

SPACE DESIGN IN HIGHER EDUCATION

COMMUNITY SPACE DESIGN IN HIGHER EDUCATION

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Masters of Arts

By
Courtney A. Ellis

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SPACE DESIGN IN HIGHER EDUCATION

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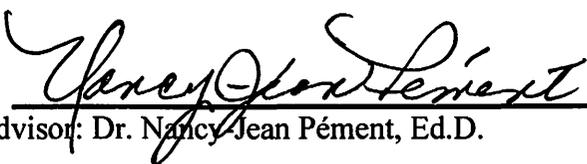
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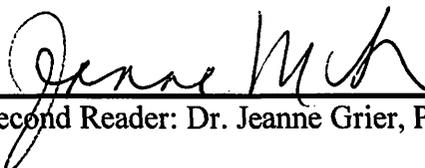
Student ID: 000440909

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APPROVED FOR THE SCHOOL OF EDUCATION

 18/05/23

Advisor: Dr. Nancy Jean Pément, Ed.D. Date

 5/24/18

Second Reader: Dr. Jeanne Grier, Ph.D. Date

APPROVED FOR THE UNIVERSITY

 5/24/18

Dean, School of Education: Dr. Brian Sevier, Ph.D. Date

SPACE DESIGN IN HIGHER EDUCATION

Abstract

Effective design of community spaces is an integral part of the educational experience in higher education. However, spaces are often designed without a clear understanding of what students need in a space and how it affects their experience. Utilizing qualitative methods consisting of semi-structured interviews and a demographic questionnaire, the impact of community space design on the student experience was explored. The study included seven participants who were current students at a public, four-year, commuter campus in Southern California. Data were analyzed by engaging in open and axial coding to identify emerging themes across the interviews. The findings affirmed that students have a better experience in and prefer community spaces that provide a variety of comfortable seating options that are easily moveable. The overall condition of the space is also important including well-maintained and regularly cleaned furniture and spaces. Findings suggested that students used community spaces for a variety of reasons including to study, meet with classmates, socialize with friends, relax, and to eat, to name a few. Most importantly, students wanted spaces that make them feel safe to perform the previously mentioned tasks.

SPACE DESIGN IN HIGHER EDUCATION

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Chapter One

Introduction

Two years ago, my supervisor tasked me with redesigning a community space on campus. Up to this point, I had been responsible for liaising with the furniture vendor for outfitting staff offices, but not really involved with student spaces. After a lengthy process that included meeting with students, service providers, campus architects, and various staff, the space has been redesigned to provide a range of comfortable seating options as well as resources for students. As a result of working on this project, I learned a lot about the design process but not as much about the theory behind the decisions I was making. Since that time, I have been more involved in furniture and space planning for both staff offices as well as student centers. After starting the master's program, I thought this would be a great opportunity to study the issue further in an effort to make more informed and intentional decisions on future projects.

Statement of the Problem

Since taking on a more active role in furniture and space planning on my campus, it is apparent that little regard has previously been given to the intention of existing spaces. In most cases, furniture was ordered to fit a given space but did not necessarily take into account how the space was to be used and by whom. Without regard for those two important aspects, furniture could not be designed in a way to provide an effective space for students. Not only are these considerations important in formal learning environments such as classrooms, space design is equally as crucial on the outside where students and other members of the university environment effectively dwell.

It is important to consider effective space design as this can have an impact on student behavior and attitudes. In a study of university language classrooms Gurzynski-Weiss, Long, and

Solon (2015) suggested that “despite results that suggest that classroom space design could play a role in student-centered participation, this consideration of classroom space has largely been ignored in university language classrooms” (p. 63). While the classroom is an important aspect of any campus, this study is focused on primarily non-academic spaces referred to as community spaces. According to Wulsin (2013), “learning spaces extend beyond classroom walls to every corner of the campus” (p. 2). This includes non-academic spaces like eateries, lounges, and study spaces, and so on. It could be argued that some students spend more time in these community spaces more than they do in the classroom. As a result, thoughtful consideration needs be dedicated to the planning of community spaces to provide the best resources for students.

Purpose of the Study

The purpose of this study is to examine how design impacts student use of space on university campuses. Research on this topic will be useful to university staff and administrators who contribute to, and are responsible for, designing and implementing community spaces for student use. Should this research be implemented, it will be the students who ultimately benefit. Students will be able to use these intentionally designed spaces in between class periods to study, meet with peers, and collaborate with faculty and staff. In addition, dynamic spaces – spaces that are used for multiple purposes – may be rented during non-academic periods which could potentially generate revenue for the campus.

The intent of this research is to be able to inform decisions regarding the design of campus community spaces which are non-academic and non-residential. It is also important to involve the end user in the planning stage as explained by Grummon (2009), “engaging future users in designing learning spaces increases the likelihood that those spaces will accomplish the mission of achieving student learning outcomes” (para. 16). In other words, end users will be

able to provide insight into the essential features and resources that will best serve their needs in a space they will use on a regular basis.

Since the majority of users of community spaces on campus are students, it is imperative to explore their relationship to such spaces. As a result, the following research questions will be guiding this study:

1. What are the experiences of students in community spaces at a public, four-year, commuter campus in Southern California?
2. What are the space design needs of students at a public, four-year, commuter campus in Southern California?

Answering these questions will enable key decision makers to design spaces that effectively meet the needs of students.

Definitions

For the purposes of this study, the following terms and definitions are used:

- Community space: refers to spaces that do not have a specific academic purpose (e.g., classrooms or laboratories) and are not residence halls.
- Informal study space: refers to spaces that are intended to provide unstructured study opportunities.
- Library space: areas within a library that allow students to engage in informal activities within a library setting which may be more restrictive due to location.

Organization of the Thesis

Chapter Two provides a comprehensive review of the literature regarding space design in higher education. Also included are the theoretical framework and connections to the literature. Chapter Three will discuss the methodology and methods surrounding the research design, data

collection, and analysis. In Chapter Four, the findings will be presented as well as interpretations of the data collected. Chapter Five will provide a summary and discussion of the research. In addition, recommendations will be offered.

Chapter Two

Review of the Literature

The purpose of this review is to examine current literature on the implications of design of space for student use on university campuses. It is important to review relevant literature on the topic as it will inform future design of space on university campuses. Upon initial review, it appears there may be a gap in available research when looking at community space design.

While there is some literature relating to classroom and library design, there appears to be little research addressing the use of community spaces that engage students outside the classroom.

Zandvriet and Broekhuizen (2017) stated that the “built environment of campuses and schools affects how we move through space, how we gather with peers, and how we feel in a space” (p. 178). In other words, the physical space is just as important to the student learning experience as the educational curriculum taking place in these buildings. According to Wulsin (2013), “learning spaces extend beyond classroom walls to every corner of the campus” (p. 2). This includes non-academic spaces like eateries, lounges, and study spaces to name a few. Even within the classroom, it is important to consider space design as this can have an impact on student behavior and attitude. According to Gibson (1979), when students enter a space, they develop impressions of that space and experience an emotional response. That is to say, students’ reactions to the physical attributes are internalized emotionally and may affect their outward response. As suggested, while classroom layout and design are important aspects of any campus environment, this review is focused on community spaces on university campuses.

This review will be useful to university staff and administrators who contribute to, and who are responsible for allocating and designing community spaces for student use. In addition to the previously mentioned audiences, students will be the ultimate beneficiaries of this study,

as they will benefit from improved space design. Students will be able to use these purposefully designed spaces outside of the classroom for social as well as academic reasons. Staff and faculty will also benefit because they will be able to use these spaces alongside students. In addition, dynamic spaces have the potential to generate revenue for the campus during non-academic periods. In conducting this review, the following research questions will be kept in mind:

1. What are the experiences of students in community spaces at a public, four-year, commuter campus in Southern California?
2. What are the space design needs of students at a public, four-year, commuter campus in Southern California?

For the purpose of this review, the literature was organized into two main categories: library spaces and community spaces. Community spaces refers to areas outside of the classroom where students may study, relax between classes, meet with other students or faculty and staff, eat, or browse the internet, for example. Library spaces refer to areas within a library that allow students to engage in the previously mentioned activities but within a library setting which may be more formal or restrictive due to location.

Library Spaces

In their review of graduate student space and service needs, Rempel, Hussong-Christian, and Mellinger (2011) evaluated resources at Oregon State University (OSU). Their study focused mainly on graduate space and services located within the main library. Rempel et al. (2011) conducted focus groups in order to gather information and data related to graduate students' perception of, and feelings for current and future services and graduate student space. Responses from 36 participants revealed that graduate students wanted both social and private spaces. The authors reported that students wanted informal learning space as a way to build community with

other graduate students. In particular, graduate students stated that they felt isolated and disconnected from fellow graduate students. Consequently, they wanted “a place where they could relax alone or with others and have a snack, drink, or meal” (Rempel et al., 2011, p. 483) in a place where they knew others would be who had common classes, research, or teaching. Specifically, they were looking for “private spaces, social spaces, and spaces that facilitated group work, all in a pleasing atmosphere” (Rempel et al., 2011, p. 481). While this study did not elaborate upon the design of social spaces for graduate students, it did demonstrate that there was a need and desire for non-academic spaces at various levels of higher education. A limitation of this study in relation to the topic of non-academic space is that it was focused on a specific student group. Most of the general concepts regarding space design still apply; however, there are some ideas and suggestions that are specific to the graduate student population and may not have the same impact on the general student body.

Applegate (2009) presented a study that focused on the use of non-computer seating areas within a library as well as non-library spaces for group study preferences. Specifically, the ways in which students use the so-called soft spaces within a library versus other informal spaces on campus. According to Applegate (2009), “facilities on campus are being designed to foster effective out-of-class encounters between students” (p. 341). In other words, institutions are coming to realize that non-academic spaces are just as significant as classrooms to the learning experience. To conduct her study, Applegate (2009) collected data via observation of “individuals in a space, by gender, being or not being in a group (sitting together and interacting), and laptop use” (p. 342) during two afternoon periods on weekdays in select weeks of a fall and spring semester. The data provided information about various user patterns that included differentiated gender uses, seasonality of use, as well as preferences by individuals and

groups (Applegate, 2009). In regard to space design, the author noted that access to power for electronic device use, proximity to refreshments, and seat comfort were noticeable preferences of students. This study focused mainly on user preferences within a library. However, it is clear that some of the same themes, such as flexibility of furniture and access to resources to name a few, are emergent regarding the design of community spaces.

Crook and Mitchell (2012) conducted a study of personal study practices of students within an open space library. They stated, “universities should explore provision of out-of-class study spaces that support the various forms of collaborative and solitary learning. . .” (p. 137). That is to say, students need some place to convene with peers, to study, and to relax between classes. The researchers argued that it is imperative for university administrators to acknowledge the need for these spaces and to allocate fiscal and physical resources to make them available for students. In addition, “. . . students themselves can perceive a positive benefit in having what might be termed a ‘third place’ (Oldenburg, 1999): somewhere between the recreational and informal spaces of everyday life and the traditionally structured spaces of work and study” (Crook & Mitchell, 2012, pp. 136-137). In their study on personal practices of students within an open library area, Crook and Mitchell (2012) collected data by using four methods: audio diaries, behavioral observations, interviews, and focus groups. Their study spanned 10 days across four weeks before and during final examinations. Students were approached randomly and asked to participate in the various components of the survey. One of the findings related to space design included “where the quality of the environment was noted (67% of session), it was almost always in terms of social features rather than physical comfort or other more material resourcing” (Crook & Mitchell, 2012, p. 127). When space design was mentioned, they found that “student’s relationships with the finer detail of space and furniture was a very prominent concern. There

was recognition of the core idea of flexibility, particularly as it applied to the option for working in groups” (Crook & Mitchell, 2012, p. 130). Simply put, students prefer a space and furniture that allows them to arrange the space in a way that meets their needs. In this particular study, it appears as though students preferred more traditional workspace (i.e. standard height chairs and work surfaces) as opposed to lower soft seating and side tables (Crook & Mitchell, 2012). The previous finding supports the notion that institutions need to plan and provide for a range of informal study spaces. For example, some students may need to be in a semi-isolated space with limited disruptions while others may need to be a space with others and some background noise. The authors noted an observed behavior they labeled as “ambient sociality” (p. 136). Ambient sociality refers to students who prefer to be a participant in a “studying community” (Crook & Mitchell, 2012, p. 136). In this scenario, students gain inspiration and a self-discipline by being surrounded by peers who are also studying.

Community Spaces

In a study on Student Centered Learning pedagogy in Malaysia, Ibrahim and Fadzil (2013) used a quantitative approach to explore the usage and performance of non-academic learning spaces on a campus. According to the authors, “a good campus environment could contribute towards improved learning outcomes that better prepare students for university challenges and beyond” (p. 344). For the purpose of their research, the term *informal learning environment* referred to the facility including physical elements, features, and spaces that support self-directed learning activities undertaken outside the classroom (Ibrahim and Fadzil, 2013). The authors argued that a “quality learning environment should go beyond functional needs, so as to fulfill current generation’s appetite for individuality and sense of identity” (Ibrahim and Fadzil, 2013, p. 346). Further, they claimed “students demand creative and innovative space

conditions possibly through the introduction of design elements that are different from the standards” (Ibrahim & Fadzil, 2013, p. 346). In other words, the standard lecture style classroom may not be effective for the newer generations of students. In an effort to provide an effective learning environment for students, the authors suggested enhancing small open spaces around campus to create pockets for students to engage with peers. In addition, incorporating outdoor spaces like courtyards, plazas, and squares which provide “a crucial element that can serve as a focal point and gathering place on campus” (Ibrahim & Fadzil, 2013, p. 346). With regard to informal learning spaces, the authors proposed that the ideal spaces would include the following elements: workstations, lounge seating, reading areas, as well as access to a café and resources such as library or technology help desks (Ibrahim & Fadzil, 2013).

Ibrahim and Fadzil (2013) conducted a single case study at a public university in Malaysia. The primary setting was four buildings in a block that included the university’s main library and a cafeteria. This study focused on four spaces within the buildings including an open use study room, informal study spaces within the library, the cafeteria, and small outdoor areas between walkways and the four buildings. A three-part field survey garnered responses from 225 people and included the following sections for each respondent: general profile, learning setting preference and setting, and an assessment of the physical conditions of learning spaces. The researcher’s study found that students appreciate spaces which provide opportunities that “not only allow them to perform their learning tasks, but also for them to interact, discuss and share with colleagues . . . [since students] consider socializing and interaction through social media as essential parts of their learning experience” (p. 349). By the authors’ assessment, this means that spaces that allow for peer interactions is an important part of the learning process. In addition, Ibrahim and Fadzil (2013) felt that “the study highlights the urgency of improving informal

settings for learning in a public university in particular” (pp. 349-350). Through their study, they determined that in terms of actual usage, the cafeteria was the most used followed by the informal library spaces, study room, and lastly the outdoor spaces. The study concluded that that students may prefer less structured spaces as opposed to formal study rooms.

In terms of limitations, for an area of the campus that serves 4900 students, the 225 survey respondents are not representative of the population at under 5%. In addition, this was one study conducted at only on university in Malaysia. It is possible that geographical and cultural customs impact student use of available space.

In their work on designing informal learning spaces, Riddle and Souter (2012) shared that “it is essential that learning spaces of appropriate qualities and quantities are available to support innovations in pedagogy” (para. 3). Their research incorporated the use of the Spaces for Knowledge Generation project that was a two-year, collaborative project between La Trobe University, Charles Sturt University, Kneeler Design Architects, and Apple Inc. One of the results of this project was the development of seven design principles for learning space design including comfort, aesthetics, flow, equity, blending, affordances, and repurposing (Riddle & Souter, 2012). In considering the comfort element, Riddle and Souter (2012) argued that it “encourages the use of natural light, good acoustics, controlled temperatures, and comfortable furniture” (para. 22). According to the authors of this review, a combination of banquette seating, ceiling fans, heating, picture windows, and acoustic paneling would achieve the previously mentioned comfort elements. With respect to aesthetics, the authors suggested that the following aspects are most important in designing a space conducive to learning. Such characteristics include a focus on symmetry, harmony, simplicity, and fitness for purpose (2012). These items are paramount as there is evidence that “students experience comfortable, functional, and

aesthetically pleasing spaces as institutional interest in their experience and thus as a proxy for institutional support . . . this in turn relates to student perceptions of institutional interest in their learning” (Riddle & Souter, 2012, para. 1).

Some of the other items mentioned among the remaining design principles include attention to flow of the space, access to reliable internet access and power outlets, as well as comfortable furniture that can be moved around easily within the space to allow for multifunctional use (Riddle & Souter, 2012). Additionally, the authors stated that it is important to involve stakeholders, including students, in the design process to ensure that the needs for each space is understood and incorporated as much as possible. This article provided a complete overview of the steps and processes employed in the design of informal learning spaces of four Australian universities. While not a research study per se, this article outlined the thought processes behind the development and design of informal spaces. This works shows the importance of including different perspectives, including the students, in the process. Considering these perspectives during the planning stages allows for input that may not otherwise be included.

Temple (2008) stated that “the work of higher education has, implicitly, generally been considered as taking place independently of the spaces in which it was located” (p. 229). Temple (2008) went on to implore educational leaders to consider integrating space planning as a “resource to be managed as an integral part of teaching and learning and research activities” (p. 229) as opposed to how learning is conceptualized and organized or as a part of campus master-planning and architecture. It may be difficult to advocate for informal learning spaces when competing priorities arise within the institution. As such:

This aspect of space management is certainly related to teaching and learning, in that priorities are set, explicitly or implicitly, for certain teaching and learning uses against others, in terms of the type of space provided, its location, and the time when it is made available (if it is made available at all). There is, however, little evidence that such decisions are usually informed by an understanding of the relationships between space and the teaching and learning that will go on within it. (Temple, 2008, p. 230)

With regard to master planning, campus architecture provides opportunities to impart the campus mission and history as well as to establish an institution's purpose, presence and domain (Temple, 2008). Further, the author shared that reference to space design in master planning usually refers to architecture rather than how spaces will specifically meet the needs of teaching and learning. To affect change in this regard, Temple (2008) suggested "breaking down barriers between the campus and 'uncampus' outside, and mixing teaching, research, and administrative and social spaces within it to create a better sense of community" (p. 230) when advocating to give students additional non-academic space. The role of the campus as a learning space has been fairly absent or under-conceptualized in the literature regarding methods to foster student learning and development (Temple, 2008).

As far as recommendations, the researcher advised the following considerations when designing a space: flexibility in design, designs which facilitate social interactions, proximity to food and drink, comfortable seating, temperature control, as well as pleasant outside views. In addition, it was suggested that facility maintenance be considered along with space design.

Temple explained that superficially small matters of facility maintenance effect the sense of community and, if not carefully tended to may, in fact, disturb learning. Further, Temple (2008) stated "the question is wider than simply the attractive presentation of the campus for marketing

or image purposes. Maintenance matters: it is not trivial in supporting learning” (p. 235). Temple (2008) made the claim that “as learning is a social activity, campus designs are needed that create welcoming, informal spaces for people to meet and talk, and perhaps to work in small groups” (p. 236). Similarly, the author suggested that student learning is aided when they can identify a “third place”, neither where you live nor work. To aid the argument that informal spaces should be considered just as much as academic spaces, Temple (2008) argued that “welcoming and flexible spaces, including informal meeting spaces should be seen as part of the support to learning through the wider learning landscape . . . speculatively suggested that certain design features can encourage new ideas and creativity” (p. 238). While this article provides an overview of works available as well as insight into the topic, it offered a literature review that did not feature any new studies or research.

Ariani and Mirdad (2016) claimed that the “physical features of learning spaces can stimulate emotions, create a sense of security, and prepare the students to learn” (p. 175). In fact, the authors shared that architecture and design features may aid students in focusing their attention and design components such as poor acoustics, poor ventilation, insufficient lighting, and chronic noise exposure lend themselves to distraction. Furthermore, the authors argued that “. . . creating the optimal learning and teaching spaces are an art that improves student performance and motivation” (Ariani & Mirdad, 2016, p. 175). As noted previously, the physical environment affects the student in numerous ways. According to Ariani and Mirdad (2016), “students perform better when proper tools such as efficient environmental spaces and inviting learning places are provided” (p. 176).

To gather more information related to the relationship between school design and student performance, a qualitative study was conducted consisting of 150 participants from Iran who

were interviewed. The results concluded, “designing effective learning environments is really an important case to support constructive learning and performance” (Ariani & Mirdad, 2016, p 178). In addition, they suggested that:

School planners and teachers should work more closely with each other in terms of better environment and better education and that not only should school planners and architects improve their understanding of learning and teaching issues but also the policy makers should benefit from the hindsight experiences of school planners and teachers as consultants. (Ariani & Mirdad, 2016, p. 178)

Along with providing adequate classrooms, the researchers argued that school planners and policy makers should consider the educational needs of students outside the classroom as well. Upon entering a space, students should feel “. . . great eagerness about learning and increase creative ways of thinking . . . schools should offer indoor and outdoor qualities to motivate their students” (Ariani & Mirdad, 2016, p. 178). Further, the authors explained that elements such as comfortable paths and walkways, adequate lighting sources, and natural features such as landscape could have an impact on a student’s learning. Limitations of this study include a low respondent rate compared to combined enrollment, limited to two schools within one Iranian city, high school setting as opposed to higher education institution, interviews translated from English and conducted in Persian, as well as the subjective nature of student’s success or performance in each type of learning space.

Carpenter et al. (2016) completed a space study that observed preferences for a large open space room with various types of seating and technology. As noted in previous literature, “the more flexible the space, the more comfortable students feel involving their mind and body in the learning process” (Carpenter et al., 2016, p. 20). As already identified, flexibility of the

space is an important aspect of design for students. The space observed for this study was a 10,000 square foot flexible learning environment located in a library at Eastern Kentucky University that included individual workspaces as well as group spaces with soft seating as well as more traditional workstations. In addition, there were several fixed computer stations, printers, and wall-mounted televisions for interactive group work. Carpenter et al. (2016) shared that “environments should allow students to be happy, productive, creative, and social to best foster learning” (p. 20). Further, the authors explained that learning is a social activity that is integral to student interactions and capacity to encourage learning. As such, incorporating opportunities for social interaction into the design of informal spaces is paramount. The researchers also made the case that involving students in the planning process is beneficial as it allows for intentional design that meets the student’s needs. The research “illustrates the importance of allowing students’ use of space, rather than staff assumptions and intentions for space, to inform design decisions . . . [since] student activities within learning spaces do not always align with staff intentions” (Carpenter et al., 2016, p. 24). One of the limitations of this study is that information was gathered via observation and did not allow for direct input from end users. While this design approach may have been successful in this location, it may not work on other campuses.

Hunter and Cox (2014) presented an exploratory investigation into student use of informal learning spaces as well as perceptions of said space. The study focused on three locations within a student union and included questionnaires, observations, and interviews from 174 respondents across all data collection strategies. According to Hunter and Cox (2014), there is “an increasing recognition of the value of informal learning spaces” (p. 34). Their observations took place at three informal learning spaces at the University of Sheffield. Hunter and Cox (2014) stated that “collaborative study in informal learning spaces is becoming increasingly

common . . . with students feeling attached to specific informal learning spaces, seeing them as somewhere to discuss work without being confined by regulations” (p. 36). Like some of the other studies, the authors referenced the “third place” concept proposed by Oldenburg and Brissett (1982). Hunter and Cox (2014) explained that this refers to a public location by which students can visit freely and use in a variety of ways away from a formal classroom, work, and home. As found in their research, sensory stimulations like décor, carpeting, lighting, temperature, comfortable furniture, warm colors, and access to food greatly influence a student’s decision to choose an informal learning space as well as their perceptions of overall comfort in the space. Similar to the research explored above, the authors found that students prefer flexible furniture that can be moved around to meet their needs as opposed to more traditional lecture style seating which does not afford space for students to spread out their belongings and settle in. Given their research, Hunter and Cox (2014) found that for students, “being in a relaxed atmosphere stimulated them to work productively” (p. 47) as did the flexibility of furniture in order to accommodate varying group sizes as well as tasks. The authors recommended that university space planners consider these and other factors when remodeling or building non-academic space, especially the background atmosphere as this is just as important as the furniture itself. Further, Hunter and Cox (2014) insisted that institutions should see the value of “avoiding creating soulless, institutionalized academic spaces” (p. 48) and instead commit to creating inviting and functional spaces. While this study provides helpful information, it was focused in a space that is already designed to be non-academic in nature. It would have been helpful to see how non-academic spaces within the academic buildings were designed and used.

Theoretical Framework

This body of literature will be reviewed through the theoretical framework of the environment-behavior theory. According to Poldma (2010), the theory “explains human-behavior relationships as causal and these relationships are situated within essentially static physical interior attributes” (p. 5). In other words, each person may experience the space differently based on lighting, colors, finishes, and other objects within a space. As a result, making changes to these elements could change a person’s attitude in and towards the space in one way or another. Further, Poldma (2010) argued that space represents not only aesthetic but also social values and constructs. In more concrete terms, a person’s experiences within a space may be affected by their gender, age, role, and status within the institution in addition to the prevailing social rules and hierarchies inherent within the institution.

In selecting the literature to be reviewed, articles were chosen based on how closely they informed the issues under consideration. Since community spaces are the focus of this review, articles that covered non-academic and non-residential spaces were reviewed first. Some of these articles were selected given their research methods and how they may inform the next phase of this project. Next, research surrounding study spaces within libraries was reviewed. These articles focus on lounge-type study areas as opposed to formal study corrals. These were included as community areas within libraries are an important aspect of this inquiry. Libraries are ideal locations for these types of community spaces given their adjacency to resources.

Connections to the Literature

In regard to community space design within higher education, it is helpful to broaden the scope and consider the larger topic of interior design and architecture. Principles and practices of interior design generally apply to any space and are not necessarily specific to higher education.

The designers-of-any-spaces approach requires that each project be approached as a blank slate and should take into consideration the stakeholders who will use the space. Poldma (2010) stated that “when designers create interior spatial designs for various types of users and experiences, they consider both the aesthetic qualities of a space and how people experience interactions and sensations within the spaces” (p. 1). While this holds true for any space, it is especially important for designers of spaces within an educational setting. Students spend so much of their time on campus and it is critical that spaces are designed with their unique needs in mind.

It is clear from the literature that community spaces are an integral part of any campus. They provide students with opportunities to collaborate with fellow students outside of the classroom as well as to interact with faculty and staff in a less formal setting. Many of the literature pieces shared common themes and recommendations for ways in which campus planners can enhance community spaces for student use. The seven design principles presented by Riddle and Souter (2012) were touched on by many of the other authors including Temple (2008), Hunter and Cox (2014), and Crook and Mitchell (2012). They all concluded that features such as comfort of furniture, colors, presence of natural light, flexibility of furniture, and temperature of the room play an important role in user interaction. Another commonly held recommendation was the practice of including the end-user in the planning process. User participation allows opportunities for students to be involved in the design process to engage and challenge the designers. Involving end users from the beginning provides a sense of ownership and pride in the space.

The body of literature provided a solid foundation for the next step in this research study. Much of the research included here offered significant examples of both quantitative and qualitative methodologies in the examination of community space design in university settings.

The literature on both the community spaces as well as the library spaces are relevant to the topic and provide an overview of the research that has been completed in these areas. Riddle and Souter's (2012) research will be especially helpful moving forward. Their seven design principles were mentioned by several other authors and, thus, seem foundational among the design elements which should be considered in creating community spaces.

There were also several common limitations to many of the small-scale studies. Several of the research studies were conducted at only one university and could not recommend how the results might translate to other geographic and cultural spaces. As such, space designs that work in a university in Australia may not have the same implications in a college in the United States. Despite the variations in the studies reviewed in this set of literature, the prevailing themes are that students need flexible spaces outside of the classroom that are close to resources and allow for engagement with their peers.

Conclusion

The existing literature has provided great insight into the topic of community spaces and will inform the next phase of this research study. Indeed, many of the studies I reviewed were closely related to the research questions that guide this study. The next chapter will explore the methods used to answer the research questions stated above. Furthermore, this review of the literature served as a helpful guide in developing a methodology for this study. As previously mentioned, many of the studies in the literature used a mixture of qualitative and quantitative methods to conduct research. For the purposes of this thesis, I conducted a qualitative study consisting of one-on-one, semi-structured interviews aimed at identifying the space needs of students as well as the experiences of students within community spaces.

Chapter Three

Methodology

In the first chapter, I discussed the need for institutions of higher education to focus intentional efforts to the design of community spaces for student use. I also set out the research questions that guide this study. They are:

1. What are the experiences of students in community spaces at a public, four-year, commuter campus in Southern California?
2. What are the space design needs of students at a public, four-year, commuter campus in Southern California?

In Chapter Two, I reviewed previous work that had been conducted in regard to library and community spaces at various institutions around the world. The current chapter will outline the methods I have utilized for this study in an effort to answer my research questions.

The purpose of this study is to examine how design impacts student use of space on university campuses. Research on this topic will be useful to university staff and administrators who contribute to, and who are responsible for, designing and implementing community spaces for student use. Students will be the ultimate benefactors should the findings from this research be implemented. Students will be able to use these intentionally designed spaces in between class periods to study, meet with peers, and collaborate with faculty and staff. Investigating the research questions stated above will enable key decision makers to design spaces that effectively meet the needs of students.

Research Design

Since I was looking to examine the experiences of students in community spaces on a commuter campus in Southern California, I chose to utilize qualitative methods that would

include both interviews and a questionnaire. According to Creswell (2012), interviews are an effective way gather information from participants who can provide detailed accounts about phenomena under investigation. In other words, the best way to learn about student's experiences is directly from them. In addition, Ariani and Mirdad (2016), Crook and Mitchell (2012), and Hunter and Cox (2014) relied on one-on-one interviews in order to gather data surrounding the experiences of students using spaces in their studies. Similarly, Hunter and Cox (2014) also used a questionnaire to gather basic information surrounding student use of space. The questionnaire employed in the current study was used to gather demographic information as well as to ask four closed-ended questions regarding the participant's use of community spaces.

Theoretical Framework

This study used the environment-behavior theory as explained by Poldma (2010) to explore the impact of design of community spaces on the student experience. According to Poldma (2010), the environment-behavior theory seeks to understand the relationship between people and their environment. That is to say, when people experience a space, they attach meaning(s) to the space that then affect perceptions and interactions within the space. By studying the ways in which students interact and experience community spaces on campus, we can use the data to inform future space design decisions. Planning for and implementing effectively designed spaces will ultimately lead to a more cohesive learning environment for students (Strange and Banning, 2001).

Environment-behavior theory has its roots in ecological psychology. According to Hall (1969), ecological psychology can be described as “objective, pre-perceptual context of behavior; that is, the real-life settings within which people behave” (p. 1185). Moos (1979) further describes the environment-behavior theory as a way to measure social interactions within

an environment. By understanding the “importance of environmental influences” (Moos, 1979, p. 3) on student behavior, we will be able to provide more effective and better resourced community spaces for students.

The environment-behavior theory was chosen over other perspectives given the emergence of inquiries into the relationship between the environment and learning within an educational setting. It became apparent through reviewing the literature that many researchers have used this theory to explain how students experience campus spaces. According to Zandvliet and Broekhuizen (2017), exploring learning environments is becoming more prevalent as a “legitimate field of academic inquiry” (p. 176). Not only are ecological psychologists studying the human-environment interaction, so too are researchers within science education, campus ecology, and architecture, to name a few.

Data Collection

As noted previously, I collected data through semi-structured interviews and a questionnaire. In addition to discussing these methods below, the location, participants, and instruments will be discussed in this section.

Location and student population. This study was conducted at a public, four-year university in Southern California with a total student population of 7,053 students as of Fall 2017 including 240 graduate and post-baccalaureate students. The student body consisted of 64% females and approximately 76% commuter students. The vast majority of student are from the county in which the institution is located and the county to the immediate east. At the time of this study, the average age of students was 22. The institution offered 26 majors, 26 minors, and a faculty to student ratio of 21 to 1. In addition, the institution is considered a Hispanic Serving Institution (HSI) with a 48% Latino/Hispanic population and served about 59% first-generation

college students in fall 2017. This site was selected based on my relationship to the space given my professional role on campus. Previous knowledge of the community spaces on campus was important so that I could reference them during the interviews. There are several community spaces on campus in various buildings that feature a variety of seating and resource options. Some of the community spaces belong to specific programs that are responsible for their upkeep; others are unowned and therefore, in need of refurbishing and upgrades.

Data collection tools. I conducted seven individual, semi-structured interviews. The interview protocol (Appendix A) included warm-up questions intended to encourage the student to feel more comfortable with the interviewer. The same main questions were asked of each participant. These questions focused on the student's experiences in various community spaces, their favorite place on campus, as well as aspects of spaces that appealed to them. The protocol also included various transition questions asking students to share their most or least favorite aspects of community spaces on campus. In addition, a short questionnaire (Appendix B) was sent to each participant via email. The questionnaire focused on collecting demographic information including age, class standing, and commuter or resident status as well as four-questions regarding community space use.

Procedure. Once permission was received from the university through the Institutional Review Board (IRB) process, participation was solicited through the use of fliers (Appendix C) placed in community spaces on campus. In addition to the IRB process, I emailed two administrators (Appendix D) who oversee one of the main community spaces to inform them of my project and desire to recruit participants who frequented this space. Participants were recruited through snowball sampling and facilitated by the researcher's colleagues. Potential participants were invited to reach out to the researcher to gain additional information regarding

the study. Once students contacted the researcher, she emailed (Appendix E) the potential participants to provide the purpose of the study, the informed consent form (Appendix F), and the questionnaire (Appendix B) and asked the student to provide availability if they would like to participate. Once an interview invitation was accepted, the researcher confirmed the details via email. At the beginning of the interview, the researcher explained consent and confirmed that two copies of the form were signed. The researcher then began to audio record the interaction and proceeded with the interview. The researcher transcribed the completed interviews and assigned pseudonyms to each participant to ensure confidentiality.

Data Analysis

Each interview was recorded and transcribed verbatim. Going through the transcribing process allowed me to listen to the interviews several times. According to Medeiros (2013), “self-transcription is a good way of getting to know the data deeply” (p. 117-118). In other words, by transcribing the interviews myself, I became more familiar with the content provided by each participant.

According to Saldaña (2009), coding enables the researcher to group data into similar categories based on shared characteristics. As a way of organizing the data gleaned from the interviews, I employed both Initial and In Vivo coding strategies. Initial coding is a method used to form a starting point in finding common themes in the data (Saldaña, 2009). In Vivo coding refers to words or phrases that come from the data. An example of In Vivo coding is my code referring to the comfort of furniture (see Table 1 below). Several participants mentioned that the comfort of furniture was important to them.

The first time I read the interviews, I marked any statement that stood out. Upon cross-referencing those statements, I was able to see that many of the participants had similar

comments regarding the community spaces. Based on the patterns I saw, I created a preliminary list of codes surrounding furniture, condition of the space, and feelings about the space. I color coded the list of codes and then read the transcriptions again. During the second read, I marked statements with the color corresponding to the list of codes. I further revised the initial list of codes to include additional aspects as well as the refine the wording of some of the existing codes. Throughout each read, I explored similarities and differences between student responses. As I coded the data, I revisited the interviews to clarify context and interpretation. A final list of the codes is provided in Table 1.

Table 1

List of Transcription Codes

Comments about the university in general
Comments about how the space is used
Comments about resources within the space
Comments about the atmosphere of the space (e.g., volume, capacity)
Comments about the comfort of the furniture
Comments about the flexibility of the furniture
Comments about the participant's feelings about a space
Comments about the physical space (e.g., condition, features, cleanliness)
Comments about the space in general
Other comments

Limitations

There was a time limitation on the open window for potential research participant responses. The recruitment process was slow moving in the beginning. For almost four weeks, I did not have any students contact me. At that point, I followed up with colleagues to have them refer students to my study. Because of the constricted timeline, I could undertake only a limited

amount of interviews. The number of interviews conducted was the second limitation: small sample size. My sample size was about 0.1% of the campus population and therefore, was not representative of the student body. Additionally, no post-baccalaureate or graduate students participated in the current study. As such, an entire student sub-population with different needs went unrepresented.

Role of the Researcher

Given my personal relationship to one or more of the community spaces referenced by participants, I needed to examine my own experiences in the spaces to evaluate the biases I may hold. In my role at the university, I am responsible for furniture and space design of staff offices and student spaces. Both of these projects took place before the start of my research. Because of my role, I have a stake in the results of this research so that I may use the information to make more informed decisions moving forward. Since some of these projects were completed prior to beginning this research, I relied on my own experiences to inform decisions regarding types of seating, fabric and color selections, and resources that would be useful in the spaces.

Trustworthiness

As noted in the previous section, I have been closely involved in the design process of community spaces. I often make recommendations and decisions about layout, finishes, and resources within a space. As such, it is not uncommon for personal preferences to be reflected in a space in some way. As it turns out, many of my preferences are consistent with findings in the literature. As such, it was important that I make note of my biases in comparison to participant responses. I engaged in a practice of analytic memoing where I kept a research journal to reflect on my thoughts, interpretations, insights, and revelations. Throughout this study and by

journaling, I was able to reflect on my own perspectives and bracket these in relation to the viewpoints of the participants.

Conclusion

The methodology utilized in the current study included qualitative instruments such as semi-structured interviews and a short questionnaire framed through the environment-behavior theory. In the next chapter, data collected from the interviews will be analyzed and a summary of the findings will be provided.

Chapter Four

Findings

The current chapter will provide an analysis and summary of the findings from the study. As mentioned, a review of the literature affirmed that community spaces are an important aspect of the educational environment (Crook & Mitchell, 2012; Hunter & Cox, 2014; Riddle & Souter, 2012; Temple, 2008; Zandvliet & Broekhuizen, 2017). However, this is still an emergent field and, comparatively, little research has been completed on the specific topic of community spaces in higher education. According to Zandvliet and Broekhuizen (2017), “many argue that the study of learning environments is an important field of inquiry in its own right . . .” (p. 176). In other words, in addition to classrooms, all types of learning environments warrant further study and exploration. The purpose of the current study is to examine how design impacts student use of space on university campuses. It is anticipated that research on this topic will be useful to university staff and administrators who are responsible for designing community spaces for student use. As the prime beneficiaries, students will be able to use these effectively designed spaces in between class periods to study, meet with peers, and collaborate with faculty and staff. Answering the research questions stated above will enable key decision makers to design spaces that successfully meet the needs of students.

Utilizing semi-structured interviews and a short questionnaire, the researcher was able to collect data to be analyzed and to add to the literature on community spaces. The following research questions have guided the current study:

1. What are the experiences of students in community spaces at a public, four-year, commuter campus in Southern California?

2. What are the space design needs of students at a public, four-year, commuter campus in Southern California?

Participants

The participants for this study were current students over the age of 18. Seven students participated in the study in the spring of 2018. Data were collected from four females and three males. Six students commuted to campus and one lived in the residence halls. The average age of the students was 22 and a half years. The entire sample consisted of upper-division students with five graduating seniors and two juniors. Interestingly, no post-baccalaureate or graduate students participated in my study; as such, an entire sub-population of students with potentially different needs was unrepresented. The interviews lasted 96 minutes in total. Table 2 contains the pseudonym, age, identified gender, housing status, class standing, and major.

Table 2

Demographic Information of Participating Students

Pseudonym	Age	Identified Gender	Housing Status	Class Standing	Major
Ailey	26	Male	Commuter	Senior	Sociology
Beli	24	Male	Commuter	Junior	Studio Art & Political Science
Cedar	21	Female	Commuter	Senior	Liberal Studies
Celo	20	Female	Commuter	Junior	Chicano Studies & Sociology
Gillis	23	Male	Commuter	Senior	Business
Nanda	22	Female	Commuter	Senior	Liberal Studies
Tera	22	Female	Resident	Senior	Health Science

Physical Aspects of Community Spaces

According to the literature, the role of design plays an important part in the student experience. Strange and Banning (2001) shared that the “basic layout and spaces, accessibility

and cleanliness, interior color schemes . . . all shape initial attitudes in subtle yet powerful ways” (p. 5). That is to say, all of the physical attributes of community spaces impact a student’s behavior and attitude. Assuming that these physical features relating to community spaces matter to students, campus administrators will be able to make better informed decisions regarding the design of such environments. In looking at the codes that emerged from the interviews, it became apparent that several of the codes related to the physical aspects of community space including furniture comfort and flexibility, condition of the space, cleanliness, as well as other design and architectural features. After further consideration, the codes were merged into larger analytical categories. Subsequently, three overarching themes emerged: comfort and flexibility, condition, and aesthetics. The following sections will explore these themes through the voices of the participants as well as the literature.

Comfort and flexibility. All seven of the participants agreed that comfortable and flexible furniture are among the top criteria for choosing a space to visit. Since the purpose of community spaces are to provide a place for students to go when not in classes, the spaces need



Figure 1. Example of community space seating option.

to be sufficient for students to stay for more than a few minutes. By providing a mixture of soft seating (cushioned items) and hard surfaces, students will have the option to choose which works best for them. In reference to a recently redesigned community space, Nanda mentioned she really liked that the new furniture is “really comfortable” compared to furniture that is “more stiff”. In addition, Tera also shared that comfortable furniture creates a space where “you actually want to get your work done.”

In terms of the flexibility of furniture, several of the participants spoke to the importance of multifunctional furniture and having a selection of types of furniture available to them within a space. In particular, the participants were drawn to spaces that included both soft chairs as well as more traditional tables and chairs. Depending on their activity at the time, they would choose to sit in a soft chair to read or to sit at a table to be able to spread books and papers out. In one community space, there are couches with little tables that can be pulled over a person's lap. This is a popular option as it allows the user to sit on a soft surface but still have something to write on or put a laptop on.

In addition to variety in seating options, easily moveable furniture was mentioned as being useful. Moveable furniture within a space would allow students to reconfigure the space in a way that best fits their needs. For example, smaller tables could be moved together for a larger group meeting. The idea of comfort and flexibility is also supported by the literature as Riddle and Souter (2012) found that as a result of the varying activities that may occur in a space, they “should be able to accommodate as many of these activities as possible, without the need for time-consuming reconfiguration” (para. 28). Not only does flexible furniture lead to a more functional space, it also provides the students a sense of ownership. In her work on Human-Centered Design Guidelines, Gee (2006), argued that user ownership is an important concept to incorporate into any space. According to the author, “users must know that all occupants have a say in defining the place



Figure 2. Example of community space seating options.

... providing furniture that people can rearrange and tools they can manipulate gives them the feeling that they have permission to claim ownership” (p. 10.10). In other words, giving students an active role in how they use a space will increase engagement through a sense of ownership.

Condition. Maintenance and cleanliness are important aspects of the physical side of spaces. A couple of the participants mentioned cleanliness as something they look at when deciding on a place to go between classes. In terms of cleanliness, the students referred to trash on the floor, clutter on walls and furniture, and dust on surfaces. All of these items detract a student from wanting to use a space. Temple (2008) furthered the argument by stating “scheduled and day-to-day maintenance and cleaning should not be overlooked” (p. 235). By maintaining spaces, a message is conveyed to students that the institution cares about the condition of its facilities. Banning (1999) discussed the idea of the “Facility/Social Message” (p. 17) in which “facilities through their arrangement and placement, through their design (exterior and interior) and through their upkeep and maintenance can communicate vary degrees of sense of place” (p. 17). In other words, all aspects of the physical space speak to a user and can have both a positive and negative implications. Poor upkeep sends the message that a space is not valued and therefore, not important to the institution.

In addition to the overall cleanliness of a space, condition of the actual furniture is critical. At least half of the participants expressed appreciation that the furniture in community spaces at their institution was “well taken care of” and “maintained.” It does not matter how clean and well designed a space is, if the furniture is stained and/or in disrepair, the space will go unused. Forgoing upkeep of furniture and spaces in general will limit the number of places for students to spend time studying and socializing outside of class. As a result, students will feel less connected to the institution and have diminished experiences on campus (Strange, 1996).

When asked what she would do if community spaces were not available, Celo stated that she would go home. If students are not on campus, faculty and staff will have less opportunities to engage with them.

Aesthetics. In terms of overall design, several other aspects seem to play a big role in the aesthetics of a space. According to Lippincott (2006), “the use of lively colors, interesting patterns and textures, and natural light can enhance aesthetic appeal” (p. 7.15). By integrating pops of color, bold fabric options, and taking advantage of windows or other creative lighting sources, ordinary spaces can transform into warm and inviting spaces where students want to go. For example, in a space I recently updated as part of my work on campus, I opted to use a blue on the accent wall instead of the typical eggshell, light mud, or avocado green. Even without the new furniture, the updated color instantly transformed the space. The space felt new and modern with just that one change. This particular space is along a corridor and was naturally divided into four corners with a walkway down the middle. The floors were concrete and two of the walls are comprised of large Spanish Colonial arched windows. In an effort to make the space feel warmer, carpet was installed into three of the four corners. Adding the carpet further aided in creating nooks in each of the corners. One participant stated that the color makes the space feel more modern and relaxing and makes her “actually want to get work done.”

In terms of lighting, it appears that a combination of both natural light and artificial light is ideal. Gee (2006) shared that natural daylight has psychological effects such as stress reduction and mood elevation. In addition to those effects, windows and natural light also make a space feel larger and more open. By taking advantage of windows and natural light, designers are able to provide students with spaces that contribute to the “way in which light is used to support

energy and creativity” (Van Note Chism, 2006, p. 2.11) taking place in the space. Tera shared that space with natural lighting is “really important . . . just naturally helpful . . . mentally.”

As previously shared, many aspects contribute to the successful design of a community space. Not only is the actual furniture essential, so too is the overall aesthetic of a space. Lomas (2006) shared that good lighting and flexible furniture makes it possible for a space to be used in a variety of ways, by various people, at any given time.

Use of Community Spaces

As I have already argued, community spaces are an integral facet of the student experiences on university campuses. They serve a magnitude of purposes including providing a space for studying, socializing, collaborating, and engaging. An interesting observation that came from the participant interviews is that some students go to some spaces for one activity and a different space for another activity. For example, Cedar shared that she goes to the café when she wants to socialize with friends but goes to a seating area in an adjacent building when she wants to study. Ailey, Cedar, and Gillis stated that they meet with friends for group work in a community space but go to the library when they do school work on their own. Gillis shared that “the library was the place that I would go usually for solitude” in reference to a place to work on school assignments. Given the variety of uses going on in these spaces, it is critical that there are multiple spaces available for students to use.

The participants also shared that available resources may determine which space they decide to visit. One of the recently updated community spaces on their campus features a microwave, water bottle refill station, coffee maker, printer/copier, and mobile device charging stations. This is a popular place for students to go because they can bring their own lunch and heat it in the microwave in this space. Access to food or a microwave was mentioned by all

participants as being a deciding factor for utilizing a space. Cedar, Ailey, and Gillis mentioned their preference for spaces near a campus eatery so they could buy food when needed. Nanda, Celo, and Tera shared that they often bring lunch and access to a microwave in the spaces they use is a great resource so they do not have to leave the space in order to eat. Lomas and Oblinger (2006) shared that a growing trend on university campuses is to combine community spaces with food services. In addition, the authors mentioned “students are no longer confined to computer



Figure 3. Example of resources available in community spaces.

terminals; indoor and outdoor spaces can become study areas or a social space as long as the internet and power are available” (p. 5.6).

Access to electrical power was also of prime concern to the participant users I interviewed. With technology playing such a large role in education, access to a power outlet throughout the campus is crucial. In addition to basic word processing, so many

professors are integrating online components to their coursework. As a result, administrators need to ensure sufficient access to electrical power in community spaces is available to avoid hindering the educational experience. Gillis mentioned the aspect of electrical power several times. With regard to one space, he mentioned that “the tables, they all have power outlets but not all of them work . . . I feel there just needs to be a bit more upkeep in that area.” Lomas and Oblinger (2006) further argued that “institutions will find opportunities to deliver information and services in multiple formats and to multiple devices . . . Student mobility means that

students, not just the institution, define the learning space . . . [as a result] space planners need to take this requirement into account” (p. 5.10).

Feelings about Community Spaces

Unsurprisingly, students have strong feelings about the spaces they use on a daily basis. According to Banning (1999), students who feel a connection to a space on campus will “feel a sense of belonging and desire to participate” (p. 18). As previously mentioned, one participant stated that if not for community spaces, she would go home when not in classes. Losing students due to a lack of space is unacceptable and the opposite of engaging them.

Several participants felt that well-appointed community spaces on their campus made them feel relaxed and more prepared to do school work. Celo felt that in an effectively designed community spaces, she had a positive experience because she was “being supported in what [she] wanted to do.” Additionally, Cedar shared that her favorite community space “. . . makes me feel good because I have my own little relax space, like in that chair. This sounds silly, but I just feel like I’m at home for a second.” While libraries typically provide ample study space for students, several participants felt that the restrictive nature of the library setting was not a conducive place for them all the time. Libraries tend to be hushed spaces that discourage group work.

Community spaces allow for a little more flexibility and promote a sense of collaboration between students without being too loud. In addition to preferring a little background noise, Tera also shared that bring in a space where other students are working, motivates her to feel more productive.



Figure 4. Example of soft seating with tablet arm.

Johnson (2006) made the argument that students want a social place to study. Gillis confirmed the argument in spades when he shared that one particular community space served as social hub for his group of friends. In describing a space in the Student Union, Gillis stated that this location was a central place for all of his friends to meet. They have created a culture amongst themselves in this place that they deemed “super table” and at which they gather daily. In addition to socializing, they also study and eat together here. According to Gee (2006), “learning is a social activity. Community and social space connects individuals with other people and other activities” (p. 10.7). Additionally, Hunley and Schaller (2006), argue that institutions should encourage learning through social engagement. Gillis and his friends have found a place to call their own to interact with each other both socially as well as educationally. Gillis shared that their place serves as a “great hub for socialization which . . . is one of the biggest cornerstones of education.”

Other participants echoed the sense of place and belonging. Beli, Nanda, and Cedar all shared that their favorite community spaces help to create a sense of home while on campus. Gee (2006) claimed that people tend to seek out the familiar or create spaces with familiar qualities. Arguably, people feel most comfortable at home. The fact that students have been able to find a space on campus that conveys that same feeling is remarkable. Being able to create these types of spaces speaks volumes of the work staff and administrators have put in to foster these connections within the university. Gee (2006) goes on to state that spaces “create a ‘home’ where faculty, staff, students, and alumni can connect” (p. 33.2).

Similar to creating a sense of being at home in the spaces, creating spaces where students feel safe is imperative. Bickford and Wright (2006), Getis, Gynn, and Metros (2006), Hunter and Cox (2014). Poldma (2010), and Strange and Banning (2001) all comment on the importance of

campus safety as well as the design of spaces in which students can feel safe. Several of the participants mentioned safety during their interviews. It is a huge responsibility for an institution to take on the task of designing spaces in which students feel comfortable enough to allow themselves to be vulnerable. One participant in particular, Nanda, shared that she takes the public bus to and from school. She went on to explain that the community spaces provide “a good place to hang out like early in the mornings and like late at night cause you feel safe.” To be able to provide that security for students is key.

Comments about the University in General

Participants had many positive comments about the campus in general. Many commented on the small size of the campus and the way in which this aspect was a determining factor in their decision to attend this school. Their other school choices were larger institutions and one participant shared that they felt they would have “been lost in the sea” at an institution that size. I feel that the smaller campus and population contributes to the sense of community felt on campus. There is a personal touch that would be absent in a larger institution. The smaller student body leads to a smaller teacher to student ratio and helps to create that personal touch. Staff and faculty are able to develop relationships and connections with students and encourage engagement.

Lastly, all of the participants mentioned the landscape surrounding the campus. Set in the foothills of a mountain range, the campus has large green belts and is surrounded by trees. Tera stated that she felt the scenery looks like a Hollywood movie set due to the picturesque setting and another student claimed the campus “feels more like a nice resort than a school.”

Conclusion

According to the Joint Information Systems Committee's (JISC, 2006) *Designing Spaces for Effective Learning: A Guide to 21st Century Learning Space Design*, "well-designed social spaces are likely to increase students' motivation and may even have an impact on their ability to learn" (p. 28). As discussed in the current chapter, through the incorporation of intentional design elements such as flexible and comfortable furniture, resources, and appealing aesthetics, it is apparent that the participants feel that their institution has echoed the literature in terms of creating safe and effective community spaces for use outside of the classroom. These community spaces on campus have provided students with a place they feel comfortable and that enables them to both work and socialize.

The following chapter will provide a summary of the study, discussion, implications, and recommendations for future community space designs.

Chapter Five

Conclusions

The previous chapter provided an analysis and summary of the findings from the study as told, in part, through the comments of student participants. The current chapter will summarize the study as well as provide a discussion, implications, and recommendations for future design of community spaces. To reiterate one last time, the following research questions have guided the current study:

1. What are the experiences of students in community spaces at a public, four-year, commuter campus in Southern California?
2. What are the space design needs of students at a public, four-year, commuter campus in Southern California?

Summary of the Study

The purpose of this study was to explore the ways in which the design of community spaces impacts the experiences of students on university campuses. The literature review established that effective design of community spaces is an integral part of the educational experience. This study focused on current students at a public, four-year, commuter campus in Southern California and was conducted in the spring of 2018. A qualitative research design consisting of a semi-structured interview and short questionnaire was utilized to collect data. Participants were recruited through the use of fliers and snowball sampling from the researcher's colleagues. Parameters for recruiting participants included any current student, aged 18 years or older. The first seven participants to confirm an interview time were ultimately selected. Data were analyzed using the coding method discussed above to identify emerging trends across the interviews. Limitations included a constricted timeline and small sample size. The findings

suggested that students have a better experience in and prefer community spaces that provide a variety of comfortable seating options that are flexible. The overall condition of community spaces is also important, including that it be well maintained and that furniture and space be regularly updated. The findings showed that students used community spaces for a variety of reasons including to study, to meet with classmates, to socialize with friends, to relax, and to eat, among other activities. Most importantly, students wanted spaces that make them feel safe to perform the previously mentioned tasks.

Discussion

As previously mentioned, the purpose of this study was to examine student needs within community spaces and how those spaces contribute to successful student experiences. Through a qualitative design utilizing semi-structured interviews and questionnaires, participants were able to share their thoughts. Major findings included that community spaces are highly utilized by students in a variety of ways. In addition, students seek safe and clean spaces with comfortable and flexible furniture, and a pleasing aesthetic. While the findings of the current study may seem obvious, they remind university professionals of the importance of the larger environment in which students advance their academic work and intellectual lives. Sadly, community spaces have typically been seen as ancillary and may not be a priority for funding or the dedication of specific resources. It is easy for administrators to find random tables and chairs to put in a space and think they are providing additional seating for students. While repurposing furniture is not necessarily a bad thing, there needs to be intention behind the items being placed in a space. At the end of the day, students will sit where there are seats. However, we want students to connect with their surroundings so they can attribute positive feelings towards their experiences in those spaces. Indeed, student feelings of comfort and of belonging directly contribute to better student

outcomes (Gordon, 2010). Designing or redesigning a community space can be expensive. Nevertheless, there are ways to effectively outfit a space on a budget.

I think the most significant finding from the study is that students view these community spaces as a second home, or what is referred to in the literature as the “third place” (Oldenburg, 1999). This idea speaks volumes about the types of spaces being created at this campus. Not only were the spaces described as being comfortable and flexible, the participants expressed a sense of feeling safe within the spaces. Students have enough stressors throughout their educational experience. It is no small thing to have access to a commodious space on campus that promotes a sense of well-being and safety. Safety becomes one less thing they need to worry about allowing students to focus on the task as hand.

Returning to the theoretical framework of the environment-behavior theory, Ittelson (1989) stated that the theory explains the everyday experiences in the world in which we live, act, perceive, and construct meaning. Further, Ittelson (1989) goes on to say that the environment-behavior theory “is the world we see with our own eyes, touch with our own hands. It is also the world of vicarious experiences” (p. 72). Through this research study, I have been able to better understand how students are using community spaces and about their experiences in those spaces. In turn, the information gathered about how the students feel and interact with their environments provides me with a better understanding of how community spaces might be better designed to support student comfort and success.

An interesting anecdote emerged from the participant interviews that showed how different people experience spaces. For example, Gillis shared that he and his friends convene in one particular space that serves as a social hub. He stated that sometimes their group could become quite large depending on the time of day and that they have to be mindful of their noise

level. On the other hand, Cedar shared that she goes to this same space when she needs to focus on schoolwork rather than socializing with friends. She also commented that she would like this space to be designated as a quiet area with signs stating as much. Interestingly, in this case, the same space serves two different purposes and elicits varying behaviors from its users.

Implications and Recommendations

It is anticipated that the data gathered in this study will be incorporated into the design of future community spaces. Within my role, I am responsible for collaborating with the furniture vendor, staff, and administrators who oversee the use of spaces on campus. With the information garnered from the study, I will be able to review the plans and provide suggestions to enhance the space for student use. Since campuses may not have just one person who oversees university spaces, this study will likely have broad implications for students of administrators across campus. The current study highlights implications for facility design, support services and educational leadership in support of students.

The following recommendations are informed by the findings of this study and are proposed for further consideration:

- 1) Collaborate with campus partners in the design process to ensure all facets of space upgrades are taken into consideration;
- 2) Solicit feedback from students to ensure their needs are taken into consideration at every phase of space planning;
- 3) Select furniture with intention that is both comfortable and flexible so students can take ownership in the space and create an effective working environment for themselves;
- 4) Choose fabrics in calming colors and various textures to attract students to the space;
- 5) Consider the use of natural light in overall layout of space;

- 6) Ensure climate control of space so that it is neither too hot nor cold throughout the day;
- 7) Consider acoustics within community spaces so that noise is not amplified unnecessarily;
- 8) Consider the overall aesthetics of community space to ensure a cohesive look across spaces that is pleasing to the eye;
- 9) Ensure compliance with the Americans with Disabilities Act and Fire Marshall;
- 10) Ensure that appropriate resources are available in the community space, and
- 11) Ensure that community space is regularly cleaned and inspected for maintenance and safety concerns.

Conclusion

There is no doubt that students spend a great deal of time on their campus. Therefore, it is imperative that universities provide adequate spaces for students to engage in a variety of ways outside of the classroom including to feel at home, to study, to meet with friends, and to relax, among others. This research project examined the design needs of students within community spaces as well as the impact of these spaces on their overall university experience. By utilizing semi-structured interviews and inviting students to complete a questionnaire, participants shared their experiences about what community spaces represent to them personally and to their overall well-being on campus. This study would not have been possible if not for the participants' important contribution to this work. Participants indicated that community spaces impart a sense of home and safety, and that this was paramount to ensuring the success of their educational endeavor. This study suggests that well-appointed community spaces serve to engage and enhance the educational experience of students, specifically, and of the campus community, overall.

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Appendix A

Semi-Structured Protocol for One-on-One Interviews

Introduction:

Thank you for meeting with me. As you know, the purpose of this research is to study how space design impacts the student experience at university campuses. Your participation is voluntary and your anonymity will be protected. This interview will be tape recorded and I may take handwritten notes as we speak. If you do not wish to have the interview audio recorded, please let me know and I will take notes only. You may skip a question, request a break, or leave the interview at any time. Please also know that your decision whether or not to participate will not prejudice your current or future relationship with CSU Channel Islands. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice. Are you ready to begin?

Warm-Up Question(s) (one to be chosen dependent on the flow of initial conversation):

- How is your semester going?
- What is your major, and why did you choose it?
- Where are you from?
- What brought you to CI?

Opening Question (same for each interview):

- Tell me about your favorite place on campus.

Main Questions (same for each interview):

- Tell me about your experiences in the Mission Lounge or similar spaces.
- Tell me how the Mission Lounge or similar spaces contribute to your experience at CI.
- Which aspects of the Mission Lounge or similar spaces appeal to you (e.g., furniture, resources, location)?

Wrap-Up Questions (same for each interview):

- How do you feel about the recent changes to the Mission Lounge?
- What recommendations do you have to improve the Mission Lounge or similar spaces?

Transition/Probing Questions (to be used as needed throughout the session)

- Tell me what you like best about the Mission Lounge or similar spaces.
- Tell me what you like least about the Mission Lounge or similar spaces.
- Tell me how you use the Mission Lounge or similar spaces.
- Tell me how you feel about the lounge spaces on campus.

Appendix B

Questionnaire

Demographic Questions:

- Age:
- Gender:
- Commuter or Resident:
- Class standing: Freshman | Sophomore | Junior | Senior | Graduate | Other

Questions about lounge spaces on campus:

- How often do you visit?
- What do you do in the space (e.g., study, socialize, eat, etc.)?
- Where is your favorite place to sit in the space?
- What resources do you use in the space (e.g., microwave, coffee maker, water refill, device chargers, copier/printer, etc.)?

Appendix C

Recruitment Fliers

SEEKING RESEARCH PARTICIPANTS!

Research study is focused on how space design impacts the student experience on university campuses.

Participants must be current CI students over the age of 18.

Participation will include gathering basic demographic information as well as a 45-60 minute interview.

If you are interested in participating in this study, please contact Courtney Ellis at courtney.ellis@csuci.edu or 805-437-2091



**DO YOU LOVE THE
FURNITURE
IN THE LOUNGE?**

SEEKING RESEARCH PARTICIPANTS FOR STUDY ON HOW SPACE DESIGN IMPACTS THE STUDENT EXPERIENCE. MUST BE CURRENT CI STUDENT OVER 18. PARTICIPATION WILL INCLUDE BRIEF DEMOGRAPHIC SURVEY AND 30-45 MINUTE INTERVIEW.

**IF INTERESTED, PLEASE EMAIL ME AT
COURTNEY.ELLIS@CSUCI.EDU OR CALL ME AT 805-437-2091.**

Appendix D

Email Communication to Administrators in the Division of Student Affairs

February 6, 2018

Toni R. DeBoni
Associate Vice President for Student Affairs & Dean of Students

Doreen Hatcher
Director of Student Transition & Engagement Programs

Good afternoon,

As you may know, I am currently in the Master's program at CI studying Higher Education. As a culminating experience, I am conducting a research study and writing a thesis. The purpose of my research is to examine how design impacts student use of space on University campuses. To learn more about the space needs of students outside of the classroom, this study will seek to answer the following research questions: 1) what are the space design needs of students at an institution of higher education and 2) what are the experiences of students in community spaces at an institution of higher education? Essentially, people may experience a space differently based on lighting, colors, finishes, temperature, and other objects within the space. Building on this argument, I am seeking to discover which aspects of the Mission Lounge appeal to and contribute to a student's experience within the space. With this research, campus administrators will be able to incorporate these elements into other spaces at CSU Channel Islands in an effort to enhance the University's mission of promoting student success. I feel that it is important to understand these influences to ensure that campus administrators design intentional and effective spaces for student use.

I have applied for and received approval from CI's Institutional Review Board for this study to take place on campus. Given that this particular space falls under your purview, I wanted to reach out to ensure there are no issues with me recruiting participants who use this space. I will recruit by placing the attached poster in the Mission Lounge as well as asking colleagues to refer students to participate. I am hoping to complete five to nine interviews for analysis in my thesis. I hope to begin recruiting as soon as possible and conclude at the end of February.

Should you have any questions or concerns with this, please let me know.

Thank you,
Sincerely,
Courtney Ellis

Appendix E

Email Response to Potential Participants

Dear Participant:

Thanks so much for reaching out! The purpose of this research is to study how space design impacts the student experience on university campuses. As part of this study, you will be asked to provide basic demographic information as well as participate in a one-on-one interview. During the interview, I will ask you about your experiences as a user of a student lounge space on campus. Your participation in the interview is voluntary and there are no right or wrong answers to any of the questions I will ask. If you experience any discomfort related to your participation in the study, you may take a break, skip a question, or terminate the interview at any time. The interview will take approximately 20-30 minutes. Our conversation will be audio recorded and transcribed verbatim for further analysis.

Attached is an Informed Consent Form which outlines the terms of your participation as well as the pre-interview questionnaire. Please feel free to complete the questionnaire and return to me. I will have copies of the consent form for your signature at the beginning of our meeting.

If you would like to participate, please provide your availability and we can find a time that works with both of our schedules.

Thank you,
Courtney Ellis

Appendix F

Informed Consent Form

Dear Participant:

You are invited to take part in a research study on how space design impacts the student experience on university campuses. In order to participate in this study, you must be a current CI student over the age of 18. As part of this study, you will be asked to provide basic demographic information as well as participate in a one-on-one interview. During the interview, I will ask you about your experiences as a user of a student lounge space on campus. Your participation in the interview is voluntary and there are no right or wrong answers to any of the questions I will ask. Your decision whether or not to participate will not prejudice your current or future relationship with CSU Channel Islands. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice. Interviews will take approximately 45-60 minutes. Our conversation will be audio recorded and transcribed verbatim for further analysis. If you decline to have the interview audio recorded, then hand written notes will be taken.

All of the information gathered during the data collection process will be kept confidential and held in a secure, password protected file for six years. No names or personally identifiable information will be disclosed at any time during this study. Minimal risk is associated with this study. However, if you experience any discomfort related to your participation in the study, you will be informed that you may take a break, skip a question, or terminate the interview at any time. Furthermore, you may contact the Primary Investigator, Courtney Ellis, as well as the Primary Investigator's Thesis Advisor, Dr. Nancy-Jean Pément, should any issues arise.

The results from the data collected will be reported in a thesis and will be published in the Institutional Repository at the John Spoor Broome Library at California State University Channel Islands (CSUCI). Benefits from this study may include incorporating the student experience into effective design of open spaces on campus which may, in turn, enhance students' overall engagement and success in higher education. Please note that there is no guarantee or promise that you will receive any benefits from this study. Your decision to participate in this study will have no implication for your status on campus. There is no compensation or reward for your participation in this study.

If you have any questions, concerns, or complaints regarding this research, its procedures, risks, or benefits, please contact the Primary Investigator, Courtney Ellis, at courtney.ellis@csuci.edu or the Primary Investigator's Thesis Advisor, Dr. Nancy-Jean Pément at nancy-jean.pement@csuci.edu. If you are not satisfied with how this study is being conducted, or if you have and concerns, complaints, or general inquiries about the research, or your rights as a participant, please contact the Institutional Review Board (IRB) at CSUCI to speak to someone independent of the research team via telephone at 805-437-8898, email at irb@csuci.edu, or postal mail at IRB, One University Drive, Camarillo, CA 93012.

My signature indicates that I have decided to participate in this study having read the information provided above. I understand that I will be given a copy of this form for my files.

- By selecting this box, I agree to participate in the research study outlined above.
- By selecting this box, I do not agree to participate in the research study outlined above.
- By selecting this box, I agree for the interview to be audio recorded.
- By selecting this box, I do not agree for the interview to be audio recorded.

Signature of Participant: _____ Date: _____

Thank you for your assistance with this study. I look forward to meeting with you.

Sincerely,
Courtney Ellis