

# Expanding study abroad in a global context: Nexus Abroad

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## ABSTRACT:

Architecture programs in the U.S. have incorporated study abroad experiences as a means of exposing students to geographical and cultural diversity. This paper analyzes and promotes an innovative approach to study abroad called Nexus Abroad. A summer 2016 iteration involving a group of faculty and students from varied disciplines serves as a case study. The three-week-long course combined geographical and cultural diversity with a collaborative, transdisciplinary structure, providing students with a more integrated global perspective. It accomplished that not through a studio project, but by focusing on a common theme in which architecture was studied as one of many components that constitute a society. The course united liberal-arts-derived goals of global awareness, resourcefulness, and openness to other cultures with discipline-specific goals, in this case four National Architectural Accrediting Board student performance criteria. The benefits of and potential improvements to this short study-abroad course are revealed by examining student deliverables and focused interviews, comparing pre- and post-course surveys, and evaluating students' grades before and after their participation in Nexus Abroad.

KEYWORDS: Study abroad, Architectural education, Transdisciplinary, Nexus Abroad

## INTRODUCTION

When educators debate approaches to improving architectural pedagogy, often the issues involve how to expose students simultaneously to societies beyond their ken and to disciplines beyond architecture. Though architecture programs in the U.S. expose students to geographical and cultural diversity through study abroad experiences, they typically isolate architecture and the built environment from the broader culture. Even when cultural literacy and intercultural professionalism are added as supplemental outcomes, courses can miss an opportunity to give students an integrated global perspective. This paper demonstrates an alternative solution: the value of a collaborative, transdisciplinary<sup>1</sup> model for study abroad. In the three-week Nexus Abroad<sup>2</sup> course at Jefferson (Philadelphia University + Thomas Jefferson University), participants focus collaboratively and intensely on a single transdisciplinary topic, and the summer 2016 experience serves as a case study for this paper. Among the many benefits of this model, it can address several student performance criteria articulated by the National Architectural Accrediting Board (NAAB), including professional communication skills, investigative skills, history and global culture, and cultural diversity and social equity.

### 1.0 HISTORICAL CONTEXT

The discussions aimed at creating a transdisciplinary, global education have their roots in the beginning of academic programs for architects in the United States. The father of American architectural education, William Robert Ware, founder of architecture programs at the Massachusetts Institute of Technology and Columbia University, fought to make architects well-rounded generalists in the liberal arts tradition with excellent skills in posing difficult questions, thinking analytically, and solving problems (Plunz 1990). At the turn of the 20<sup>th</sup> century, under the influence of Charles McKim, the liberal arts emphasis was eclipsed by a more strictly architectural menu of graphics and design courses. McKim also expanded the opportunity for the best graduates to travel and study in Europe. American architecture students were being exposed to primarily European precedents, largely through books and images (Wright 1990), and – for a select few – by studying in Paris and taking the Grand Tour. Starting in the 1960's, study abroad became possible for a larger segment of architecture students (Costanzo 2012) and the pedagogy of those programs appears to have largely copied the mono-disciplinary approach of architectural education at home.<sup>3</sup>

Since the late 20<sup>th</sup> century, educators rethinking architectural education have prompted renewed discussion. At the time, architectural studio was recognized as an excellent method of learning by doing, a “reflective practicum” (D.A. Schön 1991). Yet other voices proposed replacing superficial curricular ties to fields such as the liberal arts with more intense multidisciplinary investigations of architecture's political and cultural context (T.A. Dutton 1991; H.A. Giroux 1991). This concern was highlighted in Ernest L. Boyer and Lee D. Mitgang's landmark *Building Community* (1996, esp. 60, 81-82, 85), which posited that collaborative, multidisciplinary

work was academe's most important challenge, important due to its deep connections to ethical decision-making and communication skills.

More recently, writers with diverse agendas have continued to recommend multidisciplinary and cross-cultural approaches as means of improving architectural pedagogy and, ultimately, the standing of architects in society. One motivation is to provide architecture students with the rigorous and systematic approach they require to apply their discipline-specific "definable body of knowledge,"<sup>4</sup> along with critical thinking and analysis, to their designs and thereby challenge the status quo (A. Orbasli and M. Vellinga 2008; N. Coleman 2010). Another perspective recommends that architectural curricula address large environmental problems by working on real-world projects (A. Tzonis 2014), which by necessity calls for architecture students to collaborate with those in other fields. Such an approach to education, in conjunction with the recasting of the architectural profession from a career focused on status and profit into a "calling" aimed to benefit humanity, would help overcome society's skepticism of the field. This would be accomplished by mastering the practicalities of how space is used by people in a diverse world (T. Fisher 2001). At least one writer anticipates that these goals will be advanced by the current shift of architectural education to synthesizing varied "specialized knowledges," namely technology, history, theory, and sociology and culture (J.W. Robinson 2001). Other research emphasizes how experiencing a culturally or geographically different place can fundamentally expand students' perceptions, making them more globally minded, inquisitive, self-reliant, and adept at cross-cultural communication (K.B. Jones 2001; L.D. Culver 2011); however, those studies continue to deal with study abroad through a purely architectural lens, concentrating on issues like scale, architectural history, and how people use the environment they live in. Conventional study abroad does not address the concern raised by a few writers (L. Groat and S. Ahrentzen 2001) that architectural studios are not always successful in integrating allied disciplines.

## **2.0 NEXUS ABROAD**

### **2.1 Premise**

Jefferson's Nexus Abroad program responds to these criticisms and recommendations by presenting an alternative format for study abroad. While there are many advantages to semester-long study away experiences, there are also advantages, particularly for younger students, in using a short course to instill a different way of thinking about architecture. The Nexus Abroad curriculum aims to provide an interdisciplinary, global educational experience for all students, including architecture students, asking them to become creative problem solvers outside of the venues they are familiar with. The course recognizes that architectural effort, by itself, typically does not solve significant underlying socio-economic, cultural, or ecological problems. Instead, architecture students can be encouraged to develop the convergent and divergent thinking needed by the brain to move in new directions (T.S. Hamza and D.K. Hassan 2016)<sup>5</sup> and the history of architectural pedagogy as well as recent scholarship indicate that students can and should learn to be creative beyond the studio environment.

### **2.2 Course characteristics**

Nexus Abroad is a collaborative, transdisciplinary learning experience for students in which a three-week, three-credit study abroad course is organized around a common theme. In the summer of 2016, the common theme was the co-existence of Jewish, Christian, and Muslim communities across Southern Europe since antiquity: how they impacted one another as well as how they interacted with forces beyond the European sphere. The itinerary included locations in four countries: Sarajevo and Mostar in Bosnia; Dubrovnik in Croatia; Madrid, Seville, and Cordoba in Spain; and Florence and Prato, with an optional trip to Lucca, in Italy. Together, the group explored the common theme in terms of the socio-economic, political, and cultural environments (including architecture and urbanism) in their historical setting as well as their impact on contemporary society.

Over the previous year, the three faculty – from architectural history, fashion design, and human geography – had collaboratively developed a shared syllabus, which would allow students to integrate their experience from multiple perspectives.<sup>6</sup> In 2016, of the 33 students who participated, 45% were rising sophomores (the target audience), 30% rising juniors, and 25% rising seniors. Their majors included business, fashion merchandising and fashion design, mechanical engineering, textile and industrial design, physician assistant, psychology, and occupational therapy, along with students in the College of Architecture and the Built Environment, representing the five-year accredited bachelor of architecture program,<sup>7</sup> four-year pre-professional architectural studies program, and four-year accredited interior design program.<sup>7</sup>

The schedule consistently balanced common activities with discipline-specific activities. Providing an orientation to the host country and city as well as to the theme of co-existence, common activities included brief presentations and specialized tours of pivotal sites. On the other hand, discipline-specific activities permitted students to see connections to their own field of study. This was structured by subdividing the course into three discipline-specific smaller groups, each emphasizing a different realm within the larger topic: "History Takes Form" with the architectural historian; "Fashion Studies Abroad" with the fashion designer; and "Contemporary Europe" with the anthropologist. This way, the architecture and interior design students explored the built environment in greater depth, specifically honing their visualization skills while visiting domestic, religious, and civic architecture associated with each of the three monotheistic religions. Meanwhile, the other two groups pursued their own secondary subjects. The alternation between the two kinds of activities prepared students to work in four-person transdisciplinary teams on assignments consisting of two digital postcards and a final project in the form of a film responding to a prompt that connected to the course theme.

One version of a common activity was for the entire group to participate in a guided tour. In Sarajevo, this included tours led by clergy or docents of a Serbian Orthodox church, an Ashkenazi synagogue, and a Sunni mosque, each historically significant but typical enough for students to understand more about that religious community and how it interacted with the larger society. A subsequent smaller group activity for the architecture and interior design students was to visit residences associated with a prosperous family in each religious community – a 17<sup>th</sup>-century Ottoman house in Sarajevo, a 14<sup>th</sup>-century house of Sephardic Jews in Cordoba, and a 14<sup>th</sup>-century palace of a Christian family in Florence – where the group examined built environment issues in greater depth.

Another version of the common activity was for each of the three faculty to give a 15-minute presentation related to the topic of the day. For example, in Madrid when the daily topic was "Globalization," the students heard about how urban planning helped to create the global city, how globalization impacts Spanish fashion, and how the global city copes in a world of strife. That was followed up by smaller group activities: the architects and interior designers visited three museums designed by internationally acclaimed architects. The required reading for the day – typical of the varied perspectives discussed – was a brief article that focused on the complex economic impact of "Starchitect-designed" monuments, reconnecting the discussion of space, form, and material to larger issues in Spanish society (Holleran 2013).

Interdisciplinary experiences occurred through planning and by happenstance. An example of the former occurred in Seville, where attendance at a professional flamenco performance was preceded by a group lesson (faculty included!), an event that addressed the goal of "getting out of one's comfort zone." An example of the latter happened in Florence, when students were able to join a small disciplinary group not their own. Some of the architecture and interiors students visited the Museum of Torture in Lucca with the anthropology professor, while the remainder of the built environment students benefited from having a textile design student with them as they examined lace-making equipment on display in the mercantile family's palace.

### **3.0 STUDENT OUTCOMES AND THEIR EVALUATION**

#### **3.1 Overview**

The value of our Nexus Abroad course is demonstrated by examining student learning outcomes, which addressed both Nexus Abroad goals and, for architecture students, NAAB mandates. For Nexus Abroad, the goals were to: (1) document how social, economic, political, and cultural developments contribute to the evolution of form in architecture, landscape architecture, and design; (2) apply resourcefulness and openness in adapting to new cultural environments; (3) exhibit diagramming and photographic skills by discerning 2- and 3-D organizational patterns and representing them graphically; (4) exhibit visual-analysis and contextual-analysis skills by identifying significant elements in design; and (5) develop oral presentation skills. The benefits of a transdisciplinary and global experience of this type for design students can be identified by evaluating several tools. All students completed the pre-course/post-course surveys and the team transdisciplinary assignments. Another set of tools was limited to the architecture and interior design students: interviews conducted a year after the course concluded which asked them to reflect on the impact of Nexus Abroad on their perspective, and a comparison of grades in studio and history of architecture and interiors courses before and after Nexus Abroad.

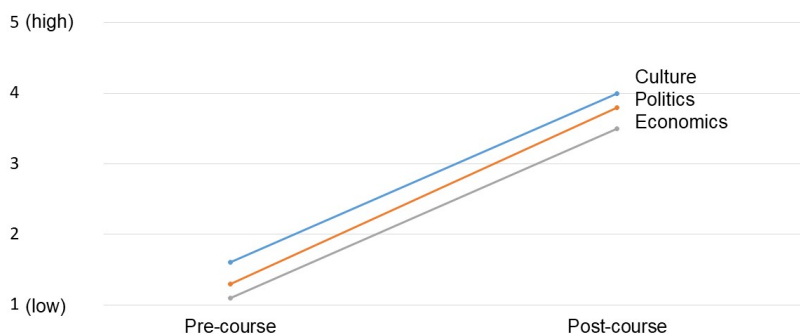
The pre- and post-course surveys addressed the overarching goals of the Nexus Abroad experience. The students typically had limited exposure to, but cautious interest in, the international world. Although they gave varied answers on the pre-course survey spanning the spectrum from "never" to "often," the majority of answers were clustered. In the pre-course surveys all but one of the built environment students said that their personal goals "mostly" matched those of the Nexus program, which were to demonstrate: global awareness,

specifically knowledge of political, economic, and/or cultural developments of a geographic region; resourcefulness and flexibility while adapting to new cultural environments; and openness to people, ideas, and activities from other cultures as a means of personal development.

### 3.2 Global awareness

Due to the goal of increased global awareness, students were surveyed about their general knowledge of the history or current events in the countries they were about to visit, with results shown in Figure 1. 63% admitted to “rarely” reading, watching, or listening to news about the countries they were about to visit, and would be unable to give a general account of their political and economic situations. When asked to give examples of cultural contributions from host countries they could discuss with peers, the examples spanned from sports (soccer and bullfighting), to culture (flamenco), to famous architects (Brunelleschi to Gaudi) and artworks (“Mona Lisa”), to popular culture (“Game of Thrones” television series) and cuisine (Turkish coffee, olive oil, and gelato). One student was unable to provide any examples, and several incorrect examples were omitted. They “rarely” or “occasionally” watched a movie or show filmed in another language and “rarely” visited a non-U.S. news or info website. On the 2017 post-course survey, students reported a substantial increase in their current knowledge of the host countries in terms of contemporary cultural (2.4/5.0), political (2.5/5.0), and economic (2.4/5.0) developments. Students responded with “extremely high” when asked about their desire to continue learning about this material, the likelihood they would recommend the course to a friend, the overall quality of course, the effectiveness of the instructor, the amount they learned, and the value of what they learned. These responses demonstrate success in regard to improving students’ global awareness.

**Figure 1:** Self-reported global awareness (current knowledge of host country), 2017 cohort



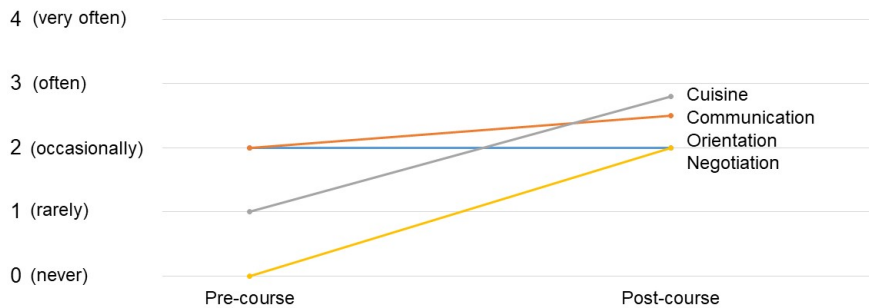
### 3.3 Resourcefulness and openness

The course goals of expanding students’ resourcefulness in new situations and their openness to other cultures were matched closely by the students’ personal goals, as reported in the pre-course survey. Students indicated that they wanted to: “try new things,” “experience different cultures,” “try a lot of new foods,” “step out of my comfort zone,” and “see and experience as much as possible.” Figure 2 illustrates the changes students reported before and after the course regarding their resourcefulness in new situations and openness to other cultures. “Orientation” (how often they found their way in an unfamiliar city, or experienced homesickness or culture shock) remained constant. Since students did have opportunities to find their own way in the cities visited, an improvement to the course could include a reflection making them more aware of what they were already doing but possibly not appreciating. “Communication” (how often they tried to speak a foreign language; conversed with or worked in a group with students from another culture; or liked a film, music group, or sports event originating outside the U.S.) increased modestly. This suggests that planning for increased interaction with natives could improve the course. “Cuisine” (how often they tried new cuisines) and “Negotiation” (how often they dealt with a store clerk who did not speak English) both rose dramatically. Given the cities visited in southern Europe, those changes were expected.

Due to the transdisciplinary nature of the course, students were asked in the pre-course survey to give an example of adjusting their way of thinking or acting to accommodate another student’s input. Some comments addressed working with others in studio or debating in a liberal arts course an issue such as civil liberties versus national security, and others mentioned changing opinions about abortion. All of them had worked in a group at the university either “sometimes” or “often,” typically in an interdisciplinary team. They enjoyed this because they learned new things and shared the workload; however, they disliked unreliable partners and dealing with peers who had a different work ethic. When they discovered that this course would require teamwork, they were positive. Their comments included a few cautious ones about the collaboration (“Ok, but

hope we get to pick partners.”) but were mostly enthusiastic (“... projects seem like fun and everyone seems awesome,” “excited to meet new people,” etc.) They were even more positive about the transdisciplinary requirement (“everyone will have a different perspective” was written by three students, “good resource to have a mixed group,” etc.) Only one response was unenthusiastic (“Wish it was limited to [my] major in order to go into greater depth about architecture.”)

**Figure 2:** Self-reported resourcefulness and openness, 2016 cohort



During the course, all students were evaluated on the work they produced as part of a transdisciplinary team. For example, to create a digital postcard each team of four students was assigned a site not otherwise covered by the itineraries. They briefly researched the site online in advance of the excursion, and then visited it to record personal observations, photograph it, and film brief interviews. Each team then posted their analysis on YouTube and linked it to the course Facebook page, in order to share it with the rest of the course as well as their loved ones back home. Faculty assessed each project on its merits, including the extent to which the built environment and fashion were discussed in the context of their socio-economic, political, and cultural realms. The culminating assignment was also a transdisciplinary challenge. Each team had to use its digital postcards, sketches, photos, video clips, and other resources to make a seven-minute film addressing one aspect of the entire trip, such as “Volition and Compulsion” or “Invisible and Visible.” The teams incorporated lessons learned in the varied disciplines and from the multiple locations they had visited to produce insightful and entertaining responses to the prompts they had been given, and were assessed in a similar manner to the previous assignments. Faculty judged six of the seven films as outstanding and the seventh as very good.

In the post-course survey, the majority of students responded that during the course they had “always” been self-motivated, asked for help, invested enough time and energy to meet/exceed course requirements, participated actively, and gave their best possible effort. They felt that the assignments “always” contributed to learning and that the amount of work was “always” appropriate. They responded that they “usually” were well prepared and that the intellectual challenge of the course was “usually” high. In addition, students reported that they felt the course was well organized and executed.<sup>8</sup> Students were then invited to write additional comments. One observed that completing a reading in advance and then experiencing the topic the next day was very useful. Another said (unsurprisingly) that she had learned a lot from walking through a building and asking the professor questions on site compared to sitting in a classroom. Another student appreciated that faculty presentations were integrated and that he had heard from each instructor. In short, with regard to the Nexus Abroad goals, the course was successful in many ways.

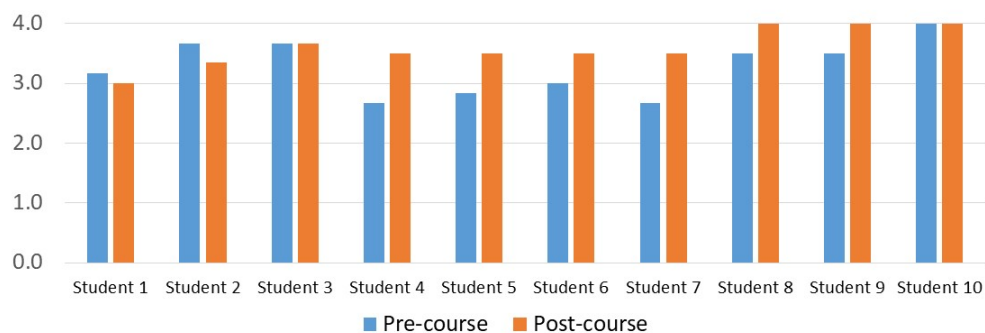
### 3.4 Discipline-specific and NAAB student performance criteria

Sixteen months after the 2016 course ended, architecture and interior design students completed post-course interviews that asked them to reflect on the course’s impact on their subsequent year of studies and its relationship to four identified NAAB student performance criteria. Regarding the course in general, all respondents said that they would recommend it to a friend. Minor concerns included one recommendation to provide more time at the beginning to adjust and another more time at the end to complete the final film. Unanimously, they felt that the influence on their subsequent education was very positive. One student said that his immersion in a foreign culture made him feel more connected to global courses in the general education curriculum. Two others noted the connection to history of architecture and studio courses. Another mentioned that seeing sites first hand gave her a “different eye.” All were favorable about the transdisciplinary aspect. One respondent thought there could have been more interdisciplinary work within the smaller group activities and another was impatient that interdisciplinary work wasn’t happening more frequently back on campus.

The second set of questions regarded the four NAAB student performance criteria assigned to the course (which overlapped with the Nexus Abroad goals discussed above): (6) communication skills, (7) investigative skills, (8) history and global culture, and (9) cultural diversity and social equity.<sup>9</sup> Regarding professional communication skills, students agreed these were honed, though one complained that the pace was too fast, and another that they should have prepared even more diagrams and sketches for the final film. One comment praised working with non-designers as a way of integrating other perspectives when completing a task. For investigative skills, while a student mentioned needing more information on the host countries, two others said they learned a lot about particular sites and social issues in Bosnia. One student wrote that it was good training for the programming studio back on campus. Finally, students were moved by sites that were memorable for historic events (the assassination of Archduke Franz Ferdinand in Sarajevo), religious conflict (the Great Mosque/Cathedral in Cordoba) or their association with nationhood (Plaza de España in Seville). Any international trip naturally addresses the history and global culture criterion, and students recognized this consistently, though their comments were still instructive. One called seeing the role of religion in other countries “eye opening,” a second recognized the impact of history on architecture today, and a third appreciated staying in centrally-located hotels which facilitated convenient exploration of the locales. Not every course can deal with cultural diversity and social equity to the same extent, but in this case every student mentioned the impact the recent war had on Sarajevo’s architecture, its power hierarchy, and its population. Students’ digital postcards and films required clear graphic and verbal communication based on research from a variety of sources, and, furthermore, on their assessments of multiple cities visited. These deliverables revealed that the students had addressed the NAAB criteria. The results of the post-course survey and interview confirm that students acknowledged their enhanced skills and knowledge bases.

The long-term impact on the students’ success in post-trip courses also provides some informative data for students in the College of Architecture and the Built Environment.<sup>10</sup> For the 13 architecture and interior design students who participated in Nexus Abroad from 2014 to 2016, and were enrolled in studio courses both before and after the experience, there was no discernible impact on studio grades. That outcome is not surprising, since there is no studio component to Nexus Abroad. Since educators would want study abroad to enhance subsequent studio performance, this issue is worth further investigation. On the other hand, exposure to the history of art, architecture, interior design, and urbanism is an important part of the experience for students, and there we do find an impact, as demonstrated in Figure 3. Six of the ten students who were midway through the required sequence in History of Architecture and Interiors courses increased their grade in those courses (while two students’ averages remained steady), with the pre-course average of 3.32/4.00 rising to 3.60/4.00 after Nexus Abroad. Compare that to the grades of a control group of ten students who did not participate in Nexus Abroad, but were demographically and academically similar to the Nexus students: three increased, four remained steady, and three declined. Furthermore, for the four students who began the history sequence after Nexus Abroad (not shown in Figure 3), two earned a 4.00 average and another student a 3.89. This is a small group of students from which to draw broad conclusions; however, the data show high achievement in history courses after the international experience.

**Figure 3:** Change of grades in History of Architecture and Interiors courses, 2014-16 cohorts



#### 4.0 CONCLUSION

Nexus Abroad is in its infancy, but it has much potential to enrich the education of architecture students. Being an elective course, it is dependent upon students’ interests, budgets, and desire to try a short study away experience. It also relies on faculty expertise and willingness to invest the many hours needed to craft a successful transdisciplinary course. This investigation of and participation in Nexus Abroad in the European context suggests that a short-term, international, and transdisciplinary course enhances the education of architecture students in terms of global awareness, resourcefulness, and openness even when studio is not part of the curriculum. One goal of Nexus Abroad is to encourage students to undertake a traditional study-

abroad semester, which at Jefferson, like many institutions, requires studio and therefore exposes students to professional issues in the global context. In a few years, there will be enough data to examine whether rising sophomores participating in Nexus Abroad continue to benefit from its global, transdisciplinary basis and whether it entices more students to choose a semester-long experience as a senior. Future iterations will also provide the opportunity to experiment with the suggestions identified in section 3 as well as the opportunity to diversify the locations and populations involved, as several educators have advocated (Dutton 1991; Groat and Ahrentzen 2001; et al.) Demonstrating that spirit, the 2018 Nexus Abroad course will tackle India.

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## ENDNOTES

<sup>1</sup> For this study, the following terms are used intentionally: multidisciplinary (involving multiple disciplines collaborating in an additive way, so they remain separate), interdisciplinary (involving multiple disciplines collaborating synergistically), and transdisciplinary (involving multiple disciplines collaborating from the onset of an activity to form a new holistic approach, which can have a long-term impact on each discipline). Linder, 291-98, provides an historical account of interdisciplinarity and transdisciplinarity in architectural education.

<sup>2</sup> Created by Philadelphia University four years ago, Nexus Abroad has no connection to the Forum-Nexus Study Abroad program that provides European experiences for students from institutions worldwide.

<sup>3</sup> A review of the websites of multiple prominent Architecture departments implies that their study away programs are still largely mono-disciplinary in practice.

<sup>4</sup> Coleman, 204. This issue touches on the debate of whether architecture truly is an independent discipline. Robinson, esp. 62-63, discusses whether architecture is a distinct discipline. Based on her clarifications, it is reasonable to continue identifying architecture as a distinct discipline for the purpose of this article.

<sup>5</sup> Those authors incorporate lessons from E. de Bono, *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas* (New York: HarperBusiness, 1993) regarding "lateral thinking," and T.J. Howard, S.J. Culley, and E. Dekoninck, "Describing the Creative Design Process by the Integration of Engineering Design and Cognitive Psychology Literature," *Design Studies* 29, no. 2 (2008) regarding the differences among original design, adaptive design, variant design, and routine design.

<sup>6</sup> In addition to the valuable suggestions from his peer reviewers, the author owes much gratitude to colleagues Prof. Catherine Casano and Dr. Steve Dinero for their collaborative efforts and sharing their disciplinary expertise in the 2016 iteration of the course. In other years, the organizing themes for the course have been: the Legacy of Nazism in Central and Southeastern Europe, Modernity and Post-modernity in Europe, and Modernism in Central Europe between the World Wars. The theme for the 2018 course in India is Politics, Power, and Presentation, combining comparative legal systems, global economy, and the built environment.

<sup>7</sup> The author is indebted to colleagues Dr. Phil Tiemeyer, former faculty coordinator of Nexus Abroad, Prof. Lisa Phillips, current faculty coordinator, and Dr. Madeleine Wilcox, director of International and Domestic Study Away Programs, for sharing surveys and discussing the broader program goals. In 2015-2018 students enrolled in Nexus Abroad shifted from primarily rising sophomores (almost 50% for two consecutive years) to primarily rising seniors (67% one year and 44% the next). The majors represented also varied to include graphic and animation design, business marketing, construction management and landscape architecture, health science, biology, law & society, and environmental sustainability, while losing some others.

<sup>8</sup> Specific to the small-group experience, students responded with "always" when asked if the instructor connected the course objectives to activities, assignments, and assessments; encouraged them to connect their experience to the course; provided clear, useful feedback to improve learning; inspired interest in the material; was available and helpful; communicated ideas and information clearly and effectively; graded fairly; treated students and their ideas with respect; and used required texts/other materials effectively.

<sup>9</sup> For full descriptions, see National Architectural Accrediting Board, 16.

<sup>10</sup> Acknowledging the transdisciplinary mission of Nexus Abroad, it would be valuable to examine how students perform in their general education courses before and after Nexus Abroad, but that topic was not considered as part of this study. Continuing to collect data from future cohorts of students would also be crucial to the study and improvement of the program.