

Standalone University Campuses' Outdoor Spaces: Case of the German International University, Egypt

Ph.D. Candidate Sarah Ashraf Ahmed Mansour¹, Assoc. Prof. Dr. Hussam Hussein Samir Salama²

German University in Cairo (GUC)^{1,2}

E-mail: Sarah.ashrafmansour@guc.edu.eg¹, hussam.salama@guc.edu.eg²

ABSTRACT

This paper investigates the nature of university campuses' outdoor spaces and some of the main important aspects and factors that contribute in achieving a successful campus. Through referring to several related researches, observing and mapping, an analysis and study of the German International University has been conducted. These have highlighted different dynamics and complexities. As it is located in a still not yet urbanized area, the German International University is considered one of the leading projects in its surrounding. A new concept was introduced, namely the "standalone" campus, accommodating all needed services, which are missing in its surrounding. This new concept is considered a solution for universities with similar circumstances and nature.

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1. Introduction

A campus outdoor space is a vital and important element of a university that has to be carefully and thoughtfully planned and designed after comprehensively studying the different and diverse aspects and dimensions of such an entity. In the literature on campus design, much emphasis is given to the nature of outdoor spaces as independent social realms. In this paper, the aim is to highlight the role of these spaces as thresholds that define the relation between campus buildings with each other and with the adjacent context.

Special attention has been paid to students' life in these outdoor spaces and the patterns of use, which are considered to facilitate social interactions and benefit the students' welfare and sense of belonging (El-Darwish, 2022; Öztürk, et al, 2016). Understanding these dynamics is vital as students spend most of their time on campus, especially after the corona pandemic and the continuously expanding social media. The global economic slowdown that resulted from the pandemic, followed by the Russian-Ukraine political conflict has also contributed to the changing social patterns. The corona pandemic

Corresponding Author:

Ph.D. Candidate Sarah Ashraf Ahmed Mansour
German University in Cairo, Egypt
E-mail: sarah.ashrafmansour@guc.edu.eg

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has created isolated personalities, as many people have spent months or even years in their homes, either working remotely or even studying online, with the minimum real one-to-one interaction. It also resulted in the excessive use of social media, where people were more attached to their phones and other electronic devices, as these are the only way to communicate, socialize, and entertain. As for the economic condition, the struggle of many businesses and industries, which led to enormous shutdowns and the loss of jobs, has led to significant changes in some people's lifestyles, routines, and spending patterns.

The study focuses on the case of The German International University (GIU), which was established during the time of the corona pandemic and the current economic slowdown. It investigates the design approaches adopted to accommodate the changing social and economic dynamics. University campuses are usually located inside the city or in its outskirts, which are considered built environments that are reachable, accessible and near all the needed services and facilities. The German International University (GIU) is considered a unique example that should be studied and analysed, as it is located in a not yet urbanized part of a new city that is far away from any services and facilities. For this reason, the GIU's campus is considered as "standalone", as it houses all the services and facilities that might be needed daily by the campus users, since its surrounding is still empty. The campus is self-sufficient and self-contained, designed to accommodate all the needed entertainment and activity options, indoors and outdoors, with consideration of the different conditions and aspects.

This study assesses the performance of the campus outdoor spaces by unfolding the proposed design layer, how users, and the lived experiences that were created have perceived it. It is essential and vital to expedite a better understanding of the constraints during the design phase of the campus and the complexity of the discussion making process to rejuvenate it and tackle challenges by creating a complexion. This complexion aims to enable more interaction between all of the campus users in different ways by offering a variety of activities and possibilities to socialize and enjoy, individually or in groups (Gehl, 1987), as the outdoor spaces are considered as a booster for social interaction and the sense of belonging (El-Darwish, 2022).

2. Theoretical Context

In the context of this study, emphasis is given to literature on outdoor spaces on university campuses. An analytical framework has been developed to analyze the spatial quality of these spaces with the German International University as a case study. Chambers, M. et al. (Welsch, E., et al, 2004) discuss the importance of the "sense of place" and the factors that shape university campuses (Welsch, E., et al, 2004). Users develop this "sense of place" in diverse modes, and their use patterns feature significant variations (Hillier 2014; Dicle & Ter, 2008; Welsch, et al, 2004; Abu-Ghazze, 1999; Hillier, 1996; Marcus, 1990). And since students represent the majority of campus users, emphasis is given to their spatial behavior and perception of space (Tiyarattanachai & Hollmann, 2016; Dönmez, et al, 2015; Aydin & Ter, 2009; Dicle & Ter, 2008; Abu-Ghazze, 1999; Hillier, 1996). A very important aspect is highlighted, which is the sense of safety on campus and the ability of users to enjoy their time on campus and create memories (El-Darwish, 2022; Welsch, et al, 2004).

Welsch, E., et al (2004) referred to Richard C. Stedman's article [*Is it Really Just a Social Construction?*]: *The Contribution of the Physical Environment to Sense of Place*, as he notes that the outdoor space is for movement between places and is also used for other activities, such as studying, socializing, or just relaxing, which is also mentioned by Öztürk, et al. (2016). Many of the outdoor spaces are located along the central axis and routes, to be easily found by the students, as the campus is pedestrian-friendly (Welsch, et al, 2004). The term "gathering space" is defined as "any place where an individual or group engages in any type of activity." (Welsch, et al, 2004).

The components of the outdoor gathering spaces are outlined in the following points: 1. Seating, 2. Access, location, and noise, 3. Green elements, and 4. Sunshine and shade (Welsch, E., et al, 2004).

Seating is categorized into structured and non-structured (Welsch, et al, 2004). Structured seating has to be comfortable to all, even if they do not have back and arm supports, and should be offered and be easily accessible to older people and the handicapped, and should offer sunny and shaded options for individuals and groups (Welsch, et al, 2004). As for the non-structured seating is all about adding chairs and benches that are moveable to provide more options and freedom. As stated by William Whyte, "forced choice is rarely chosen" (Welsch, et al, 2004).

Moving on to the second component, access, location, and noise. Visibility and accessibility should be considered for all campus users, by providing ramps or slopes to ease the movement around the campus and the outdoor spaces (Welsch, et al, 2004). Welsch, et. al (2004) also believed that the gathering spaces that are located along the high-traffic spines are usually highly dense. As for the noise, compared the acceptance of the activities for the level of noise was compared, where spaces that accommodate studying or outdoor classes should have low noise levels and be isolated from streets or construction sites, meanwhile the other recreational or social spaces can accept some noise (Welsch, et al, 2004).

The third component, the greenery, is mainly about providing shading for the seating areas, as well as it is considered one of the campus' strengths that also creates comfort for the users (Welsch, et al, 2004). As for the last component, which is the sunshine and shade, it is highlighted, that a campus should offer both options, as it is important to have sunny spaces during the winter and shaded areas during the hot days in the summer (Welsch, et al, 2004).

Table 1. Example for the seating typologies offered in the Outdoor Spaces on the University of Iowa
(Source: Chambers et. al., 2004)

Gathering Space	Seating Infrastructure	Access/Location/Noise	Green Elements	Sun/Shade
Main Library North Entrance	Ledges	A major pathway for most users	Few adjacent trees	Sun
		Close to central campus	Little green space	
		Some noise from Madison Street		
North Hall	One bench	A major pathway for west side residence halls	Trees	Mixed
	Ledges	Sheltered from traffic noise	Hedges	
Burge Front Entrance	Benches	Major pathway for dorm residents	Hedges between ledges and buildings	Mixed
	Ledges	A lot of noise from Clinton Street		
Pentacrest	Fences	The most travelled path on campus	Lots of shade trees	Ideal mix
	Ledges and stairs on buildings	Ideal location – The center of campus Traffic noise from adjacent streets	Abundant landscaping Open green space	
Philips Hall	Circular Benches	On a major pedestrian path	Shade trees in center of benches	Ideal Mix
	Ledges	Adjacent to the center of campus		
	Stairs	Noise from Clinton Street and Iowa Avenue		

All components and their characteristics that have been mentioned in this paper are valid and should be considered when designing a university campus, but all these points should be studied in depth and detail, as campuses in different countries have different treatments, due to the different characteristics of the different locations. One should not treat a university in the United States the same treatment as one in the Middle East, Europe, or Asia. Each country has its weather, traditions, culture, and even the behavior of the youth. When comparing the numbers and quantities of the components and seating elements, that were mentioned in the paper, to the number of users at the University of Iowa, one will notice, that there are not enough seating elements offered, but they are mainly depending on green spaces and lawns (Figure 1), where students can sit on the ground, instead of chairs or benches (Table 1). Meanwhile, dry and hot countries, such as the UAE or Egypt, cannot depend on large green lawns and fields, since this much greenery will not stand the weather and therefore, more seating elements should be provided.

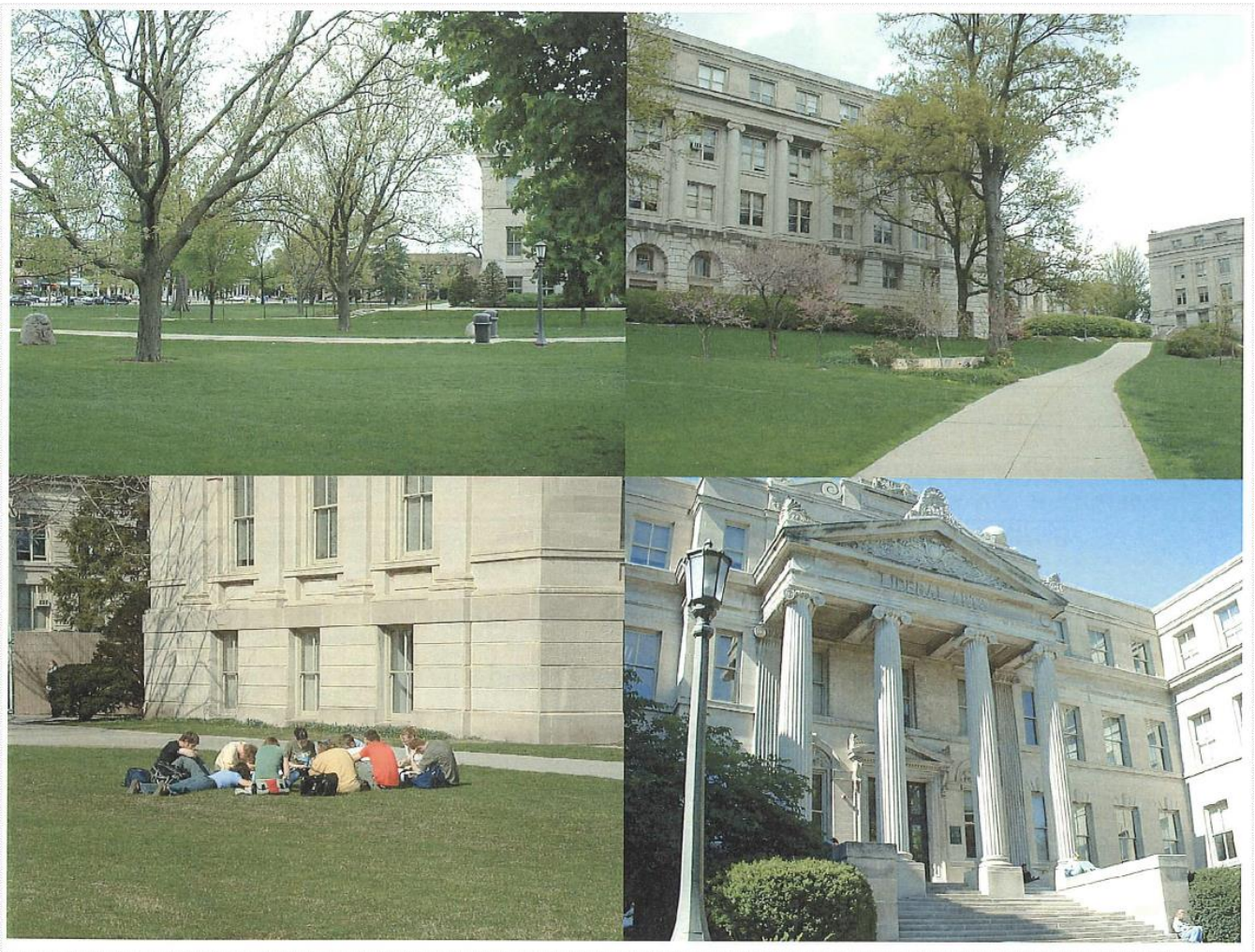


Figure 1. Examples of Outdoor Spaces on the University of Iowa Campus (Source: Chambers et. al., 2004)

In another article by van den Bogerd, et al (2018), emphasis is given to the effect of greenery on people (El-Darwish, 2022; van den Bogerd, et al, 2018; Carrus, et al, 2015; Rapoport, 2005), especially in the universities. The impact of greenery on the different groups of people and how they prefer greenery,

indoors or outdoors, as they find it more beautiful and benefits the emotional, psychological, and physical state (van den Bogerd, et al., 2018; Carrus, et al, 2015; Rapoport, 2005), were highlighted. van den Bogerd, et al (2018) also believe, that it helps people relax and distress themselves, and that greenery will be beneficial for university students, as they are always stressed, due to their studies, assignments, and exams (van den Bogerd, N., et al., 2018). In the article of van den Bogerd, et al (2018) a questionnaire was conducted, which it had some edited pictures of different spaces, showing several options of how these spaces can look like (Figure 2), and one had to select one preferred option per space. The results of the previously mentioned questionnaire, that was conducted by van den Bogerd, et al, 2018, confirm, that greenery is preferred by the majority, in different ways, indoors and outdoors, and that the majority of the university users prefer green and colorful outdoor spaces, than built campuses (van den Bogerd, et al., 2018). This questionnaire was targeting university users in eight Dutch universities. And therefore, not all university campuses can be treated the same way, having huge green and colorful outdoor spaces, due to weather constraints.

The previously published papers and articles were mainly concentrating on the seating and the greenery (van den Bogerd, et al., 2018; Welsch, et al, 2004). These two elements are considered important, but not enough to achieve an acceptable and satisfying student life on campus, as these will not fit or meet the criteria of university campuses in Egypt due to several constraints. The current work highlights the activities that can be offered outdoors, while considering additional elements, as the outdoors enables more flexible possibilities, compared to the indoors. In this study, the triad of Henri is referred to support the analysis.

Henry Lefebvre has divided the production of space into three aspects, creating a triad. These three main aspects are 1. Conceived space, 2. Perceived space and 3. Lived space (Mtolo, 2021; Salama & Wiedmann, 2012) The first aspect or dimension, which is the "conceived space," can be translated into the conceptual design created by the designer or architect of the space, which was designed based on science and can be found in the form of architectural drawings. As for the second dimension, which is the "perceived space", it is considered to be the usage of the space, that is translated into the activities taking place within the space. These activities cover all the needed activities that university users might need, such as studying, socializing, and recreational purposes. It also covers how the users move and interact within the spaces and create new networks. Moving on to the third aspect, the "lived space", is translated into "representational space", which is how the users behave towards the surrounding architectural environment, sculptures and art pieces, within the space. As per Salama & Wiedmann (2012), the users, in our case, the students and staff of the university, are the main factor or element that forms the urban space, the outdoor campus spaces, which creates the quality and identity.

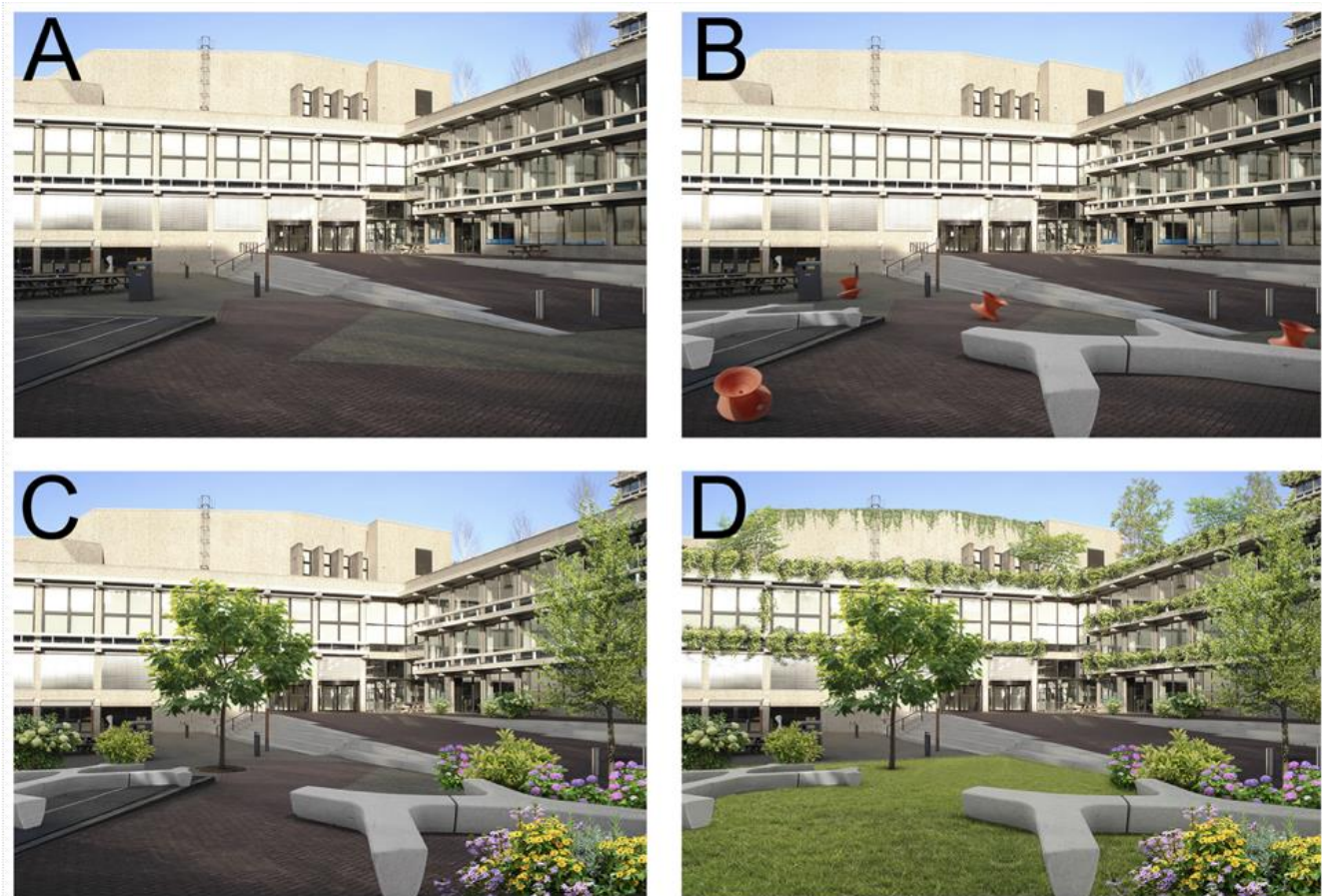


Figure 2. Example for the questionnaire's options for the outdoor spaces (Source: Bogerd et. al. 2018)

3. Case Study of the German International University

The German International University is located in the Egyptian New Administrative Capital (NAC) which is located around 35km east of Cairo and is considered one of the largest urbanization projects in the region. It has a total area of around 688 km², housing many institutions such as all the ministries, the parliament, several embassies, and their diplomatic residences in addition to several museums and theaters. It also has a large business district, which hosts a group of towers including the Iconic Tower, which is considered the tallest in Africa. The whole city is connected through a 25 km² green river. The New Administrative Capital is considered to be a well-connected city, as it is directly connected to the Cairo, Al-Suez, and Al-Ain Al-Sokhna, through highways and the currently under construction high-speed train. The construction of the first phase of the New Administrative Capital started in 2016 and is still ongoing, which is around 162 km² and includes 8 residential districts. The German International University (GIU) was planned and designed following a new approach to university campus planning, which is the "standalone campus", as its whole surrounding area has been under construction. The "standalone campus" concept is based on the idea of being self-sufficient in terms of services and facilities.

The work has been done by Welsch, et al, (2004) characterized the outdoor spaces to be easily found, which is again defined as any place, where individuals or groups can engage in any type of activity. In the current work, the concept of creating "hubs" and "hotspots" was studied and analyzed. This concept accommodates diverse and integrated activities, where these hubs and hotspots are laying in the normal daily cycle of the students and staff so that everyone should pass by them multiple times, every day for several different reasons (El-Darwish, 2022). Accordingly, the university campus planning,

as well as the rooms, scheduling, and real-life operation cycles are studied to be able to plan for the intended outdoor activities, which can serve:

1. The standalone campus or the so-called island concept,
2. The target of socialization, team building, and students and academics networking (El-Darwish, 2022),
3. Integration of normal life needs, such as food, sports, relaxing, working, socializing, etc., in one landscape design containing different hotspots, that are close and integrated with each other, and
4. Integration of seating, shading, and greenery within these hotspots and hubs in one fully integrated concept and campus masterplan. All these aspects have been considered during the designing of the GIU university campus' outdoor spaces. This new approach intentionally aims to enhance the behavior of campus users and their daily routines and activities.

3.1. Methods of Data Analysis

All the above mentioned points are very important to be considered in the design phase to create the master plan. These aspects or points have different sources. Starting with the weather, the data have been retrieved from a certified online weather website: meteoblue.com. The exact coordinates have been inserted to generate the weather forecast, as well as the weather history of this specific site. As for the students' behavior, the data has been gathered and collected through observation and mapping. These data were later on translated to visual/illustrated maps.

3.1.1. Weather

The weather including the temperature, sun, and wind at the GIU's location has been studied and analyzed carefully during the whole year, paying special attention to the period of the academic calendar and the semesters, to examine the feasibility of which activities to be placed outdoors, when to schedule the classes as well as the gaps per faculty, group, and class through adopting alternating slots, to allow different and alternating groups of students to be outdoors and where the activities and the hotspots can be placed.

During the winter, the campus has at least 12 sunny days and 13 partially cloudy days per month. And during the summer, there are around 25 sunny days per month. As for the temperature, it varies from 37 °C and 16 °C during the summer and from 25 °C and 6 °C during the winter. Moving on to the wind, it mainly comes from the North, North-North-West, and the North-North-East directions. During the summer, the wind speed varies from >12 km/h to >28 km/h, and during the winter, the wind speed can reach >38 km/h. To conclude, the winter season has strong winds, cold but almost sunny days, and during the summer, there is some breeze to be felt, but sunny and hot days (Figure 3). Considering such an important factor, the weather, the masterplan and the design of the university campus are designed to treat such constraints.

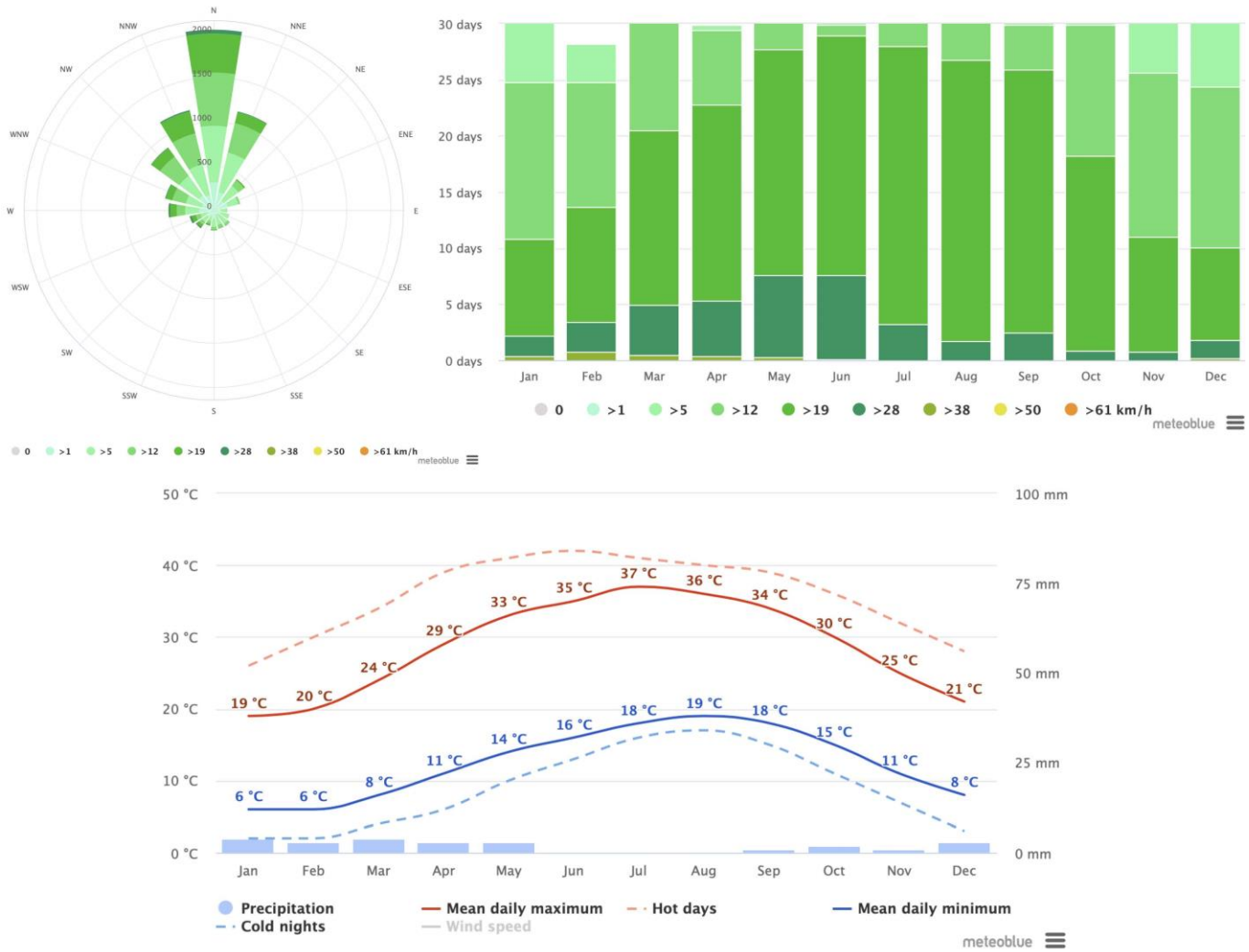


Figure 3. Weather Studies for the German International University (GIU) (Source: Retrieved from meteoblue.com)

To sum up, it can be stated that the GIU masterplan's design has considered both sun and wind screens, which was achieved through the positioning of the buildings within the layout, as shown in Figure 4, where the buildings are placed along two main axes, the southern one to act as a sun shield and offer more shade, and the northern one, which acts as a windbreaker, as it can be extremely windy sometimes.

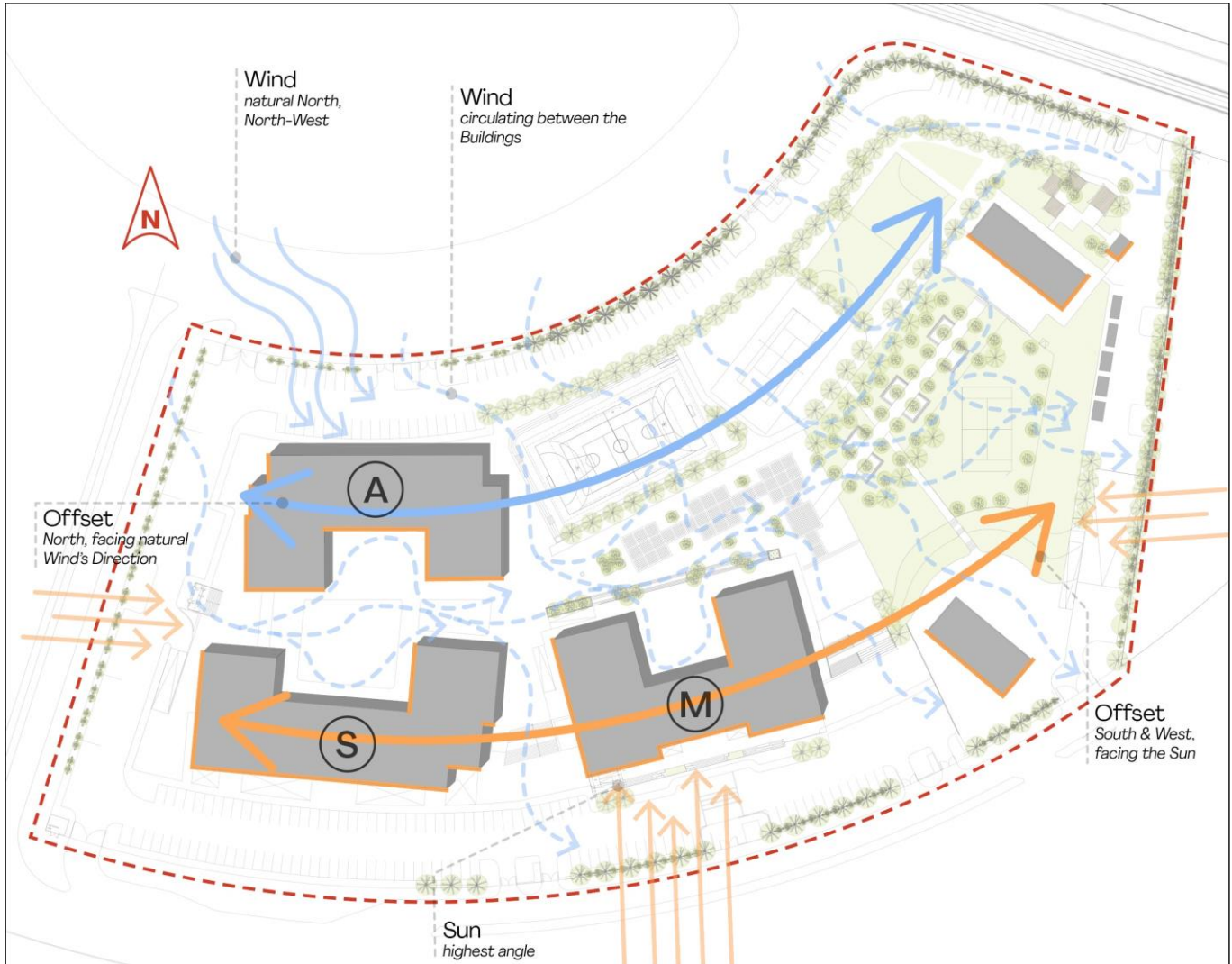


Figure 4. Weather considered in the Masterplan of the German International University (Developed Authors, 2023)

3.1.2. Students Behavior

The previous finding, together with the design mentioned above principle, a big area to accommodate an integrated hub of greenery, food, and sports on the eastern side, and another hub with less noise and distraction to be used for group work, studying, and relaxing, located in the west side by the educational buildings.

The most important aspect of studying is the students' behavior, which can be affected by the offered spaces, namely the "hubs" and their "hotspots." The youth are usually outgoing and like diversity. They dislike repeating the same activities daily and therefore require various options. These options should also be diverse so they do not get bored easily. This well-needed diversity is through offering them several activities distributed throughout the whole campus (Figure 5), as different user groups have different tastes. This aspect has been addressed by creating a new principle named the principle of multi-hubs and hotspots with diverse and integrated activities.



Figure 5. German International University (GIU) Masterplan, showing the buildings, greenery and activities (Developed Authors, 2023)

These activities are divided into five categories: (1) Studying, (2) Playing, (3) Eating, (4) Socializing, and (5) Relaxing or meditating. These categorized hubs were distributed all over the campus with different profiles, which resulted in higher possibilities of encounters between all university users. This serves the primary target, team building and achieving higher degrees of socialization, while serving the different characters and personalities, as well as achieving the campus planning purpose of having a standalone island with a vivid life. Meanwhile, the characteristics, which each hub category and its hotspot" needs are considered. The spaces for studying need to be quiet areas with low noise levels and minimum disturbances, for instance, the Technology Corridor. They also need to be shaded during the summer and well-ventilated, as well as well equipped with several power sockets and comfortable and moveable seating elements with tables.

As for the playing category, it has been treated by adding several courts for different sports, such as football, tennis, basketball, and paddle tennis. There is also a swimming pool inside one of the buildings that can be considered indoor, as well as outdoor, since three sides are glass elevations that are designed to be foldable and can be completely opened. Having this flexibility in the in-outdoor swimming pool is a great option to have and to use all year long, whether it is summer when the glass doors can be opened or closed or the winter when all the glass facades are closed. It also enables

privacy for the users, as the university offers slots for females only, so all can feel free to swim and have full privacy.

Moving on to the eating category, the campus has many food options. There are several food trucks and containers, which are considered trendy and youthful. These food outlets offer a variety of options and cuisines. There is also a fully equipped, but mobile kitchen, ready in case it is needed, and a cafeteria offering a variety of snacks and drinks. All outlets have seating in front of them, which enables the students to sit, eat and enjoy individually or in groups, while having a nice view of the different and diverse activities, such as the sports courts, greenery, and the beautiful skyline of the towers in the nearby business district. As for the last category, which is the socializing category. This category is mainly about offering the students different areas to sit, relax, and socialize together. Accordingly, the campus enables social interaction all over, whether it is sunny, or shaded, also with a view of the other activities, courts, and towers.

These categories' success is depending on several components (Figure 6), which are the 1. Seating, 2. Shading, 3. Greenery, 4. Food and beverages and 5. The activities. Considering all these components will help in maximizing the outdoor presence and the interactions between the students, with different and various background and boost interdisciplinary connections (Kaya, 2016).

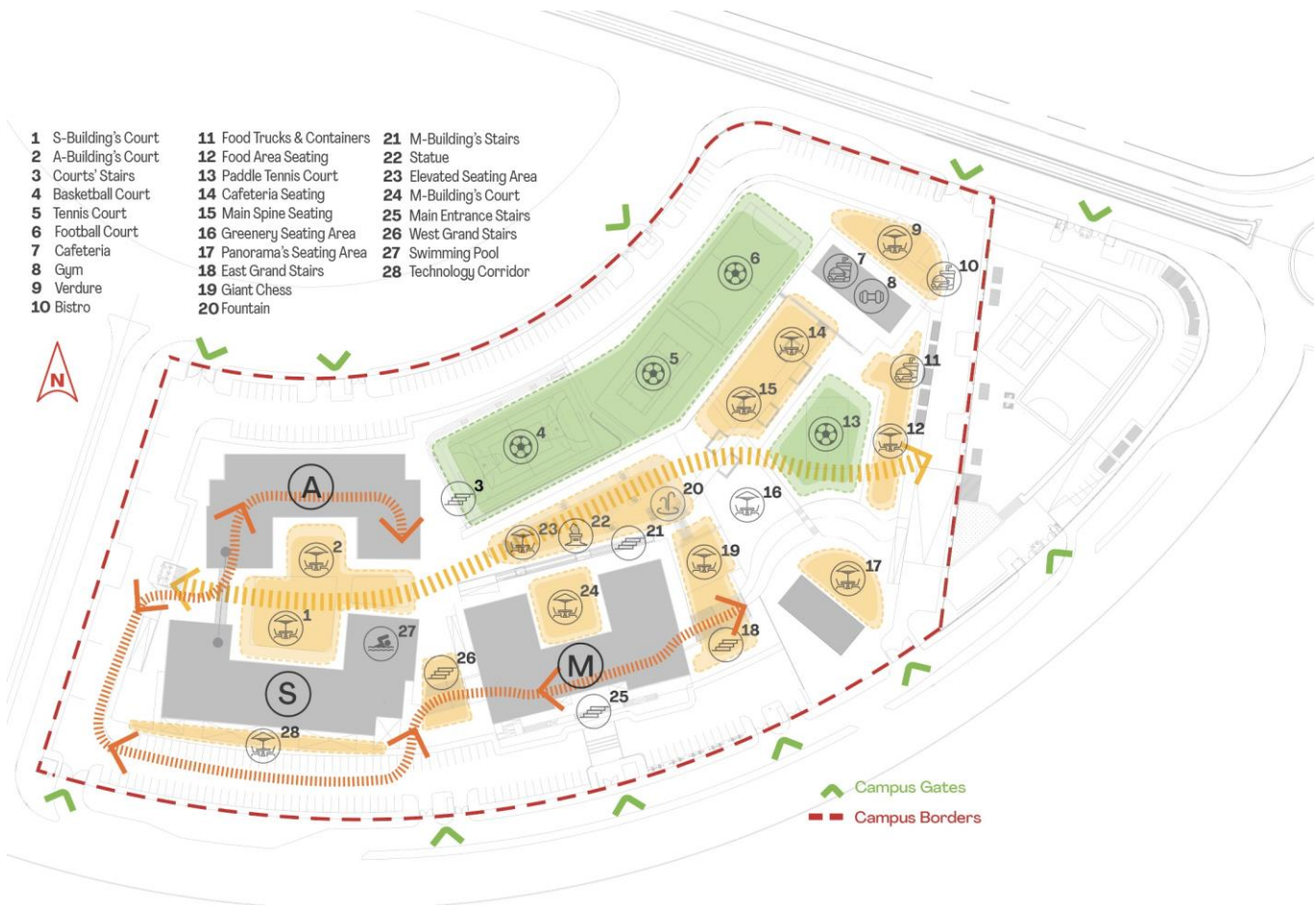


Figure 6. German International University (GIU) Masterplan, showing the buildings, main spines, greenery, activities, and hubs (Developed Authors, 2023)

As mentioned in the previously discussed readings, the seating is an important element that was divided into two categories, which are the structured and non-structured seating. As Whyte stated “forced choice is rarely chosen”, several seating options are offered on campus, where most of them are flexible. The non-flexible ones are the ones that are constructed or built, which are the outdoor stairs and stepping. These are mainly located between the buildings and in front of the court of the M-Building, as well as by the courts, to enable students to sit there and watch a game. As for the stairs between the buildings, they have a view of the towers of the business district. Stairs located by the entrance of the M-Building are also designed to be sat on, which are ideal during the winter, while sitting in the sun and protected from the strong winds, as it is located in the south. All these constructed seating, stairs and stepping, can accommodate large groups of 50 to around 150 people or even more at the same time, per stairs. As for the flexible seating, there is a variety of chairs and benches that are distributed all over the campus to offer the highest number of flexible seating possible.

Therefore, the university offers more than 1,230 outdoor seats in different typologies at the same time, which is 1:3 compared to the total number of enrolled students, excluding the structured outdoors seating as well as the indoors seating. And as the scheduling system is set to have different time slots and gaps, the offered seating elements are extremely sufficient during the breaks and gaps. This high ratio of available seating facilitates easier socialization and team or group building, as well as creating friendships. This is also achieved easily, since one can change where he is sitting, depending on the activity he is joining or even watching. There are some concentrations of seating elements that are placed strategically always to have a view of the surrounding activities. For instance, the seating spot by the Panorama Pavilion has a view of the

greenery, all sport courts, activities and the towers.

As for the seating area by the food trucks and containers have a view of the paddle tennis, greenery, and other activities. The seating placed along the main spine has a good view to all



Figure 7. German International University (GIU) Masterplan, showing the flow and concentration of users in the campus outdoor areas in three different timings during the day in winter and summer (Developed Authors, 2023)

activities, while those in the Technology Corridor see the workshops and their equipment, which can be used by all students and staff for educational reasons, for fun or to build entrepreneurs among the different specializations in engineering, design business, and others. Having flexible and movable seating elements enables the possibility for the students and academics who want to sit in extended, larger groups and for those who want to sit in smaller groups or even individually. All these seating should also have flexible options for shading. During the summer, as the weather gets warmer and sometimes hot, people cannot sit in the sun and require shading. This element has been tackled through having movable umbrellas that the students can move themselves to adjust them next to where they are sitting, as well as a fixed light structure by the "Verdure" next to the cafeteria. It has been observed that the students also sit in the shade provided by the buildings (Figure 7).

According to the questionnaire in the above-mentioned Dutch study, the greenery was found to be not only beautiful, but also has emotional and psychological benefits. Also, it was reported that the majority of university users prefer green and colorful outdoor spaces, however, in Egypt, the weather is quite different than in the Netherlands, where it rarely rains and the climate is relatively much warmer and dry. Therefore, a diversity of trees and plants have been carefully selected to be planted and added to the campus to suit the weather. Since the university's soil is loamy, the options were narrowed down to specific trees and plants, that require small amount of water, as well as stay green most of the year, especially the trees, as they are also used for shading. The concept, as mentioned before, is to have evergreen trees and plants that stay green most of the time and bloom seasonal colorful flowers, so the campus stays green and colorful all year long. The trees used are mainly local palm trees and prosopis trees, as these are considered one of the evergreen trees. As for the plants, a diversity was used, to keep the campus always green and colorful. These plants include geraniums, lantanas, red euphorbias, eucalyptus, Joshua trees, cock's combs, plumeria Albas, jasmine trees, night-blooming jasmine, African daisies, bougainvillea, and paulownias.

Moreover, the campus should offer a variety of food options to serve the different tastes, in order to be a self-sufficient standalone island campus, with all services, including a variety of food options. These options are mainly served through food trucks and containers and the cafeteria in the pavilion. There is also a fully-equipped mobile kitchen and an indoor food court that has all the needed infrastructure ready to be furnished, when needed in the future phase, and is connected to a central kitchen. It has been observed, that the youth always need to have options, to be able to change between them, as they cannot eat the same food every day and as they have different tastes. Accordingly, seven food outlets with different products are available in the Eastern hub, to serve the different tastes and moods of all students and staff members at the same time, where the students can pick their food from the different outlets and sit together to eat and socialize, meanwhile they are being entertained by the different activities surrounding them.

All these previously mentioned integrated components and elements located in the hubs and hotspots are connected together and depend on each other to achieve a successful outdoor space, in addition to the previously mentioned activities offered on campus. These activities are mainly sport oriented, such as the football, tennis, basketball, volleyball and paddle tennis courts, as well as the indoor gym and the in-outdoor swimming pool. But there are also other activities found on campus, such as the Giant Chess area, the fountain, and the newly added giant bear sculpture.

All university campus components, that were previously mentioned, are connected to each other and interlinked, specially through the students' behavior, where the students usually tend to do multiple things during their gaps or breaks or stimulated through the need to study in class or go to eat and therefore, they are crossing the different hubs couple of times during the day. For instance, some students play sports during their gap, and usually head to the food containers afterwards to grab something to eat. Meanwhile, some students go to eat, while sitting in the shade, enjoying watching the others play a football match and also socialize in a spot, surrounded by greenery or have a green

scenery (Figure 8). The activities have been placed in the campus in a way to have a balance between the different kinds offered. Not only has the placement of the different activities, but also the urban topography and the different levels within the campus created a dynamic student life, movement, and visual connectivity.



Figure 8. Picture of the eastern part of the German International University (GIU) campus, showing a part of the main axis, some food containers and trucks, the paddle tennis court, the football court and the greenery, 2022 (Photo by Authors, 2023)

3.1.3. Results & Discussion

Through conducting this research, it has been found, that there are many various aspects, which contribute in creating a university campus. Specific aspects have to be carefully studied and considered during the design phase, as well as during the operation of the campus. These vital and important aspects help and contribute in the success of the different campuses around the world. The main objective was to explore and define the main aspects to achieve successful outdoor spaces in a university campus with similar circumstances as the German International University (GIU). Every campus has its own circumstances that should be addressed, through different variables, such as the climate/weather, location and environment and the culture and the users' behavior within the space. As mentioned before, university campuses in a European country cannot be treated the same way as

campuses in the MENA region, as the weather and the cultures and traditions are not similar. As well as the location and environment, where the campus is located will help define what is needed to be offered by the university.

4. Conclusion

To conclude, there were many papers and articles regarding campuses outdoor spaces, but were limited to only one or two elements, which are considered as important as other elements, but a combination of all is needed and preferred to achieve a livable and enjoyable university campus, specifically for universities with similar situation and backgrounds.

A successful university outdoor area planning, design and operation have a direct connection with its users, in that case the students. It is very important to consider the needs of the students and staff, to create an acceptable campus life, as they spend most of their time on campus. It all starts with the real-life operation and all the needed utilities and facilities, that will allow either the integration with the university campus's surround area or in like the current case of the GIU, to apply the new approach mentioned before, that is called the "standalone island university campus", that should be self-sufficient, starting from the university's full operation and the design of the masterplan. Accordingly, a weather study should be conducted before designing outdoor landscapes and facilities, as the buildings can be used as wind and sun shields by placing them along two main rows positioned in the north and south sides of the land, as shown in Figure 4. Not only the buildings' locations but also their orientations and typologies matter. The orientation will help in the air flow and the shade.

As for the typology of the buildings, it is recommended to have U-shaped buildings to create open, but safe and shielded courts, which can eventually house some of the needed activities. A series of diverse hubs and hotspots are advisable, that should have different characteristics, as well as accommodate different functions. These hubs and their hotspots are recommended to have the following design dimensions:

1. The standalone campus or the so-called island concept,
2. The target of socialization, team building and students and academics networking,
3. Integration of normal life needs, such as food, sports, relaxing, working, socializing, etc., in one landscape design containing different hotspots, that are close and integrated with each other, and
4. Integration of seating, shading, greenery within these hotspots and hubs in one fully integrated concept and campus masterplan.

It is worth noting, that by praxis, this concept is found to be successful and has achieved its goals in both directions, the standalone, self-sufficient, vivid campus, as well as the team building, socialization and the feeling of belonging. In this paper, some important variables and aspects have been mentioned, but there are still many others, that also contribute in the success of a university campus. These aspects should also be analyzed and studied further, such as how the movement and flow of people between the tutorials and slots affect the outdoor spaces within the campus.

Conflict of Interests

The author declares no conflict of interest.

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