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Critically Examining the Role of Habitus for Minoritized Students in a Global Engineering Program

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Abstract

In study abroad programs, overall student participation and the representation of minoritized students continue to rise, but barriers to participation for minoritized students persist, especially in engineering. As we strive to broaden participation in engineering study abroad programs, we must critically examine the experiences of minoritized students who engage in these programs so we can facilitate supportive educational environments. This study examines the experiences of minoritized students in a global engineering study abroad program, using the concept of habitus, a student's collection of identities and embodied cultural capital. We find that students draw on various forms of habitus while studying abroad, connecting their new experiences abroad to their prior experiences. Based on these findings, we make recommendations for designing more equitable and inclusive study abroad programming elements.

Keywords:

study abroad, diversity, low-income, minoritized student

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Introduction

Prior to the 2020 pandemic, student participation in study abroad programs saw upward trends. During the 2018 academic year, 347,099 U.S. students studied abroad for academic credit, a 1.6% increase from 2017 (Institute of International Education [IIE], 2020a). Encouragingly, representation of minoritized students¹ has also increased in study abroad programs (IIE, 2018), and although this increase is promising, barriers to participation for minoritized students persist across academic fields, for reasons that include cost, fear of discrimination, lack of foreign language proficiency, and perceptions of delayed time to graduation (Amani & Kim, 2018).

Student subpopulations in certain fields, such as engineering, face additional barriers stemming from severe underrepresentation as well as toxic disciplinary cultures. African American and Hispanic students represent only 4.3% and 11.9%, respectively, of engineering bachelor's degrees awarded in 2019 (American Society for Engineering Education, 2020), and there is a broad literature base on the "chilly climate" of engineering disciplines, which contributes to persistent, systemic inequities for minoritized students pursuing engineering degrees (Lichtenstein et al., 2014). Barriers to studying abroad for engineering students are compounded by highly sequenced course structures, which results in lower rates of studying abroad relative to other academic fields (Davis & Knight, 2017). In combination, minoritized engineering students face unique barriers to studying abroad relative to other undergraduates.

As we strive to broaden participation in engineering study abroad programs, we must critically examine the experiences of minoritized students who decide to engage in such programs. Seeking to diversify participation in engineering study abroad opportunities is irresponsible without first examining issues of equity and inclusion in study abroad spaces. We believe that simply inviting such students to participate in study abroad would be inappropriate if their experiences are marginalizing or inequitable.

Our study examined the experiences of minoritized students in the Rising Sophomore Abroad program. Specifically, we investigated the overarching research question: *how does habitus - a student's collection of*

¹ We opt for the terms "minoritized" and "marginalized" as these terms convey a status socially constructed in specific societal contexts (Stewart, 2013).

identities and embodied cultural capital - shape the experiences of minoritized students in study abroad contexts? Using a Bourdieusian theoretical framework extended by Yosso's (2005) Community Cultural Wealth (i.e., aspirational, linguistic, familial, social, navigational, and resistance capital), we analyzed written journal reflections of minoritized students who engaged in a short-term engineering study abroad program. Specifically, we drew on Bourdieu's conceptualization of habitus as the embodiment of cultural capital—an individual's collection of identity, choices, and actions shaped by their experiences (Schirato & Roberts, 2019). Students drew on various forms of habitus while studying abroad, connecting their new experiences in study abroad to their prior experiences. Further, we found that pieces of students' identity become particularly salient while traveling abroad. By understanding the experiences of minoritized students in this engineering study abroad program, we make recommendations for designing and facilitating more equitable and inclusive study abroad programs.

Background and Relevant Literature

Benefits of Studying Abroad

Studying abroad has been identified as one mechanism for students to develop the skills required to practice engineering successfully in a global context. In engineering, these skills have been termed *global engineering competencies* (Jesiek et al., 2014; Johri & Jesiek, 2014) and *engineering global preparedness* (Ragusa, 2014). These terms cover the attainment of skills such as understanding and negotiating engineering cultures, navigating ethical considerations, global engineering efficacy, and engineering community connectedness.

More generally, studying abroad has many benefits for participating students. Researchers have found that students who study abroad are more likely to engage in other high-impact practices, such as service-learning projects, undergraduate research, and internships (Kuh, 2008). Additionally, Kuh (2008) demonstrates that if students participate in high-impact practices, like study abroad, within the first year of their degree program, they have increased chances of returning to university the following year and tend to have a higher first-year grade-point average. Similarly, research has found that students who participate in high-impact practices also experience

enhanced identity development (Miller-Perrin & Thompson, 2010), civic engagement (Tarrant et al., 2013), and personal growth (Dwyer, 2004).

Who Studies Abroad?

Study abroad is not experienced by all students in the same way. Salisbury et al. (2009) found that socioeconomic status, accumulated pre-college capital, and capital acquired during the first year all play important roles in a student's intent to study abroad. Salisbury and colleagues also found that STEM students were less likely to study abroad than those from the humanities or foreign languages. According to the IIE, in the 2019/2020 academic year, 25% of study abroad students were STEM majors, but only 4% were from engineering (IIE, 2020c). Highly sequenced engineering curricula, as well as challenges with scheduling international experiences around internships, pose barriers to participating in study abroad programs for engineering students (Parkinson, 2007).

Within engineering, previous studies indicate that minoritized students face unique barriers, including a lack of role models, different access to K-12 educational opportunities currently valued by the education system, and insufficient information about the field of engineering at large (e.g., Museus et al., 2011). These barriers are only compounded for minoritized engineering students who are exposed to discrimination and isolation during their study abroad (Willis, 2015). However, these students bring valuable life experiences that are often undervalued in academic settings, a result that Weinstein et al. attribute to teachers not recognizing their own ethnocentrism and bias (2004, cited in Cartledge & Kourea, 2008, p. 353). Our study highlights these life experiences and forms of cultural community wealth that minoritized students often bring to their international learning experience.

Minoritized Students Abroad

According to Engel (2017), much of the existing research on minoritized students' engagement in study abroad programs has investigated the access that students have to these opportunities, focusing largely on understanding barriers to participation. Specifically, minoritized students face barriers like cost, financial aid restrictions, family and

community influences, lack of awareness, and concerns about on-time graduation (Briers et al., 2010; Brux & Fry, 2010; Kasravi, 2009; Salisbury et al., 2009; Scheib & Mitchell, 2008). Unfortunately, this research is often conducted from a deficit-based approach, which centers those in power and highlights what students are “lacking” as opposed to highlighting institutional or systemic barriers or what students can bring to these environments that may be overlooked (Samuelson & Litzler, 2016). Scholars such as Perkins (2020) implore the community to shift to an anti-deficit approach that allows for the exploration of questions that counter this dominant deficit narrative. Perkins (2020) specifically explored the question of “why *do* students of color study abroad?” finding that supporting and encouraging networks coupled with anticipated gains in skills, knowledge, and networks inform student decision-making.

Less research has examined the experiences of minoritized students after they decide to participate in study abroad programs. The research that has explored this topic investigates how students of color who participate in overseas exchanges negotiate their sense of identity and representation both as a U.S. national and as a person of color (Davis-White Eyes, 2013; Goldoni, 2017a; Jackson, 2006; Wick, 2011). Chang (2017) explicitly used counter-stories to explore and analyze how four Latina students navigated their academic, cultural, linguistic, and social experiences and learnings in a predominantly indigenous country. Another critical study explored how a Black male student's race, ethnicity, and class influenced his interactions with locals, language learning, and culture learning (Goldoni, 2017b). Moreover, others have explored how race, class, and gender impacted students' experiences abroad (Shannon-Baker, 2015; Sweeney, 2014; Wick, 2011; Willis, 2015). There is much to understand about how those experiences differ for minoritized engineering students, specifically.

Our study focuses on the experiences of minoritized students from a variety of backgrounds including those attending a 4-year institution and community colleges. Research shows that students from community colleges are less likely to declare an intent to study abroad than students from liberal arts institutions (Salisbury et al., 2009). Additionally, for students who express intent to study abroad, participation rates of students from

community colleges have been consistently and disproportionately low (Oberstein-Delvalle, 1999). Although institution type is not a key part of our analysis, it is our intent to build on the small collection of studies that explore the international experiences of community college students (Drexler & Campbell, 2011; Emert & Pearson, 2007; Willis, 2015). Unlike the majority of this previous research, our study contributes a novel focus by centering the engineering context in a study abroad program that intentionally combines students from four-year institutions and community colleges (i.e., students on the path to transfer to the four-year institution).

Bourdieuian Theoretical Framework with Community Cultural Wealth

To examine how minoritized students navigate study abroad experiences from a critical perspective, we used a Bourdieusian theoretical framework extended with Yosso's (2005) Community Cultural Wealth. Figure (1) summarizes our study's theoretical lens, illustrating Bourdieu's constructs of *capital* and *habitus* in relation to how *agents* navigate *fields*. Bourdieu theorized the world as comprised of social circles—or *fields*—that each have a distinct but often invisible set of rules, customs, and practices. *Fields* can overlap, but the power structures within the social space are often autonomous. *Agents* navigate fields carrying with them their *habitus*, or their collection of identity, choices, and actions shaped by their experiences (Davey, 2009; Schirato & Roberts, 2019). *Habitus* is the embodiment of capital (e.g., social, cultural, economic) and can be described as a person's "feel for the game," where the game refers to exploring and navigating the rules in a particular field or social circle. Bourdieu posits that *habitus* can change over time (Schirato & Roberts, 2019), and thus an individual can learn and adapt to the rules of the game in a new social space. This theory also suggests that *habitus* becomes most salient when the person navigates into a new social space (Schirato & Roberts, 2019). Thus, *habitus* is "a sort of spring that needs a trigger and, depending on the stimuli and structure of the field, the very same *habitus* will generate different, even opposite, outcomes." (Schirato & Roberts, 2019, p. 153). In our study, we explore how *habitus* emerges and

shapes the experiences of minoritized students as they navigate various *fields* within study abroad programs.

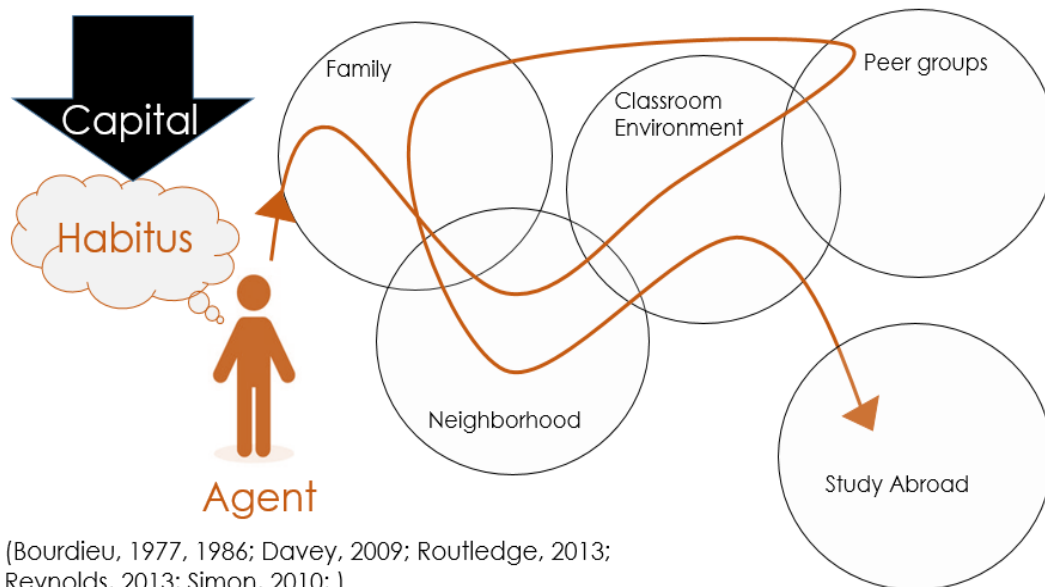


FIGURE (1): THEORETICAL LENS

Bourdieu's theory has been widely used to interrogate how educational systems perpetuate and exacerbate social inequities (Burke, 2017). Because our study is rooted in the critical research paradigm, we note here critiques of Bourdieu's work and how our study responds to these critiques. Bourdieu's conceptualization of capital is often scrutinized for implying that "some communities are culturally wealthy while others are culturally poor" (Yosso, 2005, p. 76). Because it prioritizes white, middle-class capital above all other forms, Yosso (2005) argues Bourdieu's framework is inherently racist and perpetuates a deficiency rhetoric for marginalized groups. In solidarity with these critiques of Bourdieu's work, our research intentionally problematizes the deficiency rhetoric by augmenting Bourdieu's framework with Community Cultural Wealth (CCW) (Yosso, 2005), which sprung out of critiques of Bourdieu's conceptualization of capital (see Table 1). To value forms of capital for Communities of Color, Yosso (2005) employed Critical Race Theory to develop CCW, which acknowledges the "array of knowledge, skills, abilities, and contacts possessed and utilized by Communities of Color to survive and resist macro and micro-forms of oppression" (p. 77). CCW expands Bourdieu's notion of

capital to include six types of capital for Communities of Color, including aspirational, linguistic, familial, social, navigational, and resistance. Therefore, as we explore how habitus shapes the experiences of minoritized students while studying abroad, we purposefully examine embodiments of the six types of capital highlighted in Yosso's CCW (Yosso, 2005).

Theoretical construct	Definition applied to our study context
<i>Agents</i>	Minoritized students
<i>Fields</i>	Social circles (e.g., university, peer groups, families, faith groups, etc.) that minoritized students reflect on navigating in study abroad
<i>Capital</i>	Resources leveraged by minoritized students in study abroad, including aspirational, linguistic, familial, social, navigational and resistance capital
<i>Habitus</i>	Minoritized students' combination of identity, actions, choices, beliefs, skills, preferences; their "feel for the game" of navigating study abroad

TABLE (1): BOURDIEUSIAN AND COMMUNITY CULTURAL WEALTH FRAMEWORK APPLIED TO OUR STUDY

Methods

Our data were collected as part of ongoing research and assessment initiatives in the short-term, engineering-focused Rising Sophomore Abroad Program (RSAP). For this study, we focused on the reflective journals from one cohort of minoritized students who studied abroad in Spain and Morocco through the RSAP program, subsequently described. A critical worldview underpinned our methodological decisions, recognizing that our participants – minoritized and, in many cases, underserved students – experience intersecting systems of oppression (Crenshaw, 1989). The critical worldview influenced our decision to employ narrative coding tools during analysis, recognizing that narrative methods are well-suited for intersectionality research (Christensen & Jensen, 2012) and research focused on the experiences of marginalized students (Stitt & Windsor, 2014). Moreover, the critical worldview centers the experiences of our minoritized participants. Thus, this research is not intended to be a comparison between minority and majority experiences but rather to center and describe the experiences of minoritized students.

Study Abroad Context

Our research context is a global engineering program organized by a four-year Predominately White Institution (PWI) that includes first-year, transfer, and community-college students (a full program description can be found in Knight et al. (2019)). Through this program, students participated in a spring semester course on global engineering practice and then engaged in a two-week international module immediately following the spring semester. The objectives of the program were to help students recognize the importance of national context for engineering problem solving processes, how to navigate multicultural team settings, and how to behave in international professional environments. The spring course and the international module, which combined satisfy a general education requirement, are designed to help students in all engineering disciplines situate their future work as engineers in a global context. In addition to meeting the large-scale objectives of the program, focused weekly recitation sections help students prepare for the travel portion of the program—students research local cultures and sites that they will be visiting during the international module, which include visits to engineering companies and cultural sites. The itinerary seeks to highlight regional variation in engineering as well as a range of engineering disciplines. The program served approximately 180 students and ran six concurrent international tracks (i.e., international modules taking place in different locations with approximately 30 students per track) during Spring 2019, the year that these data were collected. We scope our analysis to the Spain and Morocco track because this track had higher representation of minoritized students compared to other international tracks in the same year. This track was also purposely sampled because two diversity, inclusion, and equity initiatives were ongoing in the study abroad program and were especially relevant for this particular track.

First, VT-NETS, an engineering transfer student scholarship program in collaboration with two in-state community colleges, enabled prospective engineering transfer students to enroll in the study abroad class through their community college during the Spring semester and then participate in the international module with the PWI's first-time-in-college students. All community college participants were Pell-eligible and received a scholarship for the cost of the study abroad program through an external grant. The scholarship did not include a per diem, so students were

responsible for covering meals that were not included by the program as well as any additional costs incurred during the program's built-in free time.

The second ongoing initiative was a "travel-buddy" program aimed to reduce barriers to study abroad participation for African American students. When applying to the study abroad program, African American or Hispanic students could indicate a "buddy" with whom they would want to travel. Typically, applications for the study abroad program are scored, and students are placed into international tracks based on a combination of score and ranked track preference. Although two students may have indicated that the Spain and Morocco track was their top choice, students may have received different scores on their applications that ultimately placed them into different tracks based on the demand for each international track. The travel-buddy initiative, however, guaranteed that minoritized applicants could be placed in the same track as a selected buddy to ensure such students had a supportive peer cohort. While the efficacy of these two programs is not directly evaluated in this article, they help explain why this particular track had higher representation of minoritized students compared to other program tracks.

Participants

We examined the experiences of 13 minoritized students who participated on the Spain and Morocco track. Acknowledging systems of oppression that intersect with race (e.g., class, gender), we note that six of the 13 participants were Pell Grant eligible community college students, and three of 13 identified as female (see Table 2). We do not reveal specific combinations of participants' identities so we can protect participant anonymity, but the majority of participants were minoritized across two or more dimensions of identity.

Demographic		Number (N=13)
Race/ Ethnicity	Black or African American	7
	Hispanic	3
	Asian	2
	Two or more races	1

Gender	Male	10
	Female	3
Nationality	US	9
	Outside of US	4
Institution	4-year university	7
	Community college (Pell Grant eligible)	6

TABLE (2): AGGREGATED DEMOGRAPHIC INFORMATION FOR PARTICIPANTS

Data Collection

All program participants were required to keep a reflective journal during the international module. Following approval by the Institutional Review Board, these journals were used as the data for this study. Throughout the trip, the participants were asked to respond in their journals to specific prompts. They were asked to reflect, every four days or so, on topics such as setting goals, reflecting on meaningful experiences while abroad, telling stories about interpersonal encounters, and reflecting on how previous experiences shape their time abroad (see Appendix). Although several participants discussed aspects of their habitus throughout their journals, final reflection prompts also included a question related to habitus: *Think about where you grew up, your experiences prior to this trip, and the communities you are a part of. How did your specific background influence how you approached and experienced this trip?*

Data Analysis

Our qualitative data analysis was a recurrent process anchored on narrative analytical tools including storyline coding and analytic storylining (Saldana, 2013), both of which align with the narrative nature of the journal entries (see Figure 2). At a high level, analytic storylining is a qualitative analysis tool to map the sequence of participant's experiences as they occur over time (Saldana, 2013). Due to the time-based reflections of journal entries, storylining provided a useful analysis tool to analyze participants' experiences over time as they studied abroad. We complemented analytic storylining with storyline coding (Saldana, 2013), which we used to identify and analyze critical incidents in each student's overall storyline.

Stage 1 of our analysis began with familiarizing ourselves with the data by thoroughly reviewing each participant's journal entries. To ensure consistency and reliability, we began coding by having all four research team members code one participant's journal and then met to compare codes and resolved any discrepancies amongst researcher's coding. Then, participants' journals were divided among research team members, and each journal entry was reviewed by one member of the research team. Data condensation (Miles et al., 2013) was emphasized in Stage 2 through the processes of storyline coding (Saldana, 2013), a narrative coding scheme that focused on identifying critical events in an individual's narrative account. During Stage 2, the authors coded each journal entry, employing storyline coding to highlight experiences (e.g., events, epiphanies) that participants identified as salient or important in their reflections on studying abroad. In Stage 3, authors compared and refined storyline element coding strategies and converged on a second-cycle theoretical coding method using the Bourdieusian (Schirato & Roberts, 2019) and Community Cultural Wealth (Yosso, 2005) theoretical lenses. Stage 4 consisted of second round coding, wherein theoretical constructs of habitus, fields, and capital (Yosso, 2005) shown in Table 1 were overlaid with each storyline element identified from the first coding cycle. Finally, the research team collectively engaged in drawing conclusions and creating thematic narratives from first and second cycle coding methods (Miles et al., 2013).

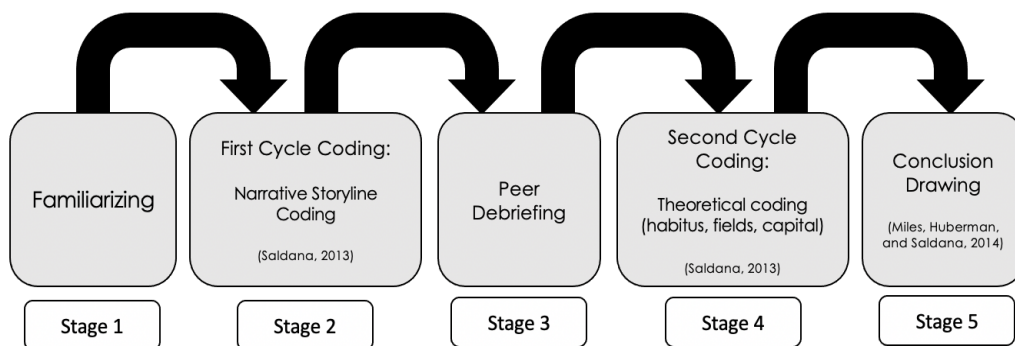


FIGURE (2): VISUAL REPRESENTATION OF DATA ANALYSIS PROCESS

Results

We first discuss prior experiences that became most salient for participants while studying abroad; participants primarily reflected on habitus formed by comparisons to home, educational experiences, and experiences with discrimination and prejudice while studying abroad. Next, we describe how several participants who had lived in more than one national context reflected on what we refer to as boundary-spanning habitus—habitus shaped by formative experiences and accrued cultural capital in two (or more) cultural contexts.

Prior Experiences Salient in Habitus While Studying Abroad

Several types of prior experiences were evident in participants' habitus: 1) comparisons to home, 2) experiences with prejudice and discrimination, and 3) previous educational experiences. Habitus formed from these experiences played a significant role in enabling participants to adopt and adapt to new cultures (Figure 3).

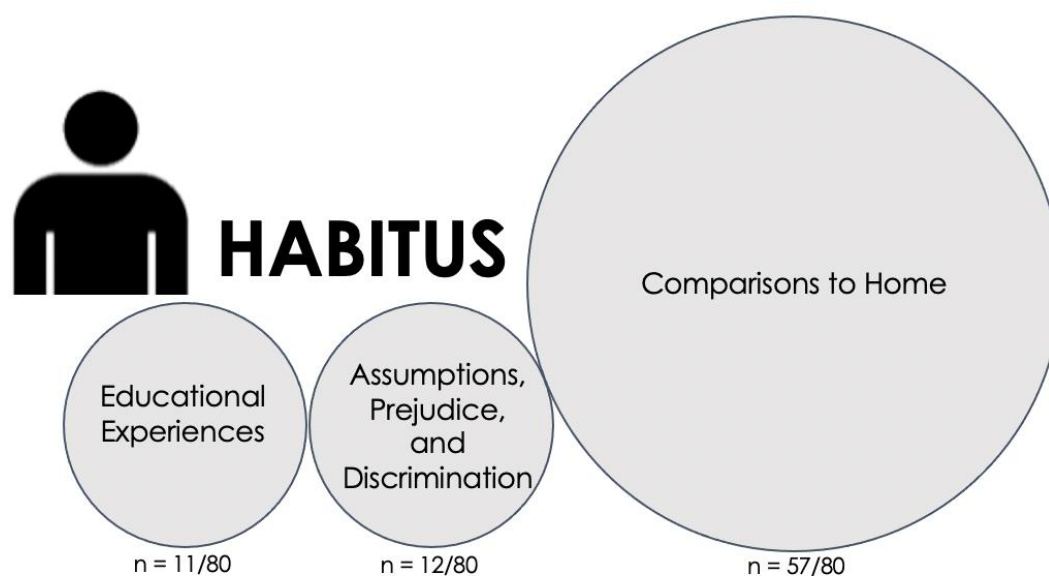


FIGURE (3): FREQUENCY OF HABITUS SUB-CODES AMONGST ALL PARTICIPANTS (HABITUS CODE APPEARED 80 TIMES)

Comparisons to Home

Most frequently, participants reflected on habitus shaped by comparisons to home (57/80 storyline elements). Within this theme, several

sub-themes characterized how participants compared and contrasted their experiences at home with their experiences while studying abroad (Figure 4). First, participants often made comparisons between what they were experiencing abroad and the U.S. culture and context (30/57 storyline elements). For example, several participants noted how relaxed and casual the people and culture of Spain were relative to their observations in the United States, emblemized by a more life-heavy approach to work-life balance. Some participants drew these comparisons during company visits. For example, one student reflected on a company speaker who discussed the impact of workspace on employee cooperation and insinuated that U.S. work culture is more competitive, whereas Spanish work culture is more collaborative. The student wondered, “if we changed some of our workspaces [in the U.S.] to our speaker’s design, could it help change the way we work in the U.S.?” As another example, a different participant recognized, “that [in Spain] compared to the U.S., there was the need to conserve the history, architecture, and even paintings; our visit to the Museo del Prado made me question why there isn’t that in the U.S.”

Sub-Theme	Storyline Elements Coded (n)
Comparison to American Context	30
Comparison to Birth/Native Context	17
Religious Upbringing	5
Connections to Family and Friends	2
Diversity of Home Community	3
Total Storyline Elements Coded	57

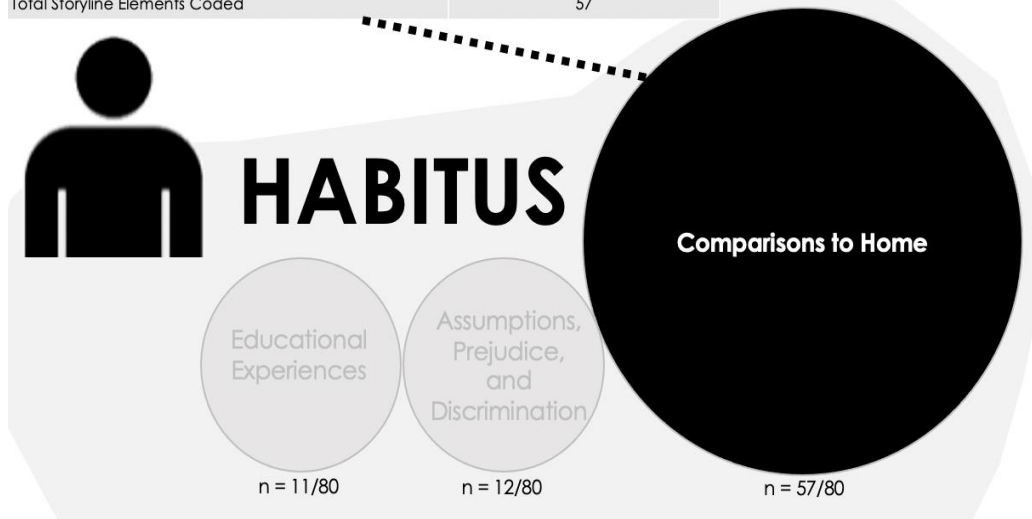


FIGURE (4): FREQUENCY OF SUB-THEMES WITHIN THE COMPARISON TO HOME HABITUS THEME

A common thread of reflection across participants was a recognition of the difference in the length of histories between Spain and the United States, as noted by a participant saying:

Since Madrid is so old, it made me wonder how the people that live in it feel about their history. In the United States, everyone is a descendant of immigrants, except for Native Americans. We all have heritage that is different from what we have adopted, but in Spain, families have resided there for, quite possibly, millennia. It made me wonder how the perception of nationalism or origin differs between the people in Spain and the people in the United States.

In this instance, the participants' habitus of experiences in the United States were salient and prompted them to compare across international contexts.

Participants who were born outside of the United States also frequently pulled from their habitus by drawing comparisons to their birth/native context (17/57 storyline elements). For example, one participant was surprised to find similarities between the food of Morocco and food in their native country: "The food was also very similar due to the seasonings used in their dishes which was very strange to me because there aren't any ties between Morocco and [North African Country]." Several participants acknowledged that their native/birth context was much more similar to Spain or Morocco than the United States, which made adjusting to the new culture easier. A different participant credited their experiences growing up in Southeast Asia to being able to identify and avoid scam at currency exchange locations and street advertisements for restaurants and clubs. This participant's navigational capital (Yosso, 2005) empowered them to avoid situations that often take advantage of unknowing tourists. Participants born outside of the U.S. context often drew from habitus formed by those prior experiences to enhance and reflect on their time studying abroad.

We identified three other sub-themes as participants drew comparisons to home, although they were relatively less prevalent: 1) connections to family/friends, 2) growing up in a diverse community, and 3) participants' religious upbringing. One participant described how their

family had spent many years living “extremely impoverished,” which helped them feel comfortable when visiting poorer parts of Morocco. That same participant also felt “extremely comfortable” in the more cosmopolitan atmosphere of Madrid, Spain, reflective of their family’s current economic lifestyle. Their reliance on familial capital (Yosso, 2005) enabled them to be comfortable in communities abroad with varying socioeconomic conditions. Another participant, relying on their social and familial capital (Yosso, 2005), felt that their experience abroad was enhanced by growing up in a diverse community and being exposed to many different cultures and ethnicities. Yet another participant recounted their religious upbringing when visiting Morocco and seeing so many people observing religious practices multiple times per day: “Also coming from an Orthodox [North African] family, most religious rules were as strict growing up and seeing others devoting their lives and daily activities to religious practices.” Participants’ backgrounds, and particularly their social and familial capital, were salient factors of habitus that shaped their experiences abroad.

Educational Experiences

Participants also pulled from their habitus formed by educational experiences (11/80 storyline elements) as they made connections to prior experiences while studying abroad. Three sub-themes captured habitus related to educational experiences: 1) connecting classroom to real-world experiences, 2) utilizing knowledge of various topics to connect with locals

on issues, and 3) understanding differences across cultural contexts (Figure 5).

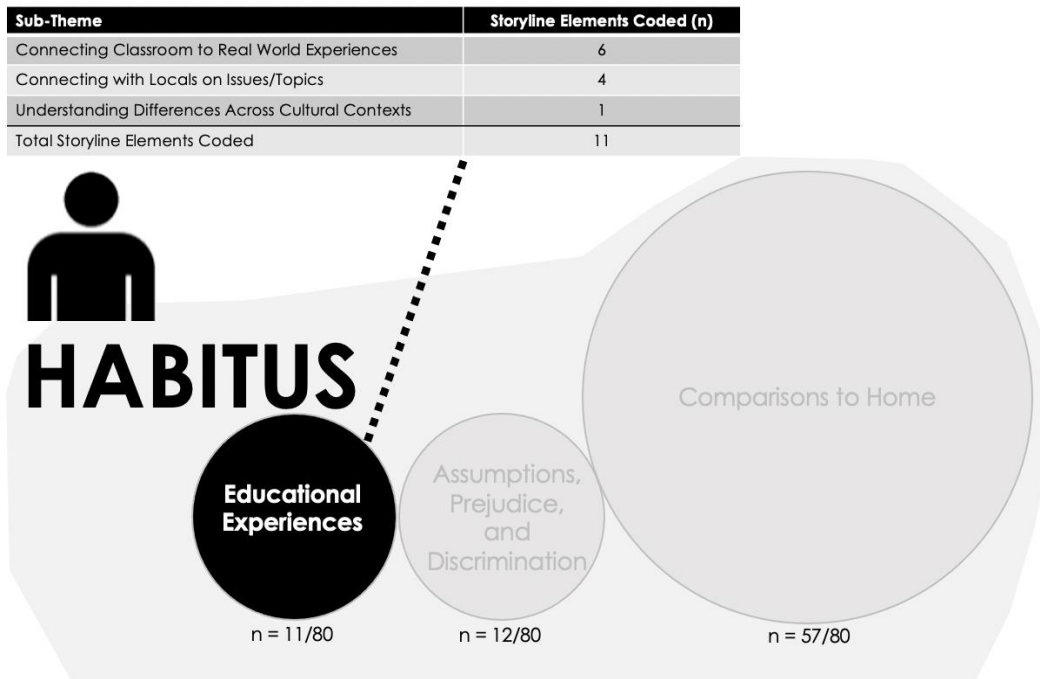


FIGURE (5): FREQUENCY OF SUB-THEMES WITHIN THE EDUCATIONAL EXPERIENCE HABITUS THEME

When connecting previous experiences in a classroom setting with their experiences studying abroad, some participants embraced the novelty of those experiences, whereas others experienced nostalgia and made connections between topics learned previously. For example, one participant appreciated doing an icebreaker at a company visit, stating they experienced a way of learning that “I’ve never seen done in a classroom before.” In contrast, another participant “was nostalgic during our visit to Museo del Prado,” as they were reminded of the many topics covered during high school Spanish classes. Linking these experiences from high school with the real artifacts of the museum helped the participant to “appreciate them more.” Other participants described how their experiences in the global engineering class leading up to the study abroad experience helped them engage critically in conversation with the Moroccan Minister of Industries, Investments, and Digital Economy about the education system in Morocco:

I recall the advisor talking about their education and unemployment issue . . . [our] group did our project on the education system in Morocco and from the research we gathered, the main issue was the public school v. private school systems. Many of the public schools weren't funded well, and many of the teachers and students in public schools didn't show up or were not given the basic materials to succeed in teaching and learning, while the private schools are too expensive for the lower class families to afford which ends up creating a wealth gap with the educated and uneducated because of the jobs offered in Morocco were in need of a degree.

Having completed a project on the Moroccan education system in advance of traveling, the participant was able to engage critically in presentations by Moroccan officials. The participant's engagement in conversations of equity also demonstrated their resistance capital (Yosso, 2005) and awareness of a need for change for families of certain socioeconomic strata in Morocco. Another participant reflected on differences in problem solving strategies in Spain relative to what they learned in U.S. classes, finding that the scope of problems in Spain were broader and that the approach to solving problems was more relaxed, calm, and collective. Prior educational experiences were important in shaping participants' experiences when engaging in and reflecting critically on their experiences while studying abroad.

Assumptions, Prejudice, and Discrimination

Participants also drew on habitus formed from previous experiences with assumptions, prejudice, and discrimination (12/80). Three sub-themes (Figure 6) characterized these experiences that shaped participants' habitus. The first sub-theme reflects the biases and assumptions held by participants regarding the country to which they traveled, and the other two reflected personal experiences with respect to racism and discrimination or presumptions of ethnic identity that others had made about them based on their appearance and salient identities.

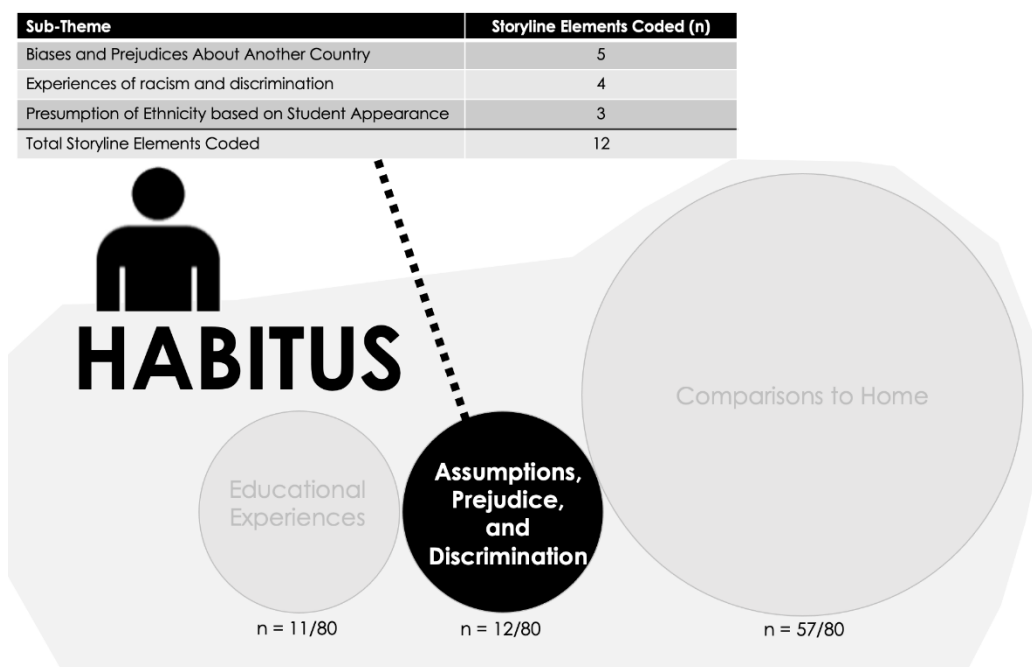


FIGURE (6): FREQUENCY OF SUB-THEMES WITHIN THE ASSUMPTIONS, PREJUDICE, AND DISCRIMINATION HABITUS THEME

As an example of the first sub-theme, one participant reflected that “talking to [Moroccan] people made me realize that even though I tried to have an open mind before traveling, I still held unwarranted bias that was incorrect. I learned that I need to be better at recognizing bias and prejudice.” Another participant reflected on how their views shifted as a result of their experiences abroad:

But while I was at [company] my views changed a lot about the citizens in Morocco, I thought the people educated usually outside of the country didn’t care for the issues that people in the lower class were dealing with, because with talk to the advisor and minister that made me feel as if the upper class in Morocco didn’t care for the issues that were in the country. But the people who were given the opportunity to study abroad have a goal to come back to try and create a better country and see the problems that many government officials are passing through their goal is to make a difference in the country with the opportunities they are given from studying abroad.

By studying abroad, the participant critically examined their own assumptions of another culture. A different participant reflected on their experiences of prejudice and discrimination that they routinely encounter in the United States and how that informed their anticipation of experiences they would have when studying abroad:

Growing up as a Black man in America is tough. I've faced a lot of discrimination and experienced a lot of prejudice. I continue to face these problems every day, but I endure it and keep moving forward. So, based on my experience in America, I figured it couldn't be worse in Europe.

Retrospectively, he reflected that people stared at him, pointed, and talked about him in Spanish, a language he also speaks, experiences that were all too familiar to him. However, relying on his resistance capital (Yosso, 2005), he actively chose not to let these experiences detrimentally impact his attitude for the remainder of the program. Another participant shared a story about their experiences of prejudice based on their identity as an American:

I interacted with a guy on the street who, upon knowing I came from America, told me he is into cocaine business and if I so wish, he would want me to be a partner. I declined but I was surprised he could openly talk about illicit drugs with a total stranger. I have never had this experience ever in my life.

The participant reflected on an experience of prejudice while abroad based on his identities as an American. In another example, a participant reflected that "walking through the Medina was uncomfortable just seeing everyone look at us like we were animals." Others' experiences were less adverse but nonetheless incited habitus based on salient identities: "In Spain, people were not rude, but some definitely got tired of us trying to speak Spanish and would switch to English or would get annoyed if they thought I was Spanish and then was not." Participants' experiences while abroad brought forward habitus related to assumptions, prejudice, and discrimination. This habitus is an important consideration for

understanding participants' experiences, particularly those who are minoritized. We also note that these participants often reflected on their resilience to overcome these experiences, in some cases because of the resistance capital (Yosso, 2005) they had accrued from experiences of prejudice and discrimination in the United States.

Boundary-Spanning Habitus

Examining habitus more closely, we found that many participants had a unique form of habitus; participants born outside of the United States reflected on what we refer to as “boundary-spanning habitus”—a collection of formative experiences that span multiple national contexts. Participants born outside of the United States reflected on habitus formed within their native/birth context as well as habitus shaped by their subsequent experiences within the United States. By entering a third international context, this latter group of participants' habitus appeared in the journals differently than participants born in the United States. Our conceptualization of this finding as boundary-spanning habitus refers to the idea that these participants' experiences are informed by merging several different worlds with varied cultures, beliefs, habits, and ways of knowing (Figure 7). Boundary-spanning habitus was, in most cases, a tremendous asset as these participants navigated their study abroad experiences.

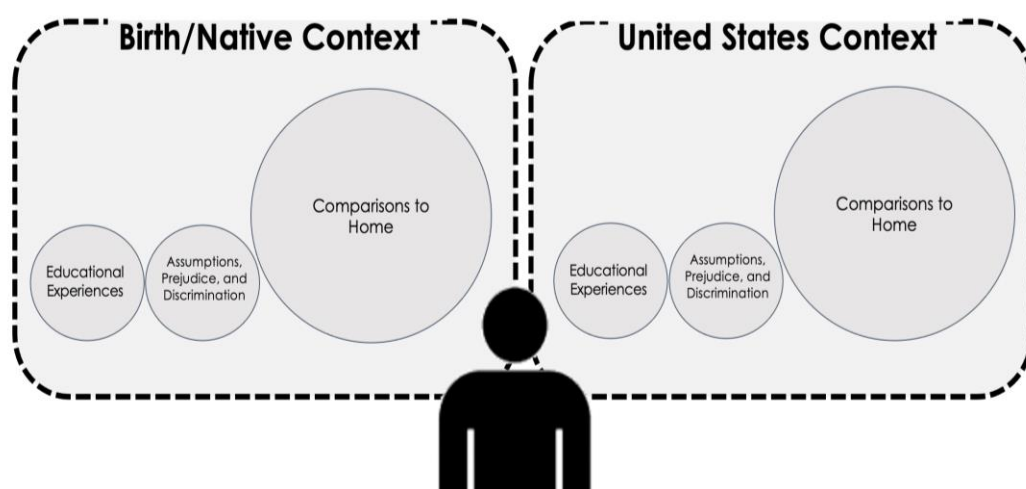


FIGURE (7): BOUNDARY-SPANNING HABITUS: MERGING WORLDS

In particular, we found that participants with boundary-spanning habitus contributed unique reflections in terms of comparisons to home as well as assumptions, prejudice and discrimination, a finding we explore further. These participants, more than their U.S.-born peers, are uniquely armed with navigational capital (Yosso, 2005) to traverse cross-cultural experiences of studying abroad. For example, one participant reflected: "I think that the experience coming from Mexico to the United States helped me understand the whole situation of going into a new country, learning the country, having a good time at that country, while not disrespecting the country." Having already encountered a different culture and international context as a part of their youth, this participant felt better able to acknowledge and respect the different values, beliefs, and cultures of the countries they traveled to during study abroad. Another participant shared similar reflections on their boundary-spanning habitus and its impact on their experiences studying abroad:

My background being born in the U.S., but also being raised in a family that comes from [North Africa], and the different groups of people I've been around since my childhood will hopefully make me have a better connection and understanding about the cultural difference I see when I get to Spain and Morocco.

In addition to feeling better prepared for travel abroad, another advantage of boundary-spanning habitus was a broadened perspective on the types of experiences during the program. For example, a participant reflected on observations while stuck in traffic in Spain:

I observed people cleaning the windshields of vehicles as a commercial venture. This I have seen people do in the streets of [North African Country] but for an advanced country like Spain to have people do this a job was amazing to me. I had not seen that in [United States]. In the nights in Madrid, there were sellers (hawkers) who displayed their products in the streets by the roadside. Another feature of the Spanish economy alien to the United States but common to [North African Country].

Empowered by boundary-spanning habitus, this participant was surprised to find street-workers in the Spanish context, something they became familiar with only through his experiences in their birth/native context. When confronted with poverty in Morocco, a different participant described their

ability “to be empathetic to the locals” given that their mother grew up in a lower-GDP country and that they spent their early years of childhood living in poverty. As a result of their boundary-spanning habitus, they found themselves adopting empathy when interacting with locals in similar economic situations. Another participant relied on boundary-spanning habitus when attempting to engage locals in conversation and found stark contrasts in how those interactions went across different cultural contexts:

The people of Madrid are very helpful for the most part if you ask for help. The only thing that I noticed compared to the people in the USA, and a country like [Central America Country] is that everybody is very focused on what they say and what they are doing (work or any other duty they are attending). In the USA people also help you in the same way as they do here in Madrid. [Central American Country] is different than these two countries, not just because it's my country but because I've noticed people are a bit more relaxed and tend to joke around easier with strangers . . . For instance when we went to get ice cream the lady there was very focused, anything I questioned, like the price of one scoop of ice cream, she would get right to the answer. I tried making the conversation for there to be more fluidity, she did answer my questions and was nice about it but in a straightforward way.

The participant found that interacting with locals in their Central American home country was much more casual than in the United States and in Spain. Boundary-spanning habitus enabled the participant to reflect on how different cultures approached conversations with strangers.

During a company visit, another participant found kinship with one of the tour guides, who—like the participant—immigrated to Spain from another home country. The participant recounted how he learned to speak English by watching a famous American television show and could relate very well with a tour guide who described doing the same using a Spanish sitcom. For this participant, they felt their experiences with boundary-spanning habitus were in some way affirmed by interacting with someone in a different country who had similar experiences accruing language skills.

Finally, one participant reflected on the value of studying abroad in helping them regain some of their birth/native culture that had disappeared when they assimilated to the United States:

I grew up in [South American Country]. The culture of [South American Country] is derived from that of Spain, and similar to that of Morocco. Moving to the United States, I had to assimilate to life there and replaced some of that culture with that of the United States. In Spain, I felt that I was regaining some of that original culture that I was raised with. In Morocco, it was a very new experience, but I was familiar with the types of behaviors of the people.

This last finding highlights an understated benefit for participants with boundary-spanning habitus who study abroad, particularly in a country that shares some of the cultural heritage or is similar in some way to the participants' home/native context. By studying abroad, the participant identified the experience as helping mend some of what was lost during the U.S. immigration process, rekindling their ties to the culture of their birth country. Participants with boundary-spanning habitus were cognizant of how it shaped their study abroad experiences.

Discussion and Implications

In this study, we used a Bourdieusian lens with Yosso's (2005) Community Cultural Wealth to explore how habitus shaped the experiences of minoritized students in study abroad contexts. We analyzed participants' journals because reflective writing can provide a space for reflexivity and contextualizing unexpected or uncomfortable encounters for participants engaging in international learning experiences (Glass, 2014). Leveraging narrative analytical tools for qualitative data analysis, we examined the reflective journal entries of 13 minoritized engineering students who participated in a two-week long study abroad experience in Spain and Morocco. We found that students' prior experiences were salient in the ways they interpreted their experiences abroad, and we found that our participants experienced instances of discrimination both at home and abroad. Additionally, we found that our participants that were born outside of the U.S. had a unique kind of habitus that allowed them to span boundaries. From the findings of this study, three pressing discussion points and implications for practice emerged:

1) the importance of centering students' prior experiences, including experiences with discrimination, in curricular design of study abroad programs; 2) the need for a reconceptualization of capital to acknowledge and value the capital of minoritized students; and 3) opportunities to scaffold and support students' reflexivity on the role of habitus in study abroad experiences. We elaborate on these discussions below.

First, minoritized students' reflections on their study abroad experiences foreground the salience of prior experiences during students' time abroad. While abroad, students engaged in a recurrent process of meaning-making of the new contexts they were navigating by drawing comparisons to home, including prior experiences with education systems, family, friends, and religion. In students' reflexive journal entries, the profound prevalence of connections between prior experiences and study abroad experiences suggests that students' prior experiences shape how they engage in study abroad programs. This finding aligns with assertions of learner-centered approaches to education, which hinge on a fundamental belief that students incorporate their prior beliefs and experiences to construct their own meanings and understandings (Barr & Tagg, 1995; Bransford et. al, 2000). For leaders of study abroad programs, this finding suggests an opportunity to ground curricular design in learner-centered approaches, creating learning environments-- both pre-departure and during study abroad-- that value students' prior experiences and help students prepare for and process study abroad experiences in relation to those prior experiences.

Related to students' prior experiences, one of the most striking findings of this study is minoritized students' reflections on navigating discrimination and prejudice while abroad. Several students connected experiences of discrimination during study abroad with prior experiences of discrimination in their home contexts. More specifically, students navigated racist interactions during their study abroad experiences and drew comparisons to prior experiences with racism. For example, one student reflected on their discomfort walking through a public space with "everyone look[ing] at us like we were animals." Another student reflected on a "lack of people who look like me" in their study abroad context. Students' reflections on experiencing racism abroad are an urgent reminder that systems of oppression are not nationally bound. Our findings align with previous research examining the experiences of

students of color during study abroad that include encounters with acts of racism (Sah, 2019; Trilokekar & Kukar, 2011). In pre-departure sessions, we urge program leaders to consider how racial trauma may transcend across contexts for minoritized students. Ongoing work of critical reflection may help prepare program leaders to engage with minoritized students about their experiences in a way that does not perpetuate harm.

This study also suggests the need to reconceptualize notions of students' cultural capital and reimagine how to acknowledge and honor minoritized students' cultural capital in design and implementation of study abroad programs--doing so could represent an opportunity for such global programs to serve as an example for more traditional learning environments within engineering. Using Yosso's (2005) Community Cultural Wealth as an analytical lens for examining the capital of minoritized students, we found that minoritized students activated navigational, linguistic, familial, and cultural capital during their study abroad experiences. For example, several minoritized students reflected on the critical value of their linguistic capital during their study abroad experiences. In alignment with Yosso's (2005) call to expand notions of cultural capital to include cultural resources of marginalized groups, our findings suggest that program leaders of study abroad programs could leverage pedagogical tools underpinned by Yosso's (2005) Community Cultural Wealth.

Finally, our study compels educators to consider opportunities to scaffold and support students' reflexivity on the role of habitus in study abroad experiences. One important contribution from this study is the notion that minoritized students leverage boundary-spanning habitus to navigate study abroad experiences. We refer to boundary-spanning habitus as a collection of formative experiences that span multiple national contexts. For example, in their reflections, minoritized students born outside of the United States reflected on leveraging habitus formed within their native/birth context as well as habitus shaped by their subsequent experiences within the United States. The distinct ways in which students reflected on leveraging their boundary-spanning habitus has been underexplored in literature and represents an opportunity to acknowledge and value the unique habitus of minoritized students born outside of the United States. Program leaders could foster students' critical reflections on habitus by asking students to "look back" and

“look forward” in preparation for study abroad. To “look back,” program leaders should consider how to support students’ reflections on their personal set of values, beliefs, and prior experiences. To support students in “looking forward,” program leaders should encourage students to think about what experiences they anticipate having abroad, and how their prior experiences and values might shape their experiences abroad. Importantly, program leaders’ work in this area should begin with their own critical reflections, as leaders should engage in this process personally before guiding students through this process.

Future Work

Future work in this space should focus on different forms of data collection and on helping study abroad leaders incorporate the findings from this study into their programs. In terms of data collection, one-on-one interviews could be conducted with students to allow for a dialogue around students’ experiences, eliciting richer responses that can complement reflective journals. Additionally, study abroad leaders could be asked to reflect about their growth in recognizing different types of capital and consider their experiences helping students unpack instances of triggered habitus. Future work could also help study abroad leaders gain the skills necessary to recognize and value these types of capital and practice self-reflexivity.

Conclusion

In this article, we analyzed reflective journal entries of 13 minoritized engineering students who participated in a two-week long study abroad experience in Spain and Morocco. We make several key contributions to the literature. First, we propose a reconceptualization of capital; study abroad leaders should recognize, value, and center the kinds of capital that students from traditionally underrepresented backgrounds bring to study abroad experiences. We also put forward the notion of “boundary spanning habitus”: students who have their habitus formed within their native/birth context as well as by subsequent experiences in the United States. These students have the unique ability to span several different worlds with varied cultures, beliefs, habits, and ways of knowing, and this boundary spanning ability should be recognized, valued, and centered by study abroad leaders. Finally, we highlight the necessity of reflection and self-reflexivity before, during, and after study abroad experiences for both students and trip leaders.

Appendix: Reflective Journal Prompts

Initial Reflection Prompts

Set goals for your time abroad in RSAP. Make a goal for each of the following: learning, professional development, and cultural engagement. Every four days, return to this goal and see how you are doing.

Continuous Reflection Prompts

Throughout the trip, students were asked to write one in-depth reflection every three-to-four days (approximately one entry per visited city), following the prompt:

Identify 2-3 important experiences or ideas that you have been thinking about or were meaningful to you based on the events of the past few days. For each experience or idea, write 1-2 paragraphs where you explore the topic in more detail by asking yourself questions (from the template or on your own) and writing your answer. This reflection process should focus on making connections, exploring ideas, challenging beliefs, recognizing patterns, or identifying applications of things you have learned. You can write about what happened and what you did if you would like (some students find it helpful to remember the trip that way), but 1-2 paragraphs should focus on reflective topics specifically.

Final Reflection Prompts

For students' final reflection, they were asked to respond to additional prompts. They were required to answer questions 1 and 2, and given the option of answering question 3 or 4:

- 1. Think about where you grew up, your experiences prior to this trip, and the communities you are a part of. How did your specific background influence how you approached and experienced this trip? (REQUIRED)*
- 2. Tell stories about two people not affiliated with RSAP who you encountered during your travels - not about how you met, but about their lives and experiences. What makes each story especially meaningful to you? (REQUIRED)*

3. *Describe a time that you felt a bit uncomfortable on the trip so far - with the travel, being in a new environment, with your peers. How did you deal with that situation? What did you learn from this experience? How might you apply what you learned in the future? (OPTIONAL)*
4. *Describe a time that you felt a bit uncomfortable on the trip so far - with the travel, being in a new environment, with your peers. How did you deal with that situation? What did you learn from this experience? How might you apply what you learned in your future? (OPTIONAL)*

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