



DESIGNING THE MELTING POT:

Physical attributes of the intercultural campus

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Abstract

American universities are becoming increasingly diverse. Current university internationalization programs assist in the adjustment of international students. However, meaningful intercultural connection often occurs on an interpersonal level, not an institutional one. To understand how campus places may support intercultural connections among diverse students, the researcher conducted a survey, observations, and interviews with domestic and international students. These methods evaluated the physical attributes of students' favorite campus places and revealed students' perceptions of attachment and intercultural connection they experienced inside. Students experienced positive intercultural connections in campus places that allowed them to interact and relax with each other. Centrally located places with recognizable features, private/open areas, consistent ambient conditions, and access to comfortable furniture, refreshments, and technology were preferred. These findings may inform the design of future campus places so that they support the needs of a future global workforce and build connections among empathetic citizens of the world.

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Introduction

Many students from around the world take advantage of opportunities to study at colleges and universities in the United States, gaining both knowledge and exposure to new cultural experiences. In fact, during the 2014-2015 school year, nearly 975,000 international students studied at U. S. institutions of higher learning (Institute of International Education, 2015). Schneider (2000) notes that many international students choose the United States to study so that they may gain access to “a huge, diverse, and complex educational system recognized

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for its scope and creativity,” plentiful resources, facilities and growth opportunities (p. 6). However, these opportunities do not come without challenges as well. Despite various university efforts intended to support international students, many students still reported psychological, social, and academic challenges to their integration into the university culture. Left unaddressed, these challenges may lead to isolation, reduced retention, and even violence (Hechanova-Alampay, Beehr, Christiansen, & Van Horn; 2002).

Although research on the integration of international students into campus life is available, it rarely intersects with the role that the design of the built environment plays in this process. This integration may reduce the aforementioned challenges faced by international students while increasing empathy, compassion, respect, and perceived value of diversity among all students (Al-Sharideh & Goe, 1998;

Clements, 2000; Hechanova-Alampay et al., 2002). On a university campus, it is often the places outside the classroom where pleasant and voluntary intercultural contact and social connections may occur (Tupper, Carson, Johnson, & Mangat; 2008). Research suggests that when users have pleasant experiences in a place, they may become attached to the place and the people inside (Waxman, 2006a). This concept is known as ‘place attachment.’ This research study will address the design attributes of non-classroom spaces that support place attachment for international students on college and university campuses. The findings have the potential to impact campus design to facilitate more opportunities for interaction and positive campus experiences for all students.

Review of Literature

This review of literature will focus primarily on the built environment typically seen in western universities and how it may support place attachment among international student users. Due to the limited amount of scholarly literature addressing this specific topic, the researcher utilized several related areas to ground the study. First, the researcher explored internationalization efforts developed by western universities to help international students overcome the challenges they encountered while on campus, a topic with much available literature. Next the researcher examined the physical space of the traditional western university to see how its design features may support place attachment among a diverse student body. Lastly, the researcher explored how physical spaces in general can support feelings of attachment and safety, not just among international students, but among all users of a space. An understanding of these areas will provide a foundation for a better understanding of design that enhances the student experience and provides opportunities for attachment and interaction among diverse students.

University Internationalization Efforts

To support international students, many universities have turned their attention to “internationalization efforts,” defined by Knight (1994, p. 3) as the “process of integrating an international and intercultural dimension into the teaching, research and service functions of the institution.” Such examples may include teaching intercultural competency and understanding as part of the curriculum, developing outreach programs tailored specifically to international students at orientation, peer-to-peer and community mentoring programs, cultural celebrations, and increasing international students’ access to opportunities that foster equal status and collaboration (Clements, 2000; Hayes & Lin, 1994; Leask, 2009). Additionally, faculty members may be trained in intercultural and interpersonal communication skills, employ a wide range of teaching styles, and have an awareness of resources available to help international students (Hayes & Lin, 1994; Leask, 2009). Though these actions help universities recognize, value, and support diversity as a strength of the academic institution, there may be additional opportunities to support international students in a deeper and more personal way.

Challenges of International Students in Western Universities

Though international students engage in many positive experiences while studying in western universities, some of which may be facilitated by university internationalization, these students may still face social, academic and practical challenges. These challenges may

include loneliness, homesickness, culture shock, cultural value clashes, and pressure to integrate with native students with whom they share little common ground (Schram & Lauver, 1988; Yakushko, Davidson, & Sanford-Martens, 2008). Such challenges may be exacerbated by language barriers. In response, many international students gravitate toward friendships with students from their native country, which may prevent them from fully taking advantage of their new setting.

Attachment to the campus and to the users within it depends on the motivation, skills and opportunity of international students and the willingness of hosts to facilitate this (Leask, 2009; Ward, Masgoret, & Gezentsvey, 2009). International students often want meaningful interactions with domestic students, who may feel apathetic towards them in return (Ward et al., 2009). Some research attributes domestic students' apathy toward international students to a lack of understanding, since American students travel abroad less than many other cultures and may perceive international students homogeneously (Ward, et al., 2009; Sowa, 2002). Domestic students may even accept international students on a spectrum, based on the degree of difference between their cultures and the degree to which the international students adopt the host's culture and language (Ward et al., 2009). To help facilitate relationships between international students and their domestic hosts, many universities engage their students in extra-curricular activities on campus such as international dance and movie programs, multicultural events, discussion groups for international students to learn colloquialisms with their domestic peers, or the hosting of cross-cultural meals (Gurin, Dey, Hurtado, & Gurin, 2002; Lacina, 2002; Leask, 2009; Schram & Lauver, 1988). While these examples and many others provided by university internationalization literature may be effective ways to introduce cultural awareness to a campus, Ward et al. (2009) suggests that these methods may result in quick and superficial collisions among students, not meaningful relationships and strong social ties—those that may result from place attachment.

In addition to social obstacles, international students are often unaccustomed to certain pedagogical styles within the western learning environment which emphasizes competitiveness, assertiveness, individualism, questioning, discussion, and a focus on the personal development of the whole student (Cruickshank, Chen, & Warren, 2012; Moores & Popadiuk, 2011; Parr, Bradley, & Bingi, 1992). When faced with such challenges,

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international students may seek support services such as tutoring or mentoring (Grebennikov & Skaines, 2006). There is abundant literature on how to develop and implement support services on university campuses to help international students overcome challenges in the curriculum and reach their goals within the academic environment (Leask, 2009; Parr, Bradley, & Bingi, 1992; Roberts & Dunworth, 2012). However, information on helping international students feel a sense of belonging and attachment while on campus—but outside the classroom—is not as readily available.

These challenges—socializing, language, academics, and access to resources—can impact any student. For international students, however, these challenges may negatively affect their sense of belonging and retention at the university (Andrade, 2006; Bista & Foster, 2011; Meeuwisse, Severiens, & Born, 2010; Zepke, Leach, & Prebble, 2006).

Academic Architecture

The built environment of the university campus provides much of the physical context for an international students' experience in the United States. Though the English medieval architecture seen on many U.S. campuses is thought to represent the ideals of “a community of scholars, living as a family, perpetuating the traditional curriculum, united by a religious creed” (Turner, 1984, p.110), some believe that this architecture preserves specific cultural and historical hegemony, inequality, and monoculturalism, which, in its ubiquity, undermines the goals of an intercultural campus (Nemeth, Aryeetey-Attoh, & Muraco, 1992). Educational architecture has evolved in purpose and meaning throughout its history; specific and widely accepted architectural forms, as applied to all schools, evolved into the idea that architecture could be linked to educational goals (Prosser, 2007). However, educational goals vary according to location, and often change faster than the architecture and budget can keep up (Prosser, 2007). Many of the schools constructed in the 1950s and 1960s, when the factory model of education was perfected, are in “need [of] major repairs, contain environmental hazards, or exceed their planned capacity” (Taylor, 1993, p. 1) and no

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longer reflect the ideals of higher education (Uline, 1997). Some research suggests that campuses could reflect the multicultural curriculum, cultural background of the students, and the educational profile of the community by incorporating more diverse architectural form and organization, human scale, outward-facing orientation, prayer/ritual spaces, and even art from diverse cultures (Ali & Bagheri, 2009; Bingler, 1995; Brase, 1987; Seaborne & Lowe, 1977, Whyte, 1988).

Though the classroom has been the setting of much research concerning international students, non-teaching spaces where students voluntarily gather and spend time have been given less attention, and therefore justify the need for this study. Non-teaching spaces are valuable sources of information on students' self-expression, citizenship, status, culture, and socialization because they are chosen voluntarily (Prosser, 2007). The design of these spaces can create possibilities for diverse people and ideas to interact and amplify each other while transmitting the values of a society to the students who are responsible for practicing them (Alexander, Ishikawa, & Silverstein, 1977; Brase, 1987; Davis & Uptis, 1994; Uline, 1997).

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Place Attachment

People and places are inherently intertwined (Finlay, 2011; Seamon, 1979) and emotional bonds and attachment to places often develop (Casey, 2009). Students may spend formative years on college and university campuses, thereby laying the groundwork for feelings of attachment to that place. There is a body of work surrounding the term "place attachment", which is defined as "the affective link that people establish with specific settings, where they tend to remain and where they feel comfortable and safe" (Hernandez, Hidalgo, Salazar-LaPlace, & Hess, 2007, p. 310). Though much research has been conducted on how place attachment can support the accomplishment of tasks, identity formation, personal restoration, and socialization, (Ellis,

2005; Lewicka, 2011; Waxman, 2006a), only a handful focus specifically on place attachment among international students. Although people may become attached to many kinds of places, those referred to as "third places", often create an atmosphere ideal for connecting with others (Oldenburg, 1999). Third places are those that "host the regular, voluntary, informal, and happily anticipated gathering of individuals" (Oldenburg, 1999, p. 16).

Attachment to places, and to third places especially, is a result of both the social environment as well as the physical attributes of the place itself (Waxman, 2006a). Research

shows that the benefits of attachment to “third places” on campus-task accomplishment, identity formation, personal restoration, and socialization may help students connect with the campus community (Waxman, Clemons, Banning, & McKelfresh, 2007).

People grow attached to third places, in part, because these places promote productivity by providing resources, services or amenities to accomplish tasks outside of the work or home environment (Lewicka, 2011; Waxman, 2006a). Accomplishing tasks in a relaxed and pleasant setting often leads to a renewed sense of purpose, achievement, increased well-being and connection to a larger whole (Cicognani, Menezes, & Nata, 2011; Najafi & Shariff, 2011; Rollero & De Piccolo, 2010).

Places can facilitate restoration by helping people forget the personal or social pressures encountered in daily life and can take the form of a positive change in mood, a renewal of directed attention capacity, or a reduction of stress, which regulates the self (Korpela, Hartig, Kaiser, & Fuhrer, 2001; Rollero & De Piccolo, 2010). Places also enforce personal identity by providing a physical context that reflects users’ values, and lays the foundation for memories and experiences (Churchman & Mitrani, 1997; Najafi & Shariff, 2011; Rollero & De Piccolo, 2010). Places can evoke passion, creativity, and self-exploration merely by being physically interesting or full of interesting people (Ellis, 2005; Uptitis, 2004).

Much of a place’s meaning is derived from the socialization that occurs there (Waxman, 2006a). Places tend to function as social hubs where peoples’ routines intersect and where meaningful relationships among like-minded people can develop serendipitously (Ellis, 2005; Rollero De Piccolo, 2010; Waxman, 2006a). Places may offer shy people anonymity, people-watching opportunities, or the chance to be among familiar strangers - those people who become part of the fabric of one’s life due to proximity and opportunity (Waxman, 2006b).

Cultural attributes of place attachment. The majority of the modest research focused on place attachment experiences of international students has been conducted outside of the United States. These studies found that the way in which international students experience place attachment varies based on culture, the factors that motivated the international student to study abroad, their distance from home, their plans after graduation, length of residency, and level of community involvement (Hernandez et al., 2007; Lewicka, 2011; Cicognani, et al., 2011; McAndrew, 1998; Churchman & Mitrani, 1997). In Fincher and Shaw’s (2011) study of an Australian university, (mostly Chinese) international students were more attached to the enclosed, temperature-controlled, well-lit, and clean food court of their nearby shopping center to socialize with friends, instead of the neighborhood bars near their student housing or the “grubby” Chinatown in the city. Churchman and Mitrani’s (1997) study of Russian immigrant students in Israel found that the subjects grew attached to places that they preferred, with little consideration to the places’ similarity to their native

counterparts. In these cases, space provided meaning and safety for students, while simultaneously encouraging the separation of students into distinct cultural groups. Diverse students may be obligated to share space in their learning environments. However, if they choose to remain separated from those that are different from them while spending time in third places, these spaces may be in danger of “becoming mosaics of ethnic ghettos rather than vibrant intercultural communities” (Tupper et al., 2008, p. 1082).

Safe Spaces

It is unlikely international students will develop strong feelings of attachment to their campus if they do not feel safe. In light of escalating violence on college campuses in recent years, campus safety has become an ever-increasing priority. Not only is it a moral obligation of universities to protect all students, a university’s reputation for safety and security is a factor many international students consider when applying (Paltridge, Mayson, & Schapper, 2010). Patridge et al. said:

Even without being exposed to any acts of violence, the mere act of becoming an international student can reduce a person’s sense of security...[and] as they are not a citizen of the host country they [may] lose many of the rights they may have enjoyed as a citizen in their host country, possessing instead only the reduced rights of a migrant. (2010, p. 356)

Therefore, when exploring the built environment of the university, the physical security of its users must be carefully considered.

The physical safety and security of students (both international and domestic) may be supported through the creation and use of “safe spaces” on campus. The term, “safe space”, can refer to a metaphorical or physical space “in which individuals are free from discrimination, harassment, and any activities that may make an individual feel uncomfortable or unsafe” (Founders College Equity Committee, 2010). For the purpose of this article, the existing literature on the design attributes of a physical safe space will be discussed.

Though each building on a university campus will have a different level of risk, safe spaces may include design features which deter violence and reinforce feelings of protection,

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refuge, calm, and recovery. Campus spaces which possess a distinct exterior appearance which can be easily described and identified, an interior with clear and direct traffic patterns and way-finding landmarks that help users understand where they came from, where they are, and where they are going may instill calm and confidence during an emergency evacuation (Jung & Gibson, 2007). If a violent event should occur, certain physical characteristics, such as safeguarded communication and power supply systems and alternative command centers may help users evacuate quickly and safely (Lyman, 2003). Though an international student may not be consciously aware of all of the deterrent, evacuation and recovery measures included in safe spaces, the feelings of protection, refuge, and calm, they experience inside may contribute to their overall well-being.

Literature Summary

In Western universities, intercultural connection has been fostered by a greater understanding of the history and obstacles faced by international students, as well as the efforts made to encourage interaction of diverse groups of students. However, there are still many opportunities to increase the connection between international students and the university culture, especially as this connection intersects with the built environment. At the time of this writing, much of the research on the intersection of these two topics is limited to specific case studies in countries outside of the United States, or in academic spaces only. Little information exists on the “third places”, those places outside of the home or classroom, where diverse students voluntarily spend time. An exploration into this topic may be justified and beneficial because “a campus’s physical character— its forms spaces, styles, visual messages—provides the most tangible, direct, visceral, and insuppressible expression of what an institution is all about” (Brase, 1997, p.42).

Overview of the Methodology

The purpose and primary research question was: How do the design features in the built environment of non-classroom spaces on university campuses support place attachment for international students? A mixed-methodology approach was taken. The study utilized a survey, visual instrumentation, observations combined with behavioral mapping, and interviews with the goal of answering the research question. The study was conducted at a public university in the southeastern United States. The total university population is approximately 40,000 students including a small but diverse international student population.

[T]he interviews also determined the students' perception of their level of attachment, self-expression, sense of community and cultural interactions they experienced while in these campus places.

Survey

The first stage of the research included a survey of 2072 international students which identified the places on the campus they frequented, how often they visited, the activities they engaged while there, and their perceptions of whether the design features in these places promoted productivity, personal expression, attachment, and sense of community (behaviors which signal place attachment). The survey consisted of ten demographic questions and twenty-seven questions where participants evaluated the physical attributes of the place on campus, other than a classroom or a laboratory, they most often frequented using a Likert Scale. There were four open-ended questions asking participants to provide information about what the place meant to them, why they came to the place, what they liked best about the place, and what they would change about the place.

All international students were asked to participate in the survey, with the full support of the International Student Program at the university. A link to the survey was sent from the email address of the Director of the

International Student Program to the international students' university-sponsored email address. The survey was accessible to the sample from September 24th, 2013 to October 10th, 2013.

Observation and Behavioral Mapping

To better understand how the spaces were used, observations sessions were conducted. The seven spaces on campus most frequently used by the international students who participated in the survey included three libraries, a gymnasium, a coffee shop, a student life center, and the student union. Each space was observed for 5-10 hours on both weekdays and weekends during the morning, afternoon, and evening. During the observation sessions, the researcher recorded the activities of the students to better understand how they used the spaces.

Interviews

To further understand if the design features of the built environment support place attachment, follow-up interviews were conducted with four international students randomly selected from those who responded to the survey and agreed to be interviewed. In addition to providing information on the students' preferences of their favorite campus places, the interviews also determined the students' perception of their level of attachment, self-expression, sense of community and cultural interactions they experienced while in these campus places. The interviewees were also asked about the design features that helped them meet people from different cultures. Finally, two administrators were interviewed to gain a better understanding of the university's internationalization efforts.

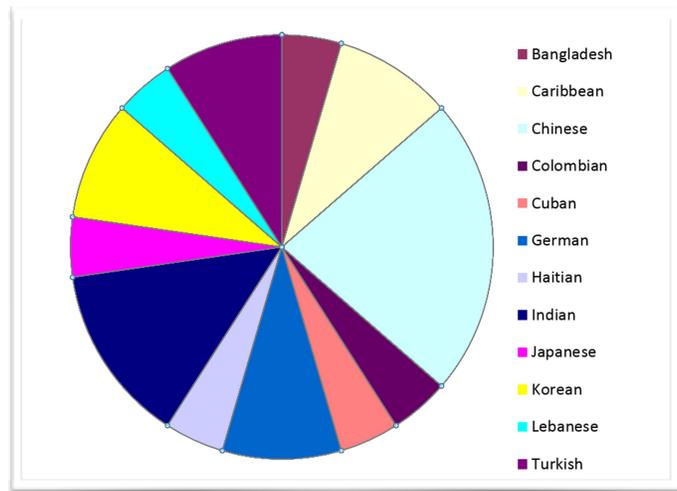


Figure 1. Nationalities of survey respondents (International students n=22)

Analysis

The researcher used descriptive statistics for the analysis of the survey data. Qualitative analysis was used to analyze the observation and behavioral mapping, and interview data. The data was examined and emergent themes identified.

Findings

Of the 2072 international students surveyed, there were 22 respondents. This sample population represented twelve nationalities (See Figure 1). Half of the sample had been on campus more than two years while the other half had been there less than two years. The majority of the sample (77%) was graduate students. When asked about their most preferred campus place that they chose to visit, most (77%) discovered the place themselves or through a friend and visited it about 2-3 times a week. Half of the sample socialized in their campus place, while the other half did not. Though this sample provided valuable data discussed below, because of its small size, there can be no conclusions drawn based on individual nationality.

Internationalization Information About the Site

The university has a diverse international student population that is of average size when compared to the other public universities in the state. This population has increased from 1570 students in 2006 to 2072 students in 2012 (Institute of International Education, 2015). There are clubs on campus celebrating various nationalities and religions which host events throughout the year as well as many support services and programs available to help international students. The Vice President of Student Affairs noted,

“Establishing a physical “home” for international students that provides access to services, accommodates programs to meet their needs, and offers space for them to gather informally is an essential component of their successful transition and goal achievement at this university. Our goal was to provide a welcoming environment and inclusive programming that facilitates happiness and academic accomplishments for students from around the world who choose to study with us.”

There are two buildings on campus that are intended to facilitate the needs of international students, though anyone on campus is welcome to use them. The first is the Center for Global Engagement, which contains primarily meeting spaces, prayer rooms, and dining facilities and the Center for Intensive English Studies which contains primarily classrooms, meeting spaces and offices. Though international students may spend time in both of these places, neither were mentioned by the survey participants as being their most preferred campus place. A faculty member from the Intensive English Studies Program described their building, a two-story brick house with a white wrought iron balcony that has been repurposed into this learning center as being,

“...a family-like atmosphere that is safe on many levels. Good language learners need to feel safe in their environments to learn well. We get people from all over the world and we want them to hang out with other language groups...we have the only designated smoking area on campus because that is part of many cultures.”

While there were a variety of ways that this campus supported the needs and goals of international students, third places, those non-teaching places that students chose to visit, appeared to have an additional impact on the attachment they felt to the university as a whole.

Survey Results

Survey respondents were asked to evaluate attributes of the space they frequented using a Likert scale. Respondents generally agreed that a variety of comfortable furniture, ample task and natural lighting, comfortable ambient conditions such as aroma, temperature, humidity and sound level, and access to technology were all present in their most preferred non-classroom campus space. Additional survey data revealed that international students felt that they could express themselves freely in the space. They also indicated they could accomplish a variety of tasks while in this space. Survey and interview data also indicated that students felt positively about interacting with students from diverse cultures and were open to more interactions in the future, so long as they occurred voluntarily and naturally. The observations sites were designed in such a way to support such interactions.

Characteristics of the Observation Sites

During the second stage of the research, the observations were conducted at the seven sites most frequently mentioned by students in the survey as being their most preferred campus place. The location of each of these places is noted on the campus map shown in Figure 2. Generally speaking, these spaces contained the following similar physical features which supported place attachment and safety for the users inside.

Building type, access and location. All of the sites selected by students as preferred places were located within a ten minute walk of the center of campus as seen in Figure 2. The places were accessible to students traveling on foot and allowed opportunities for a short, walk to or from them, either alone or with friends.

Recognizability. Though most of the buildings on this campus were brick with large signs out front with names corresponding to a campus map, it was noteworthy that the observation sites and additional features that made them easy to identify and remember (See Figure 3). For instance, the science library had a large bronze sculpture in front. The

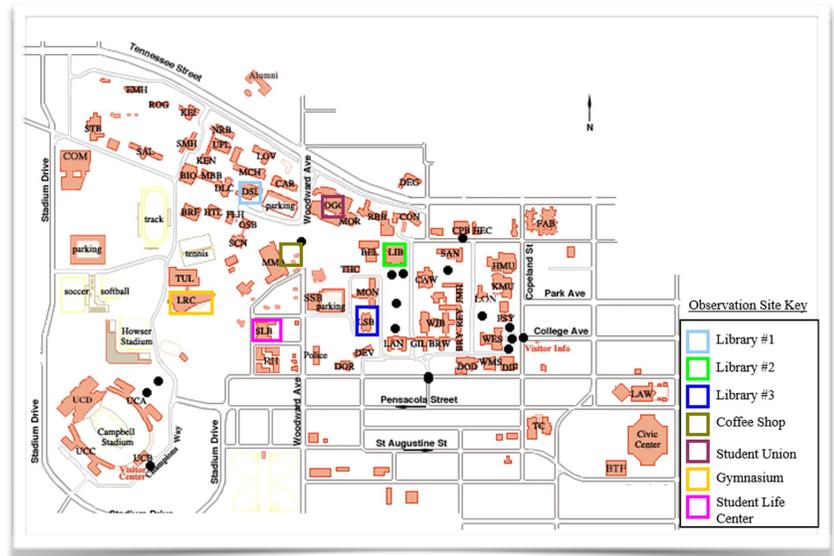


Figure 2. Campus map showing centralized location of observation sites

main library is centered at the end of a large green space where students routinely play Frisbee or suntan. The front façade of the student life center had a two-story window at its center.



Figure 3. (Left to right) Recognizable exterior features of the science library, main library, and student life center.

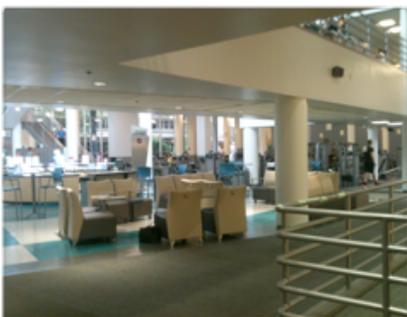


Figure 4. (Top to bottom) Interiors of the gym, library with cubicles and student life center showing fixed architectural features.

Overall appearance of the interior. Most of the interiors of the observation sites had a distinct and unified contemporary design and had recently been remodeled. The interiors seemed to have mass appeal and avoided overt references to a specific culture.

Fixed architectural features. The observation sites contained varying degrees of openness and enclosure. For instance, the gym had multi-story atriums surrounded by dropped ceilings while the libraries had open plans with smaller nooks and cubicles around the perimeter. Similarly, at the student life center, an open seating area was favored by some students while others preferred a nearby cove-like space created with half walls and a lowered ceiling (See Figure 4).

Lighting. Though the observation sites were adequately illuminated, there were a variety of light sources. All of the spaces had access to natural light often from windows on only one side of the space or from clerestory windows above and were supplemented with artificial light sources.

Access to views. All spaces offered access to views of the outside from some part of the space. Seats in all of the observation spaces were used, regardless of their access to views.



Figure 5. Furniture groupings which support group and individual study

Ambient conditions. Though there was not a preference for quiet spaces over loud ones, each space had a sound level that was respected by the majority of users. For example, in the quiet spaces, users took phone calls outside and wore headphones. However, when a space was noisy and had a buzz of activity, that sound level was also maintained by the users. With regard to temperature and humidity, both were acceptable to international students and were consistent across spaces. Cleanliness, which research shows is an important feature (Waxman, 2006a), was acceptable to the users as well. This consistency is likely attributed to the university's standard controls and regular maintenance by staff.

Technology. Technology use was a key feature in these spaces. Though computers were available in some of the observation sites, most students brought their own and took advantage of the free and secure wireless internet signal available throughout the campus. The only type of technological amenity that seemed to be lacking for users of the spaces was electrical outlets.

Furniture. None of the physical attributes of campus spaces seemed to have as direct an impact on the users as the variety, comfort and mobility of the furniture. Most of those surveyed and observed indicated that their campus space allowed them to choose a comfortable seat. Student K (male, Japanese) responded,

“When I study by myself, it depends on my mood, right? It depends seriously on my mood. My room is very small. I feel pressure. I need a bigger place. I like a wider space [more] than a closed space. Even though I like a small [space] with very high walls but [for] study[ing] I usually go to the wider space, not my room...I like moving to go outside, [to an] other seat, [an]other seat, then change to [an]other seat. But in my room I cannot work. I cannot choose the space, [I can choose] only [the] desk or bed, that's it. So I like a wider space to study.”

Most of the observation sites had a variety of furniture types to choose from including sofas, lounge chairs, task chairs, small side tables, work tables, bar-height stools, and café tables. Lightweight furniture and/or furniture on casters were often moved by users to support group interactions. This resulted in an increased the noise level inside, but allowed people the desired interaction and control, self-expression, personal restoration, socialization, and the accomplishment of tasks. All of these factors were found to signal place attachment in the review of the literature. In other observation sites, immobile furniture in arrangements that discouraged group interaction and instead supported quiet, solitary study. In these spaces, the noise level was reduced (See Figure 5).

Refreshments. In all of the observation sites, eating and drinking was encouraged and refreshments were available nearby. The refreshments were American fare, likely the result of university food service which offers a standardized menu. However, users could enjoy spaces without patronizing them or could bring their own refreshments with no repercussions. Said Student S (male, Korean) about the medical school library,

“I am just studying here and I couldn’t find any place to have some snack[s]. So at first I was just very hungry but I didn’t try anything. But later I found some students that were eating some kind of snack. So rather than just starving, I am eating some snacks. I am not sure other students dislike it or not...sometimes my wife makes me smelly Korean food so I cannot...” [trails off]

Use of patterns inside the spaces. Though the observation sites were located within different building types, they were utilized in similar ways. The campus spaces allowed users to study or pass time alone, work individually but in the company of others, or meet with others to study or socialize. In many of the sites, users would join multiple groups and move between them freely during their visit. There were also frequent occurrences of restorative activities such as eating and drinking, passing time (watching movies, playing with phones, or engaging in some other type of entertainment, social media, or online shopping), or relaxing (sleeping, listening to music).

User interactions inside the spaces. In addition to supporting a variety of uses, the observation sites also provided spaces for nuanced social interactions among the users and created a sense of community. Interview and observation data revealed that on campus, feeling a sense of community resulted from three main factors: that students were “in it together” (regardless of what ‘it’ was), that they were connected because they shared the same space, and that this space had an unstated code of conduct that simultaneously supported self expression. Said one first-year PhD student in math, of time spent in his preferred space,

“... We are all sort of in this together. We will usually be like, ‘hey are you stuck on number four?’ and it’s like ‘yeah, I have been working on it for the past two hours,’ you know? It’s stuff like that.”

Findings also indicated that users trusted that their territory and possessions would be respected by others and kept safe from harm or theft. This trust was echoed by a Haitian student who described the unspoken rules about the study rooms at the law school libraries where he and his friends spent time. Each semester, groups selected their study room that they would occupy for the rest of the term. If the group was not there, the room would remain empty. Respecting the places that other study groups claimed showed a level of understanding and trust which connected the community of users in the space in which this student spent time. In summary, territories were established, maintained, and respected.

Campus spaces also supported users who felt they could safely express themselves through prayer, wearing unique clothing or costumes, or being “in their own world.” For instance while observing the first floor of a library, the researcher repeatedly saw a male dressed like a cowboy sitting in the same booth facing a major traffic pattern. He ate sunflower seeds and spit the shells into a glass bottle while acquaintances would stop for a chat. This fellow was “holding court,” putting himself on display for the world to see a real cowboy. During every observation at the Student Life Center, a tight-knit group of undergraduate males played video games in a cave-like alcove made of partial walls and dropped ceilings. They were oblivious to the other users of the space, yelling profanities, teasing each other mercilessly and belching loudly! Though incredibly diverse—a doctoral math student, law student, a cowboy and even gamers—each felt safe to come as they were and be themselves inside their space while simultaneously displaying trust and community. These observations signaled that students were not only sharing space, but they were sharing culture as well.

Safety. Though overt crime prevention methods like metal detectors and drug-sniffing dogs were not present on this campus, swipecards were required to access the gym and two libraries. The union, student life center, coffee shop, and remaining library were all staffed by at least one employee who had access to a phone nearby. In the event of severe weather or a criminal act on or near campus, students are texted an



Figure 6. Safety pole delineating path to police station

alert en masse directly to their cell phone. There is a police station near the center of campus that is accessible to all students via phone or in person at all times. The campus itself is punctuated with safety poles that light the paths to the police station at night and contain a phone with a direct line to campus police (Figure 6). Users are also given the police station's phone number at orientation and are encouraged to call as needed.

Most of the observation sites were located towards the center of campus and on a common path of travel, which was easy to traverse by car, foot or bicycle. The sites had recognizable exterior features and signs outside with the building name that distinguished the sites from their surroundings in case they needed to be quickly described or identified. Though not all possible safe space design guidelines were included on this campus, users inside the spaces appeared to feel safe and comfortable.

Discussion

The data revealed a variety of nuanced information about the students, their activities, and their preferences in campus spaces. Yet this data also yielded realistic design implications regarding the features of non-classroom campus spaces, which may support attachment for international students. Based on the data from the surveys and observations, users appeared to exhibit self-expression, personal restoration, socialization, and the accomplishment of tasks, which, according to the review of literature, signal place attachment. For example, functional elements such as comfortable furniture, views to the outside, natural lighting, and access to refreshments and technology (outlets, free and secure wireless internet, computers) allowed users to relax and linger inside their favorite campus place for as long as they wanted. Most of the observations sites had a variety of moveable furniture, adequate lighting and sound-dampening materials to support a variety of tasks and group interactions. Though some research indicates that physical features like windows, walls, partial walls, corners, decorative columns and a distinct overall scheme may help users grow attached to a place, the survey respondents provided minimal feedback on these features. Instead, the international students found the ambient conditions—cleanliness, sound level, aroma, temperature and humidity levels—to be comfortable and pleasant.

Though the survey sample did not agree that *specific* design features (walls, half walls, corners, etc.) which made them feel safe were present in their preferred campus place (as was suggested in the literature), the campus contained many of the safe space design elements which deter crime and reinforce feelings of protection, calm, and recovery. Access to the observation sites were controlled with a swipecard or the sites were monitored by employees. The observations sites had distinguishable exterior features and were on an easily accessible and centralized path. As would be expected, the interior of the sites were

equipped with fire/safety code requirements like egress lights and fire suppression systems. Though the interiors of each of the observation sites did not all have way-finding landmarks as mentioned by Jung and Gibson (2007), they did have at least one exit door that was visible from anywhere in the space. Alert systems such as mass text messaging, direct police access and safety poles, though not discussed in the review of literature, played a critical part in the overall feelings of safety on this campus as well. Overall, this campus contained many of the design features described in the existing research on the topic of place attachment and, when combined with internationalization efforts put in place by the university, did an adequate job of supporting international students.

Future Research

To build on these findings, there are a number of adjacent ideas that could be further developed. First, by studying a larger student sample, researchers may be able to more fully understand which features of the built environment are preferred by specific cultures. This research may also provide a springboard into the design of other campus spaces such as classrooms or dormitories which could support place attachment among users. Moreover, in the wake of growing terrorism and violence on university campuses, the design of “safe spaces” may provide an additional layer of safety, comfort and security to students. Finally, this model of intercultural design could be expanded to support place attachment among users of campuses abroad.

Summary

After careful evaluation of the design features of the built environments explored for this study, the researcher concluded that many supported place attachment among international students. When certain physical attributes such as ideal ambient conditions, a unified overall appearance, amenities such as technology, and comfortable furniture, and areas which supported individual and group tasks were included, users’ needs were met. When safety features such as controlled access, emergency response systems, and effective way-finding were included in spaces, students could focus completely on the task at hand—be that task homework, relaxing, or socializing.

The research showed that users came from diverse cultures, engaged in a variety of tasks while in these campus spaces, and had clear preferences regarding these spaces. This research has the potential to influence campus spaces for users to share which unifies them toward common goals, while also allowing their differences to emerge in a supportive and empowering environment.

As one interview subject said, “I don’t have a lot of money, so meeting people from other countries is like traveling without leaving.” This researcher hopes that these design implications will make everyone, regardless of culture, feel attached to the United States university campus. This attachment, when combined with the practical components of campus internationalization, may lead one to agree that “the internationalization of higher education is not an end in itself, but a means to an end, with the end being an improvement of the quality of education” (Knight, 1999, p. 20).

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