



The role of key landscaping elements on enhancing social interaction in tertiary institutions students' center

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Abstract

This research paper investigates the pivotal role of landscaping elements in enhancing social interaction within student centers on university campuses. By examining existing publications relating to landscaping and its elements, the paper explores the influences of key elements, such as green spaces, seating arrangements, amenities, and art installations, in creating an inclusive and engaging environment for students. Understanding these influences is essential for designing student centers that foster community building and student well-being.

Keywords: student center, social interaction, Landscaping elements

1. Introduction

Humans are social beings and therefore need to relate with one another to have sustained health, wellness, and prosperity in their daily lives (Ogunmiloro *et al.* 2022) ^[12]. Student centers are integral components of university campuses, serving as focal points for academic, social, and recreational activities (McLane *et al.*, 2019) ^[10]. These spaces play a vital role in nurturing a sense of community, fostering student engagement, and promoting overall well-being. Within the design and planning of student centers, landscaping elements hold significant potential to enhance social interaction among students (Liu *et al.*, 2020) ^[9]. By creating inviting outdoor environments, and integrating green spaces, seating arrangements, and art installations, student centers can cultivate spaces conducive to meaningful connections and collaboration.

As the global academic landscape continues to evolve, with a focus on student experience and holistic development, the exploration of landscaping elements within student centers becomes particularly timely. Through an in-depth analysis of key elements and their influences on social dynamics, this research aims to contribute to the ongoing dialogue surrounding the design and utilization of student spaces, ultimately enhancing the overall quality of student life on university campuses. Researchers and designers have explored various strategies to optimize these spaces, considering factors such as user preferences, campus culture, and environmental sustainability. This research paper aims to delve into existing studies conducted to explore the multifaceted influences of landscaping elements on social interaction within the outdoor environment in student centers. Understanding these influences is crucial for informing the design, management, and maintenance of student center landscapes. By identifying effective strategies and best practices, universities can create inclusive and vibrant environments that enrich the campus experience for students therefore showing that universities prioritize inclusive healthy urban environments (Adeboyejo, *et al.* 2022) ^[2]. The objective of this paper is to examine the role of green spaces, seating arrangements, and art installations in enhancing social interaction in the outdoor spaces of student centers, providing insights for future design interventions.

2.0 Literature Review

2.1 Student Center

Student centers serve as vital spaces within university campuses, providing students with opportunities for social interaction, academic support, and extracurricular engagement. Over the past few years, there has been a growing body of literature exploring various aspects of student centers, ranging from their design and functionality to their impact on student well-being and academic success.

2.1.1 Design and Functionality of Student Centers

The design and functionality of student centers play a crucial role in shaping the campus experience and supporting student engagement. According to Rood, (2019), student perceptions of campus spaces are influenced by factors such as accessibility, aesthetics, and usability. Effective design principles, including the integration of flexible spaces, collaborative work areas, and recreational amenities, contribute to the overall appeal and functionality of student centers (Gabr, 2021) ^[6]. Furthermore, research by Mendoza, and Venables, (2023) ^[11] emphasizes the importance of creating inclusive environments that cater to the diverse needs and preferences of students, promoting a sense of belonging and community within the campus setting.

2.1.2 Impact on Student Well-being and Academic Success

Student centers play a significant role in supporting student well-being and academic success. Studies have shown that access to supportive resources and services within student centers, such as counseling services, academic advising, and health clinics, positively impacts student retention and graduation rates (Hoyt, 2023) ^[7]. Additionally, the availability of spaces for social interaction and relaxation contributes to reducing stress levels and enhancing overall student satisfaction (Yusli *et al.*, 2022) ^[18]. Research conducted by Crisp *et al.*, (2020) ^[5] highlights the importance of creating community hubs within student centers, fostering social connections and peer support networks that contribute to student success.

2.1.3 Technological Integration and Innovation

In recent years, student centers have embraced technological integration and innovation to enhance the student experience. Digital amenities such as interactive screens, mobile apps, and virtual reality experiences offer new opportunities for engagement and collaboration (Vasilevski, and Birt, 2020) ^[16]. Moreover, advancements in sustainability practices, such as energy-efficient design and green building initiatives, are increasingly being incorporated into the planning and development of student centers (Amaral, *et al.*, 2020) ^[1]. These technological advancements not only enhance the functionality of student centers but also contribute to environmental sustainability and resource efficiency.

2.2 Social Interaction

Social interaction is a fundamental aspect of the human experience, and its significance in the context of higher education cannot be overstated. Research consistently demonstrates that positive social interactions contribute significantly to various dimensions of student life, including academic achievement, personal development, and overall well-being.

Su, (2022). emphasizes the multifaceted nature of student engagement, encompassing not only academic activities but also interpersonal interactions and extracurricular involvement. Social engagement, as a critical component of this broader concept, plays a pivotal role in shaping the holistic development of students. Tinto's 1993 model of student departure underscores the importance of social integration in academic success and persistence, highlighting that students who form meaningful connections with peers, faculty, and the institution are more likely to thrive academically and persist through their educational journey (Abdul-Rahaman, *et al.*, 2019) ^[10].

Furthermore, Zhang, (2022) ^[19] posits that social involvement contributes to cognitive development, indicating that interactions outside the formal classroom setting foster intellectual growth. Exposure to diverse perspectives, collaboration on projects, and participation in social activities all contribute to a rich learning environment that goes beyond traditional academic boundaries.

The social environment on a college campus also significantly influences students' overall well-being. Kuh argues that a sense of belonging and connection to others is crucial for student success and satisfaction (Strayhorn, 2022) ^[17]. Positive social interactions contribute to mental health, reduce stress, and create a supportive community that enhances the overall quality of the student experience.

2.3 Landscaping elements that can enhance social interaction

1. Green Spaces and Nature Connectivity:

Green spaces have been identified as crucial components that contribute significantly to social well-being. The presence of natural elements within recreational landscapes not only enhances aesthetic appeal but also promotes mental well-being and social interaction. Research indicates that exposure to nature positively influences mood and encourages users to engage in group activities. Baur (2022) ^[3].

2. Amenities and Activity Zones:

Amenities within the landscapes, such as sports facilities, picnic areas, and playgrounds, have a direct impact on user engagement and interaction. Access to a variety of activities encourages diverse user groups to converge, fostering social connections. The strategic placement of amenities and the creation of distinct activity zones within the landscape contribute to the formation of social hubs and community-building (Silva, *et al.*, 2023)

3. Seating Arrangements and Social Dynamics:

The design and arrangement of seating play a critical role in shaping social dynamics within recreational spaces. Research suggests that the incorporation of flexible seating options, such as movable chairs and benches, encourages spontaneous interactions and group gatherings (Gabr, M. M. (2021) ^[6]. Additionally, the provision of shaded seating areas can extend the duration of social engagement, creating comfortable spaces for users to connect.

4. Artistic Installations and Aesthetic Appeal:

Artistic elements within recreational landscapes, such as sculptures, murals, or interactive installations, contribute to the overall aesthetic appeal and serve as focal points for social interaction (Brown *et al.*, 2018) ^[4]. These elements not only enhance the visual experience but also provide opportunities

for users to engage in discussions and shared experiences.

2.4 Relationship between landscaping and student center

Thoughtful landscape design can shape the atmosphere of the student center, making it more inviting and conducive to various activities. Natural elements, artistic installations, and well-designed seating contribute to a positive and vibrant ambiance. It can also transform underutilized outdoor spaces into functional areas that serve multiple purposes. Whether it's a space for impromptu gatherings, outdoor classes, or simply a place to unwind, the design principles employed enhance the overall functionality of the student center. It can contribute to the creation of a shared space where students can come together. Events, gatherings, and activities organized in these areas foster a sense of belonging and strengthen the social fabric of the university community.

3.0 Methodology

Literature-based methodology, also known as literature review, involves conducting research and drawing conclusions based on existing literature and previously published studies. The primary objective of this literature-based methodology is to explore and analyze the influences of key landscaping elements on enhancing social interaction within the outdoor environment of student centers on university campuses.

A thorough literature review was conducted using existing academic databases, journals, and relevant publications. Key search terms included "student center," "landscaping elements," and "social interaction" The existing publication used and their authors:

Table 1

AUTHOR(S)	Publication Title	Landscaping elements
Baur (2022) ^[3] .	Campus community gardens and student health: A case study of a campus garden and student well-being.	Green spaces
Reyes-Riveros, R., Altamirano, A., De La Barrera, F., Rozas-Vásquez, D., Vieli, L. and Meli, P. (2021) ^[13] .	Linking public urban green spaces and human well-being	Green spaces
Rishbeth, C., and Rogaly, B. (2018) ^[14] .	Sitting outside: Conviviality, self-care and the design of benches in urban public space.	Seating arrangement
Gabr, M. M. (2021) ^[6] .	Student experience and the design of campus outdoor spaces: an optimized assessment and comparative cross-case analysis at Universities from two leading nations—England, UK & California, US. University of Salford (United Kingdom).	Seating arrangement and Amenities
Silva, A., Matos, M., & Gonçalves, M. (2023).	Nature and human well-being: a systematic review of empirical evidence from nature-based interventions.	Amenities
Brown, S., & Dissanayake, E. (2018) ^[4] .	The arts are more than aesthetics: Neuroaesthetics as narrow aesthetics.	Art installations

The literature review identified several key themes and patterns related to landscaping elements in outdoor environments. These include the significance of green spaces, seating arrangements, amenities, and art installations in shaping social dynamics within these spaces.

Based on the comprehensive literature review on the influences of key landscaping elements in enhancing social interaction within student centers the following research questions are proposed:

1. How do well-designed green spaces impact social interactions within the outdoor spaces in student centers?
2. What is the role of seating arrangements in fostering spontaneous interactions and creating social hubs within the outdoor spaces in student centers?
3. What is the influence of amenities, including recreational spaces and study areas, on the vibrancy and inclusivity of student center outdoor environments?
4. How do artistic elements, such as sculptures and murals, act as focal points for social interaction and community engagement within the outdoor spaces of student centers?

4.0. Discussion of Findings

The findings of the literature review are organized into key landscaping elements that influence social interaction within student centers, offering insights into their impact on creating

vibrant and engaging environments.

1. Green Spaces: Green spaces have been consistently identified as crucial elements in fostering social interaction. Research by Baur, (2022) ^[3] indicates that the presence of greenery positively influences mental well-being and encourages social cohesion within the physical environment. Reyes-Riveros *et al.* (2021) ^[13] further supported this, demonstrating that exposure to well-designed green spaces within student centers has been associated with stress reduction, improved mood, and enhanced overall mental health. Incorporating greenery into the landscape provides students with a connection to nature, creating a sense of tranquility and relaxation. Planting native species, creating pollinator-friendly environments, and implementing sustainable landscaping practices not only enhance the ecological value but also raise students' awareness of environmental issues. The literature underscores the importance of regular maintenance to keep green spaces inviting and functional considering seasonal changes in landscaping design to ensure that outdoor spaces remain attractive throughout the year, adapting to climatic variations, and providing year-round social opportunities

2. Seating Arrangements: The design and arrangement of seating significantly contribute to shaping social dynamics within the outdoor spaces of student centers. Rishbeth and Rogaly (2018) ^[14]. Emphasize the role of diverse seating

options, including benches, movable chairs, and informal gathering spaces, in fostering spontaneous interactions and creating social hubs that also accommodate different preferences and group sizes. Additionally, Gabr's (2021) ^[6] study underscores how well-designed seating arrangements in outdoor spaces encourage collaboration and networking among students. Comfortable seating encourages students to linger, facilitating spontaneous conversations and social connections. The arrangement of seating plays a crucial role in shaping social clusters within student centers the literature suggest that suggests that strategically placing seating to create small clusters promotes group interactions.

3. Amenities: The availability of amenities within student centers has been shown to contribute to a vibrant and inclusive environment. Gabr (2021) ^[6] demonstrates that well-designed amenities, including recreational spaces and study areas, attract diverse user groups, fostering social connections and enhancing the overall social experience within student centers. To cater to diverse recreational preferences, incorporating outdoor gaming zones is essential. These zones can include chess tables, ping pong tables, or other gaming equipment that encourages friendly competition and group play. Outdoor gaming areas create informal settings for students to relax, socialize, and enjoy leisure activities. Additionally, the positive impact of sports courts and activity spaces within student centers. Multi-functional spaces equipped with basketball courts, volleyball courts, or open areas for various sports provide opportunities for organized and impromptu physical activities. These spaces act as hubs for social interactions, friendly competitions, and recreational sports

4. Art Installations: Artistic elements within the landscape, such as sculptures and murals, play a significant role in enhancing the aesthetic appeal and social interaction within the outdoor environment of student centers. Brown and Dissanayake, E. (2018) ^[4]. emphasize the impact of art installations as conversation starters, attracting individuals to specific areas and contributing to the overall identity of the space. Public art within recreational spaces not only enhances the visual appeal but also creates a unique identity for the student center, fostering a sense of pride and belonging among the student community. Encouraging community involvement through art projects fosters a sense of collaboration and ownership. Temporary or permanent installations created through student-led initiatives or collaborative projects involve the community in shaping the visual and cultural landscape of the student center. Community art projects contribute to a shared sense of identity and pride

Synthesis of the literature reveals that well-designed green spaces promote positive social interactions, with biophilic design principles positively impacting mental well-being. Seating arrangements contribute to social hubs and spontaneous interactions, while art installations act as focal points for engagement.

In presenting these findings, it is evident that a combination of green spaces, well-designed seating arrangements, amenities, and art installations collectively contributes to the creation of student centers that are conducive to social interaction, community building, and overall positive campus experiences. These findings form the basis for recommendations

5.0 Conclusion

In conclusion, the exploration of landscaping elements and their profound influence on social interaction within student centers illuminates the pivotal role that well-designed environments play in shaping the campus experience. The synthesis underscores the importance of adopting an integrated design approach that considers the holistic nature of student center landscapes. Green spaces, often infused with biophilic design principles, not only provide aesthetic appeal but also act as catalysts for positive social dynamics. Strategic seating arrangements, ranging from flexible configurations to collaborative spaces, facilitate spontaneous interactions, fostering a sense of community. Diverse amenities promote inclusivity, accommodating the varied needs and interests of the student population. Artistic installations emerge as powerful tools for expressing identity and culture, creating shared experiences, and strengthening community bonds.

Building on the synthesis of key landscaping elements influencing social interaction within student centers, the following recommendations and future directions emerge to guide designers, planners, and policymakers in creating vibrant and socially engaging campus environments.

Recommendations for Student Center Design

1. **Integrated Design Approach:** Designers should adopt an integrated approach that considers the interconnectedness of landscaping elements. Green spaces, seating arrangements, water features, amenities, and art installations should be strategically integrated to create harmonious and inviting environments.
2. **Flexibility in Seating Configurations:** Provide flexible seating configurations that allow for both individual study and group interactions. Movable furniture, adaptable seating arrangements, and designated collaborative spaces can cater to diverse student preferences and foster spontaneous social engagement.
3. **Biophilic Design Principles:** Embrace biophilic design principles in the planning and development of green spaces. Incorporate natural elements, such as vegetation, water, and natural light, to create restorative environments that positively influence well-being and social interactions.
4. **Inclusive Amenity Planning:** Ensure the planning and provision of amenities cater to the diverse needs and interests of the student population. From recreational spaces to quiet study areas, an inclusive range of amenities supports a variety of social interactions and activities.
5. **Artistic Installations for Identity:** Incorporate artistic installations that reflect the identity and culture of the student body. Public art not only enhances the aesthetic appeal but also serves as a means of cultural expression, contributing to a sense of belonging and community.

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