both for comparison?	Need a reflection question for this module: how does this school compare to your elementary school?
Building Type: Workplace	• Okausa Obeng World Bank	• ASA Lanna Center	No	Yes	Move earlier to capture more student interest.	Same as this year for comparison

Table 1. Results from Global Studies Intentional Inclusion Project and Goals for Next Year.

differences between the two settings. The Housing module question and the Connection to Nature module question are both effective at encouraging student engagement because, for each module, the videos showcased three unique climate and cultural contexts. This inspired the students to be nuanced in their observations of formal and material differences between Southern China, Sri Lanka, Iran, and the Midwest for Housing, and China, Indonesia, and Vietnam for Connection to Nature. Because multiple videos and contexts were included in these questions' text, some students were even able to compare the cultural contexts to each other, not just comparing to the Midwest U.S as the question requested.

The coding of the answers revealed four levels of student understanding: an understanding of climate difference, of cultural difference, of both differences sequentially, and a small number of students understand the intersection of climate and culture. This student's quote illustrates this intersection: "This project would most likely not be possible in the Midwest, due to an entirely different need of housing structures, and different local materiality. Additionally, it would not be culturally appropriate."

In the Connection to Nature answers, some students noted renewed interest in using local recycled or salvaged materials in their design projects: "I have thought of the use of natural materials in my project but sometimes it really isn't my priority. However, after watching the videos I think I'll take it into consideration because it really helps set a buildings tone as well as to be more sustainable." Only two students from the Midwest could recall an existing building in their communities that used local, recycled or salvaged materials, though many of the students who were raised in or had strong familial connections to other countries could recount examples.

Initially, we set a code named "developing country," but after two rounds of iterative coding, this code was split into two: "my developing country" and "other developing country." Many students identify strongly with the developing country in which their parents or grandparents live. Answers coded with "my developing country" are often coded with "responsibility" or "very personal story." The pedagogical intention for the students personally connected to a developing country seems to be successful—students identify with other developing countries and write more about those videos. One student wrote as part of their answer, "This type of project would be special to me because it could be my way of giving back to where my family comes from."

Students also showed a strong inclination to serve the communities in which they were raised, whether in the Midwest or abroad, again coded with the "personal motivation" or "responsibility" code. One student wrote, "I personally find this important due to how scary the privilege gap I have seen in my own country. I believe it is right to have good accessibility

to health care and education as it is two most important thing to survive." Another student wrote on this same topic:

"If I could be an architect or stakeholder in a project that would be important to me, it would be a form of a communal center in my hometown that connects all parts of the city. My hometown has various parts of town that are not as privileged as others. If it were possible to have a community center that was quite literally at the center of town and linked these regions, I would definitely be a part of it. This center would aim to improve the parts of the town that need help and continue to make (my hometown) a better place."

The code "positive cultural association" is used to denote answers that showed an interest in multiculturalism and, sometimes, a simultaneous critique of midwestern ideals. For example, "I think people in the US would be worried about their privacy at first because it seems like a very important thing to most Americans, but they would soon realize that, if built like the Tulou Housing project, they would have a better sense of community with their neighbors," and, from a different student answer, "While traditional Midwest houses look to build to appeal the aesthetics, the projects highlighted in the videos focus on mainly on sustainability, efficiency, and less environmental impact."

Within this code are also moments of sage advice from the students: "In order to be culturally appropriate, architects can look at past designs within the US that were successful," and "Tulou Collective housing focuses on combining cultural familiarity with modern aesthetics and uses which I feel is lacking in the United States. Their style of affordable community living is both aesthetically pleasing and reminiscent of their cultural heritage. This is something I feel is unique to places with a deep cultural heritage."

DISCUSSION

Students who have lived outside of the United States, or have close family who lived outside the United States were the most able to connect their current environment to the cultural and geographic contexts presented in the films. Future questions should be written with an awareness of the more sheltered students' inabilities to see connections between their home context and that of others.

The quiz questions are the "sharpie marker" of this process. It is not enough simply to include diverse content in the course. Students may or may not watch all of the videos, but when they have to respond to a question about the video, this forges more indelible intellectual connections. Responding in a personal way also forges deeper connections with the material. While the Social Interaction answers did not reveal any significant cross-cultural lessons, the question did ask if a student could imagine living in the building. This imaginative thought experiment may have made the unique balance between the

collective and individual in the design of the building more visceral for the students.

Student answers, especially in the last group of quizzes toward the end of the term, show a deeply reflective relationship with the course material: "Upon reflecting on these experiences, I have now come to realize just how crucial it is to create a comfortable setting for patients who are already undergoing physical and emotional discomfort. Doing so respects the whole person - physical and emotional needs, life experiences, values and beliefs, and cultural influences." One student wrote in their quiz answer, "It is important to study this information because it shows that sustainable design can be implemented everywhere and is not a foreign concept."

The quiz questions can be improved to better evaluate the students' learning outcomes and insights. For example, the knowledge/reflection question used in 2020, "Do you think you can replicate the same strategies for high-rise buildings in Chicago? Why/why not?" will be changed to, "What changes would you need to make to adapt Ken Yeang's strategies for a building in Chicago?" to encourage more expansive thinking. Also, the School Module had two Knowledge/Synthesis questions this year but no Knowledge/Reflection questions, an oversight. A variation of "How is this school similar to and different from your elementary school?" will provide a valuable opportunity to connect to the material. Multiple, short videos for each module resulted in more insightful connections and comparisons, but personal stories like that told by Ayesha Batool in the hospital video resulted in the most inspiring and moving answers.

CONCLUSION

The greatest lesson from the implementation and evaluation of this cultural inclusion project is the importance of multiple resources for each quiz question. The students were the most articulate about their cultural understanding of people, material, form, and program when they could compare multiple contexts with their own. Seeking a balance between the Knowledge/Synthesis and Knowledge/Reflection questions is a key component of encouraging thoughtfulness and engagement.

This is the first step of many in creating more inclusive content for "Environment, Architecture and Global Health." New resources are needed for the Modules without culturally inclusive content. Of particular importance are the two Principle Modules without videos: Physical Activity and Multisensory Experience. The introductory module must also include a diversity of perspectives to set the tone for the class. Another priority is working with pedagogical experts to write an effective quiz question for the first Module that can fulfill its role of tone-setting, but also function as a "pre-test" to further evaluate the success of the culturally inclusive pedagogy.

This content infusion was instigated by the funding from the Global Studies Institute, and thus focused on geographic and cultural diversification. However, there remain opportunities for representation across the course content. The first modules, in particular, would benefit from a close look at gender and racial diversity and representation.

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