



DOI: <https://doi.org/10.38027/ICCAUA2025EN0019>

Quality of Student Life: Factors Affecting Students' Perception and Use of a University Campus Built Environment

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Abstract

Received: 29 January 2025
Revised: 7 June 2025
Accepted: 18 June 2025
Available online: 5 July 2025

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This article has been selected and peer-reviewed for publication in this journal as part of the 8th International Conference of Contemporary Affairs in Architecture and Urbanism, held on 8–9 May 2025 in Alanya, Türkiye.

This paper aims to explore how the built environment of a university campus influences the quality of life of its students, the author investigated students' perception and attitudes towards the use of various spatial components and outdoor open space of the campus to identify influential factors, including buildings layout, physical features, and outdoor thermal conditions, as well as students' needs and behaviour. Students from (3) faculties within Jazan University Campus in Jazan city (Saudi Arabia) were used for the case study. The methodology included literature review about quality of life and campus design requirements, an electronic questionnaire, and on-site visual observations to record students uses and interactions with the surroundings. The findings provide valuable insights for planners and administrators to understand the factors that influence the students' perception to enhance their student's quality of life. Further studies are recommended to explore these factors in different contexts.

Keywords: Quality of Life ; University Campus ; Built Environment ; Student Quality of Life; Spatial Quality.

1. Introduction

The built environment of a university campus influences student attraction and behavior (Hanan, H. ,2013)¹. Several researches asserts that the physical campus environment has remarkable impact on students' collegiate experiences (Smith, P.,2000)². The components of a university campus include buildings, open spaces and all the essential infrastructures needed to function effectively, it is an institutional place used for education as the primary activity for a large number of users (Ahmed,M. ,2023)³. The provision of integrated outdoor spaces suitable for social interactions such as open spaces, paths, and routes in campuses have positive impact on the sense of belonging and enhance students life (El-Darwish, 2021)⁴. A well-designed campus plays an important role in students' educational experiences (Alnusairat et al., 2021)⁵, and influence the image of the university. The perception of a university's image is an important factor in attracting new students and fostering a sense of pride and loyalty within enrolled student (Dinh, 2021)⁶. The availability and quality of modern campus facilities and amenities play a vital role in student satisfaction and contribute to the quality of life of students. University image and reputation is about the quality of education, in addition to the attractive and conducive built environment it provide for students, therefore most universities compete in creating unique lively spaces in their campuses to provide memorable experiences for students.

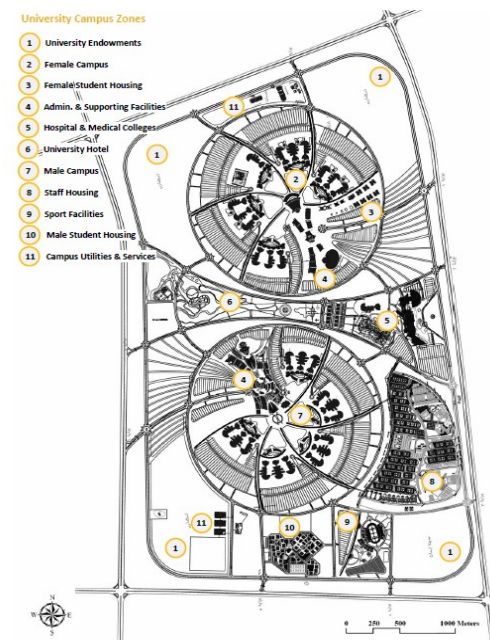
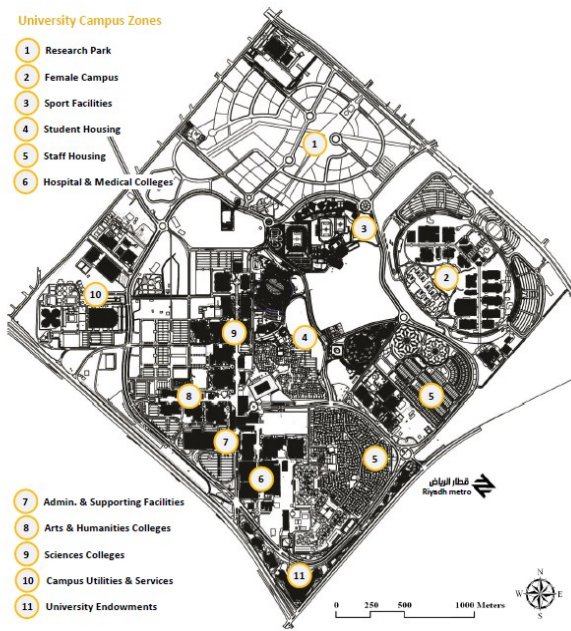
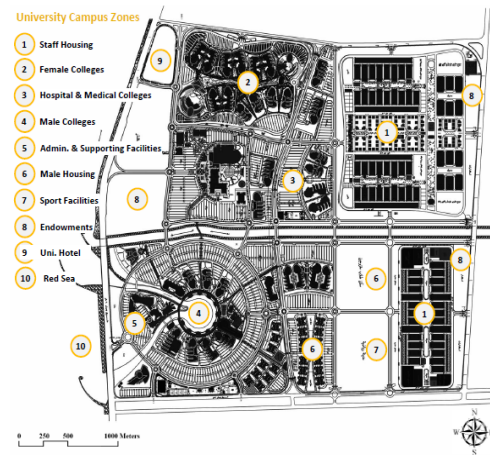
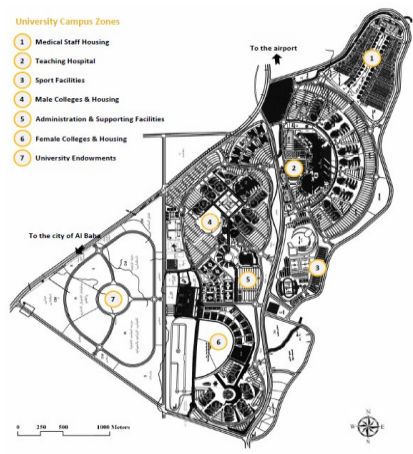
The quality of life (QoL) is a multidimensional term (Gür, 2024)⁷, It is linked to individual assessment of their overall satisfaction about life circumstances and standards of living. (QoL) reflects the physical and psychological well-being of individual during a specific timeframe. The term university life quality (ULQ) describes students satisfaction with university life (Kesici & Çavuş, 2019)⁸. The quality of life of university students is described as an indication of the subjective sense of well-being students experience in the specific social context of the university (Roberts and Clifton,1992)⁹. University life quality is a multi-dimensional phenomenon with institutional, physical and psychological dimensions (Yılmaz, 2019)¹⁰.

This paper aims to explore how the built environment of a university campus influences the quality of life of its students, the author investigated students' perception and attitudes towards the use of various spatial components and outdoor open space to identify influential factors, including buildings layout, physical features, and outdoor thermal conditions,

as well as students' needs and behaviour . Students from (3) faculties within Jazan University Campus in Jazan city (Saudi Arabia) were used for the case study.

1.1 University campuses in Saudi Arabia

In the context of Saudi Arabia , governments invested heavily in education (Sait, S.M. , 2013) 11 , the strategy focuses on expansions of existing universities and the construction of new ones , more than 20 new campuses and other satellite extensions campuses to existing ones were constructed in the last two decades. The Kingdom has about 30 public universities, 12 private and civil universities, with a total of 42 universities, in addition to approximately 13 public, and private colleges, and 7 military colleges. The Ministry of Education was responsible for managing centrally the first stage of planning, design , and construction of the main campuses and satellite campuses of these recently established universities . The construction of new campuses was implemented in phases, in each phase a couple of college buildings and some supporting facilities were built , campuses were developed as a mini-city , each main campus includes college buildings, a hospital, science park, sports and recreational facilities, staff housing, student dormitories, and other supporting facilities (Alghamdi, N. ,2018) 12.



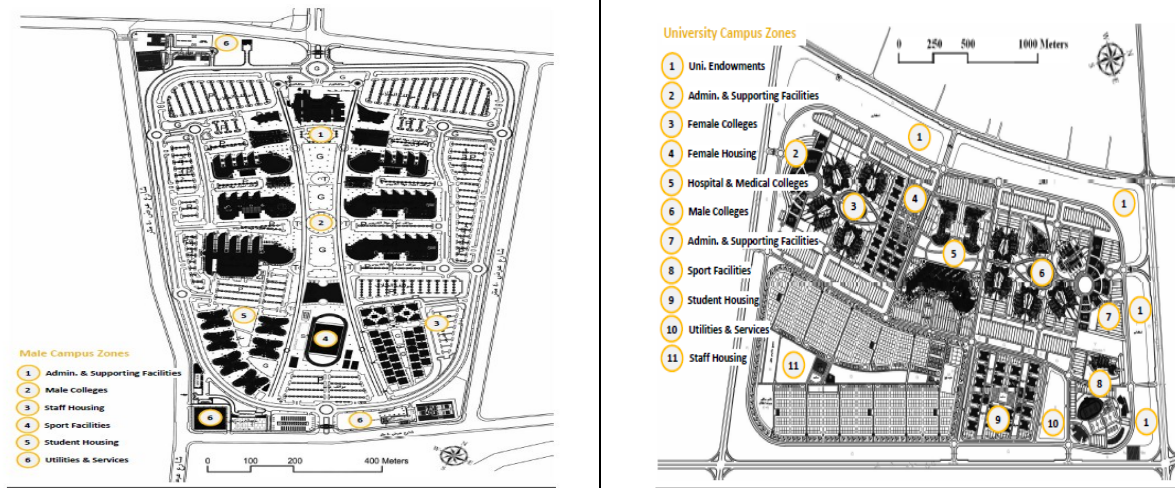
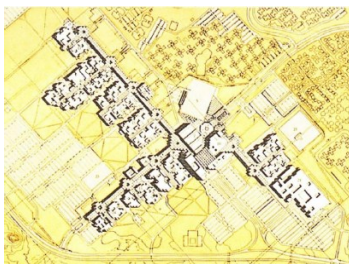


Figure 1. Master Plans of Saudi Universities constructed between (2003-2024) , Source: (Alghamdi, N. ,2018)12.

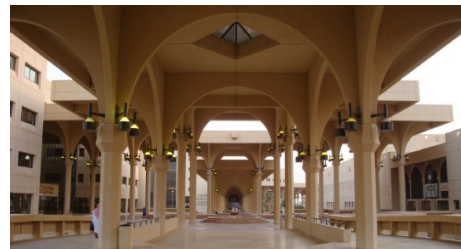
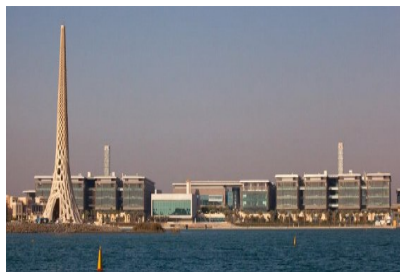
2. Components of the built environment of a university campus

The built environment is described by (McClure & Bartuska, 2011)13 and (Safiullah & Sharma, 2017) 14 as a man-made , arranged , or maintained physical environment to fulfil users needs and values. It has seven interrelated components: products, interiors, structures, landscapes, cities, regions, and Earth. The Built Environment (BE) is the physical manifestation of a space designed for human occupancy. According to (El-Darwish, 2021)4 the physical components of a university campus are buildings, roads , and spaces , while (Gür, 2024b)7 described university campus components to include faculty buildings, social and recreational facilities, dormitories, cafes, shops, common areas, green spaces, and pedestrian and vehicle roads. In the context of the framework of this research, the built environment of a university campus includes man-made physical components that provide the setting for human activity, usually in a gated urban fabric , It can be categorized into:

- 1- Building blocks :
 - Building blocks : academic colleges, administration , staff housing, student dormitories, and other supporting facilities.
 - Internal covered courtyards or atrium.
- 2- Outdoor spaces :
 - Road networks.
 - Open spaces (plazas).
 - Pedestrian walkway network.
 - Green open spaces and landscape.
 - Parking lots.
- 3- Infrastructure and services networks:
 - Sanitary systems.
 - Electricity service networks.
 - Water supply networks.



King Saud University (KSU)15





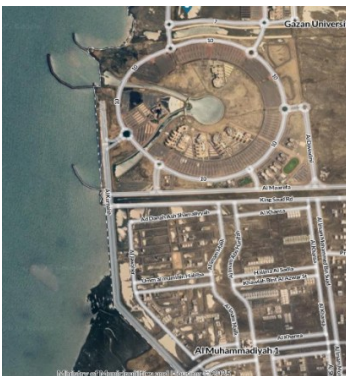
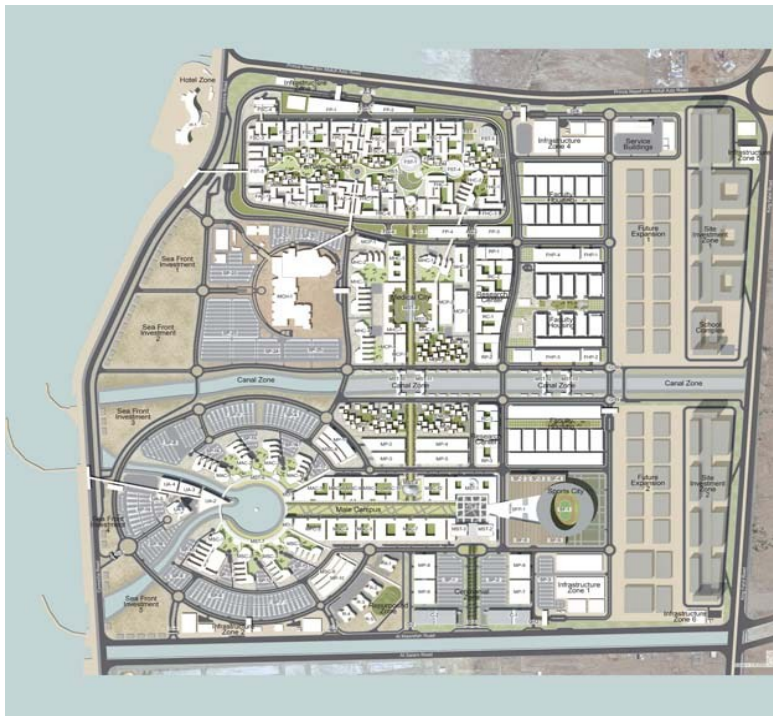
Qasim University 16



Prince Sattam University 17



Figure 2. Examples of Components of The Built Environment of Saudi Universities, Source: (Official Universities Websites).



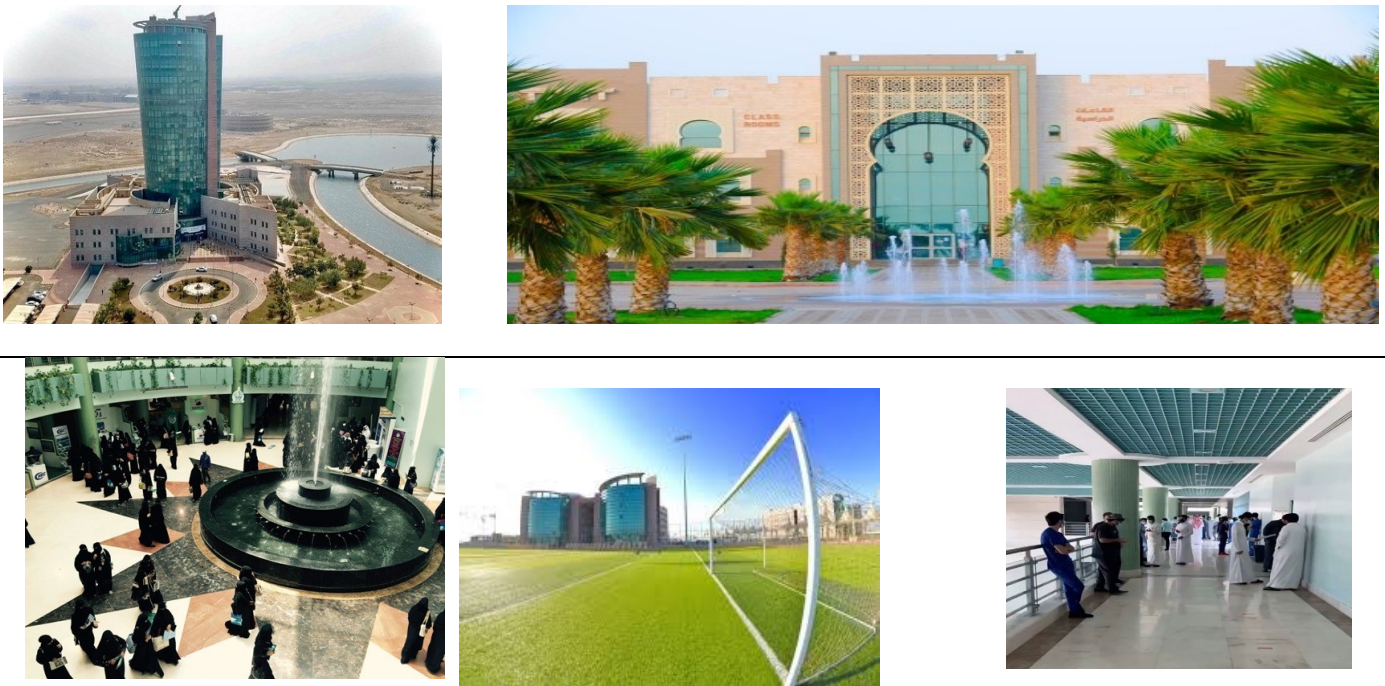
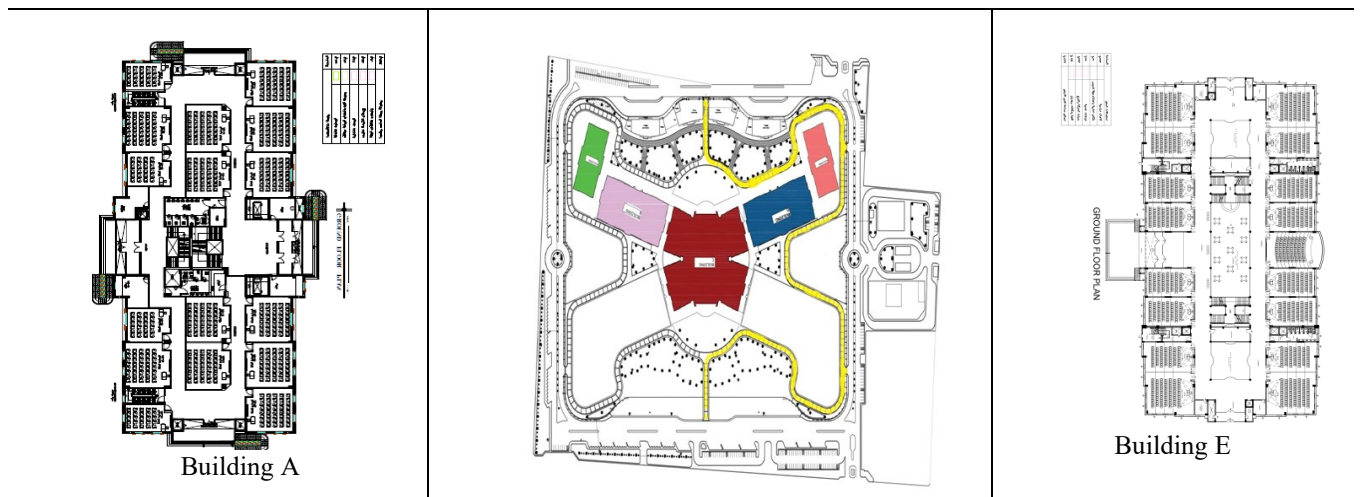


Figure 3. Jazan University campus , Jazan , Saudi Arabia.

3. Materials and methods

3.1 Case study

The educational campus used as case study is Jazan university campus for girls in Mahlia in Jazan city , Saudi Arabia. It is one of the satellite campuses of Jazan University . Jazan University has a main central campus that rests by the Red Sea on the southwest coast of Saudi Arabia, but Mahlia campus for girls is located in Mahlia neighbourhood 15 km from Red sea coast. It is a gated campus surrounded with two fences separated by a buffer zone with high walls to provide privacy for female users inside the inner zone of the campus. The external fence has three main gates leading to parking areas and services blocks (air conditioning plants , electricity and emergency standby generators). The inner fence has five gates leading to the inner courtyards and green landscape areas. The campus comprises five blocks accommodating approximate (12000) female students and staff , with a total approximate area of 270000 square meters. The building blocks (A,B,C,D,E) are medium rise (3 floor) with covered internal courts arranged in a fan shape layout with main central block at the centre. Fig(3), (4) .



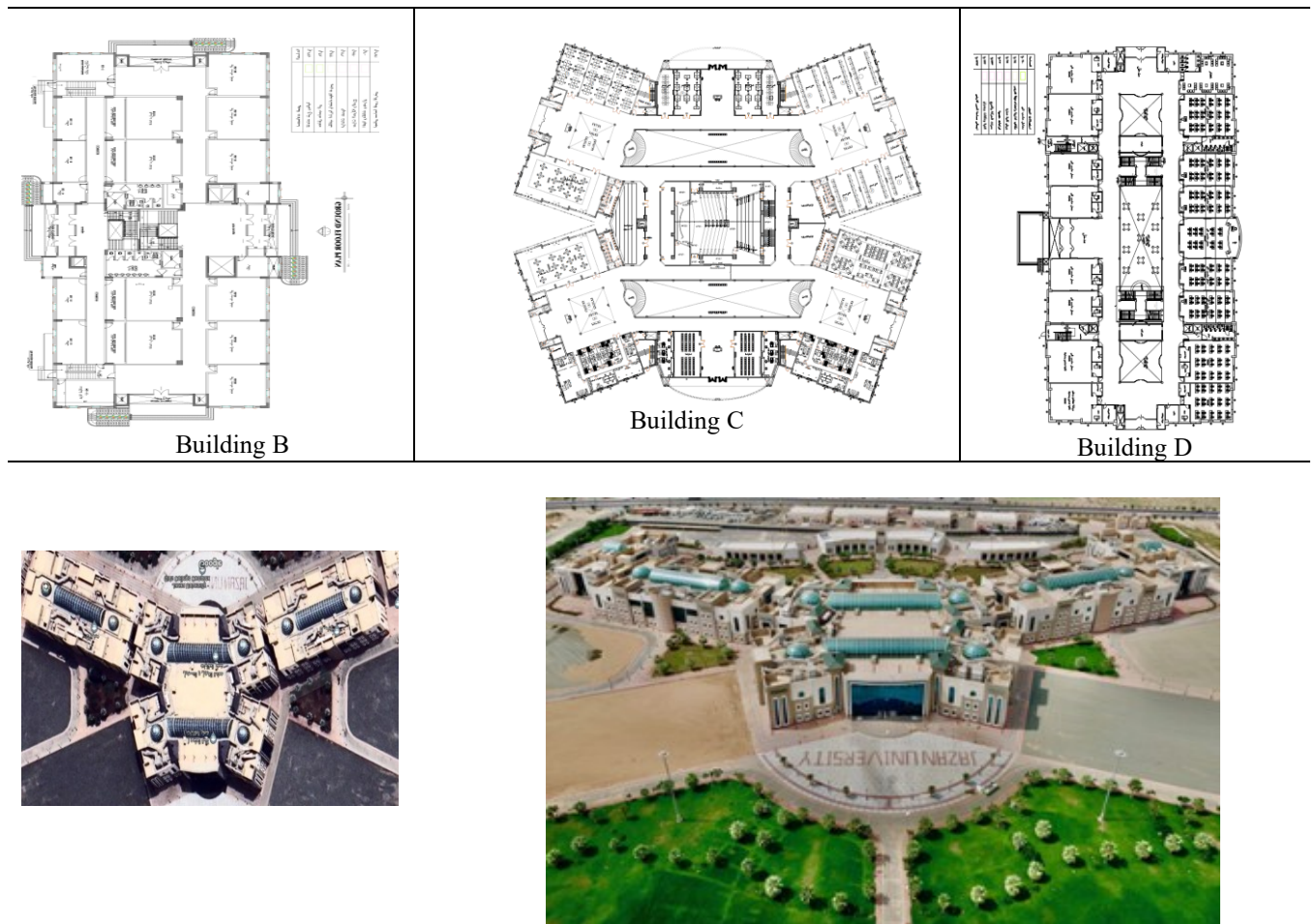


Figure 4. Layout of Mahlia Campus for Girls -Jazan University -Saudi Arabia.

3.2 Methods

The methodology employed in the study included :

- 1- Literature review about Quality of Life ,and university campuses in Saudi Arabia.
- 2- Site visits and visual observations to record students uses and interactions with the surroundings :
The researcher conducted several on site observation visits to Jazan University main campus, and three of the satellite girls' campuses: academic campus1, academic campus 2, and Mahlia campus during the period (Dec.2024- March 2025) .The main objective of the multiple site visits is to observe how students behave and interact with the campuses built environment components “behavior patterns” on various occasions to have “subjective assessments”, and provide clues to understand what is actually happening .The visits were done at different time periods , and were supported by a desk research (satellite images, arial photos of the campuses). The documentation of data collected from site visits are sketches and illustrated architectural plans.
- 3- An electronic online questionnaire:
An electronic online questionnaire was employed to measure the student’s perception and use of the university campus built environment and the overall satisfaction about students’ quality of life. The questionnaire was developed based on literature review (Ibrahim et al., 2012)18, (Haron et al., 2015)19, (Nosair, E. et al.,2015)20 , (Ajibua, A. and Onanuga, O.A. , 2020)21 , (Mathew O, U. 2023)22 , (Sari, E. & Bükün, M.F ,2023)23 , (Dodd, A.L. et al. , 2024)24 , (Gür, 2024)25 . The questionnaire is divided into 9 sections :
 - Personal characteristics: includes 14 question to collect personal characteristics data about respondents.
 - Satisfaction with education spaces : includes 12 questions to measure students satisfaction with educational spaces , based on 5-points Likert scale (strongly agree=5, Agree=4, Neutral =3, Disagree=2, Strongly disagree=1)
 - Satisfaction with outdoor components of the campus : includes 4 questions to measure students satisfaction with outdoor open spaces and landscape , based on 5-points Likert scale.
 - Satisfaction with facilities: includes 7 questions to measure students satisfaction with outdoor open spaces and landscape , based on 5-points Likert scale.
 - Accessibility and satisfaction with transportation: includes 3 questions to measure students satisfaction with outdoor open spaces and landscape , based on 5-points Likert scale.
 - Satisfaction with academic development and administrative management: includes 3 questions to measure students satisfaction with outdoor open spaces and landscape , based on 5-points Likert scale.
 - Overall Satisfaction with university life quality : includes 7 questions to measure students satisfaction with outdoor open spaces and landscape , based on 5-points Likert scale.

- Students use of the university campus : includes 4 questions about the activities and uses of the different components of the campus.
- Students’ needs and requirements: includes multiple choice questions , to select the most important criteria to be provided in campus built environment components from students point of view.

The questionnaire was distributed electronically using Google forms , a QR code was sent to randomly selected 60 female students currently enrolled in courses taught in the selected campuses during the period of Dec2024 – march 2025. The results were analyzed , and the quality of the components are related to satisfaction level , the author adopted (Aydin & Ter, 2008) 26 Gap width of Quintet Likert Scale .

4- In-Depth interviews:

The author conducted semi-structured interviews with 3 female students in their fourth year of study in interior design program . The author selected the three students from studio design course because they were willing to participate to share their feelings, opinions in greater depth about Mahlia campus built environment. The interviews took place on 2nd March 2025 at building A room No. (AF-09).

4.Results

4.1 Characteristics of respondents

The personal characteristics shown in Table 1 reveal that 100% of the respondents were female as the case study took place in females academic campuses. The distribution of age groups of respondents shows the majority are (22-24) years old with 60% , accordingly the majority of the respondents were in their semi or final years 52% . Regarding marital status, 10 % were married , 88.3 % were single, and only 1.7% were divorced or widow. The Saudi nationals were 88.3 % of the participants , and 11.7% were non Saudi. The high income level were 63.3% , medium income 26.7% , and only 10% were low income level students. Most of the respondents were from Jizan city 93.3% , and 6.7% were from other cities. In addition, 98.3% live at home with family , and only 1.7% live in the university dormitories .The mode of transportation shows that 80% use private car , and only 20% use public transportation. 65.7% of the students were from College of arts and humanities, 20% from the Faculty of engineering and computer sciences, 10% from the Faculty of medicine /Heath studies, 6.7% from the Faculty of science. Regarding the location of study , 75% study at Mahlia Girls campus, 16.7% study at main university campus , and only 1.7% study at academic campus 1&2, and medicine campus.

The reasons for the participants preference of Jazan university 51.7% choosed the university because their family or close friends live in Jazan, and 21.7% find it more attractive to study at Jazan University , 5% because there are more job opportunities as a student and after graduation , 3.3% because of the academic reputation , 11.7% because of their school exam score were enough for here. Reasons for choosing specialization (faculty) shows that 46.7% Because it’s their dream job, 16.7% to be close to family and friends, 10% because there are more job opportunities after graduation, 11.7 % because of their school exam score , while 15% for other reasons.

Table 1. Personal characteristics of respondents.

Variable	Group	n	total	%
Gender	Female	60	60	100.0
	Male	0	60	0.0
Age	16-18 years	4	60	6.7
	19-21	19	60	31.7
	22-24	36	60	60.0
	> 25	1	60	1.7
Level of study	First year	3	60	5.0
	Second year	10	60	16.7
	Third year	3	60	5.0
	Fourth year	31	60	51.7
	Final year	13	60	21.7
Disabilities	Yes	10	60	16.7
	No	50	60	83.3
Marital status	single	53	60	88.3
	married	6	60	10.0
	Divorced/widow	1	60	1.7
Nationality	Saudi	53	60	88.3
	Non Saudi	7	60	11.7
Income level	Low < 3000	6	60	10.0
	Medium (3000-8000)	16	60	26.7
	High (>8000)	38	60	63.3
City of permanent residence	Jizan	56	60	93.3
	Other	4	60	6.7
Type of housing	At home with family	59	60	98.3
	University dormitory	1	60	1.7
	Private apartment with other students	0	60	0.0
Mode of transportation	Private car/vehicle	48	60	80.0
	Public transportation	12	60	20.0
	On foot	0	60	0.0
	Faculty of medicine /Heath studies	6	60	10.0

Faculty of study	College of arts and humanities	34	60	56.7
	Faculty of engineering and computer sciences	12	60	20.0
	Faculty of science	4	60	6.7
	Other	4	60	6.7
The campus	Main University campus	10	60	16.7
	Mahlia Girls campus	45	60	75.0
	Academic campus 1&2	1	60	1.7
	Medicine campus	1	60	1.7
	Other	1	60	1.7
Reason for choosing Jazan University	I find it more attractive to study at Jazan University	13	60	21.7
	The academic reputation of Jazan University	2	60	3.3
	There are more job opportunities as a student and after graduation	3	60	5.0
	My school exam score was enough for here	7	60	11.7
	My family and /or close friend live here	31	60	51.7
	Other	4	60	6.7
Reasons for choosing your specialization (faculty)	To be close to family and friends	10	60	16.7
	Because it's my dream job	28	60	46.7
	Because there are more job opportunities after graduation	6	60	10.0
	My school exam score was just enough for here	7	60	11.7
	Others	9	60	15.0

4.2 Students' perception and satisfaction with the campus built environment components

Student's satisfaction with the the campus components summary :

- 1- Students satisfaction with education spaces: The results show that the overall students satisfaction with the education spaces is 3.90 which is considered as a good value . Most of the respondents were satisfied with the lay out of the building blocks and the architectural design of the blocks . The respondents rating of the internal environment considering the acoustic ,lighting , thermal , organization , furniture and equipments were relatively the highest among the other variables , which is expected to positively influence the quality of students life , it is considered as crucial (Gür, 2024)²⁷ within the context of the built environment of a university campus and for student QoL .
- 2- Students' satisfaction with outdoor components of the campus : Considering the hot humid climate of Jazan region , the outdoor components of the campus are considered of high importance and necessitate careful measures to provide comfortable conditions for students in their daily experience of passing through buildings and using the space between buildings . these outdoor spaces are more valuable for campus life in hot humid regions. The results show that the overall students satisfaction with the outdoor components of the campus is 3.46 which is considered as a good value , although it ranked as the least score recorded in results . Students have made remarks on the need for shaded outdoor pedestrian path in Mahlia campus , similar to those in the main campus .
- 3- Satisfaction with facilities and services : The results show that the overall students satisfaction with the facilities and services is 3.68 which is considered as a good value . Most of the respondents perceived the campus as clean and well maintained with 4.22 score . The respondents rating of Indoor sports facilities ,Club facilities , food and beverage facilities , Recreational activities , health services offered by the university, were relatively high with more than 3.5, which is expected to positively influence the quality of students life
- 4- Satisfaction with accessibility and transportation: The results show that the overall students satisfaction with accessibility and transportation is 3.81 which is considered as a good value.The majority of respondents perceive the campus as a walkable campus , they can reach most places on foot . It is also perceived as accessible for the majority of students and the transportation facilities are adequate and affordable.
- 5- Satisfaction with academic development and administrative management : Student's perception and satisfaction with academic development and administrative management overall score is 3.86 which is considered as a good value.Most of the participants are satisfied with the quality of lectures , the academic programs , and the administrative staff .
- 6- Overall Satisfaction with university life quality : The results show that the overall satisfaction with university life quality score is 3.81 which is considered as a good value. The majority of the respondents feel safe in the university built environment with the 4.17 score , while the satisfaction with the campus life score is 3.83 . Regarding the satisfaction with the university life it scored 3.77 , and most of the respondents feel as a member of the a member of the university with 3.85 , and the score of feeling happy to belong to the university is 3.78. As for recommending the university to someone else the score is 3.75 , while choosing the university again score is only 3.52 .

Table 2. The summary of the overall students’ satisfaction with the campus built environment components.

Dimension	Score
Satisfaction with education spaces	3.90
Satisfaction with academic development and administrative management	3.86
Overall Satisfaction with university life quality	3.81
Accessibility and satisfaction with transportation	3.81
Satisfaction with facilities	3.68
Satisfaction with outdoor components of the campus	3.46
The overall students’ satisfaction with the campus’ built environment components	3.75

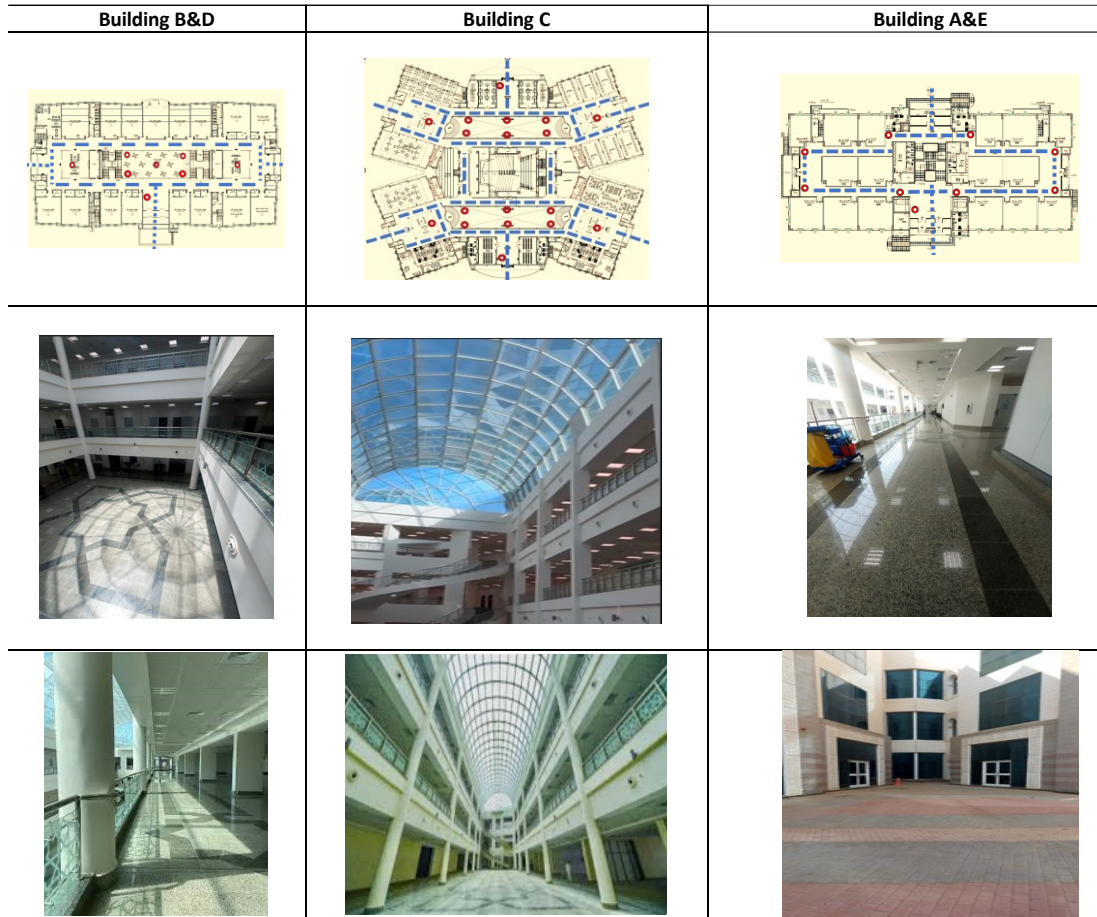


Figure 5. Internal covered courtyards and atrium in Mahlia Campus.



Figure 6. Outdoor components of the campus.

4.3 Students usage of the university campus

The questionnaire included 4 questions to investigate students preferences and usage of the various components of the university campus. , Four types of spaces were investigated:

- 1- Internal courts inside buildings:
46.67 % of students enjoy having a group study and discussion in internal courts inside building , and 56.67 % of them use these courts as a waiting place for the next lecture. There are significant numbers of students 51.67% who have lunch break , eat or have coffee in internal courts , while 48.33% use them for sitting and chatting with friends, and 40% for social media browsing , and 20% use them for walking and sports. Only 15% reported of not using these spaces and 11.67% of rarely using them.
- 2- Corridors and small lobbies inside buildings:
31.67 % of students enjoy having a group study and discussion in corridors and small lobbies inside buildings, and 65 % of them use these spaces as a waiting place for the next lecture. 35% who have lunch break , eat or have coffee, or for sitting and chatting with friends, and 31.67% for social media browsing, and 13.33% use them for walking and sports . Only 11.67% reported of not using these spaces and 15% of rarely using them
- 3- outdoor green spaces
62% use outdoor green spaces to enjoy nice weather , and 57 % enjoy sitting and chatting with friends , while 40% use outdoor open spaces for eating and having coffee . 42% use outdoor green spaces to have a quite moments alone , and 30% for social media browsing. 17% reported of not using these spaces and 20 % of rarely using them
- 4- outdoor open spaces allocated along the main axis
35% use outdoor open spaces allocated along the main axis for walking and sports , and 31.76 % to enjoy nice weather , while 23.33% prefer to use it for awiting for lectur . 20% of students enjoy eating and having coffee in these spaces . 16.67% use outdoor open spaces to have a quite moments alone , and 21.67% for social media browsing. Noticably the highest rate for not using outdoor open spaces allocated along the main axis and 21.67 % , and 23.33% of rarely using them , this high rate is related to the harsh weather of the region in summer times.

Table 3. Students usage of the university campus.

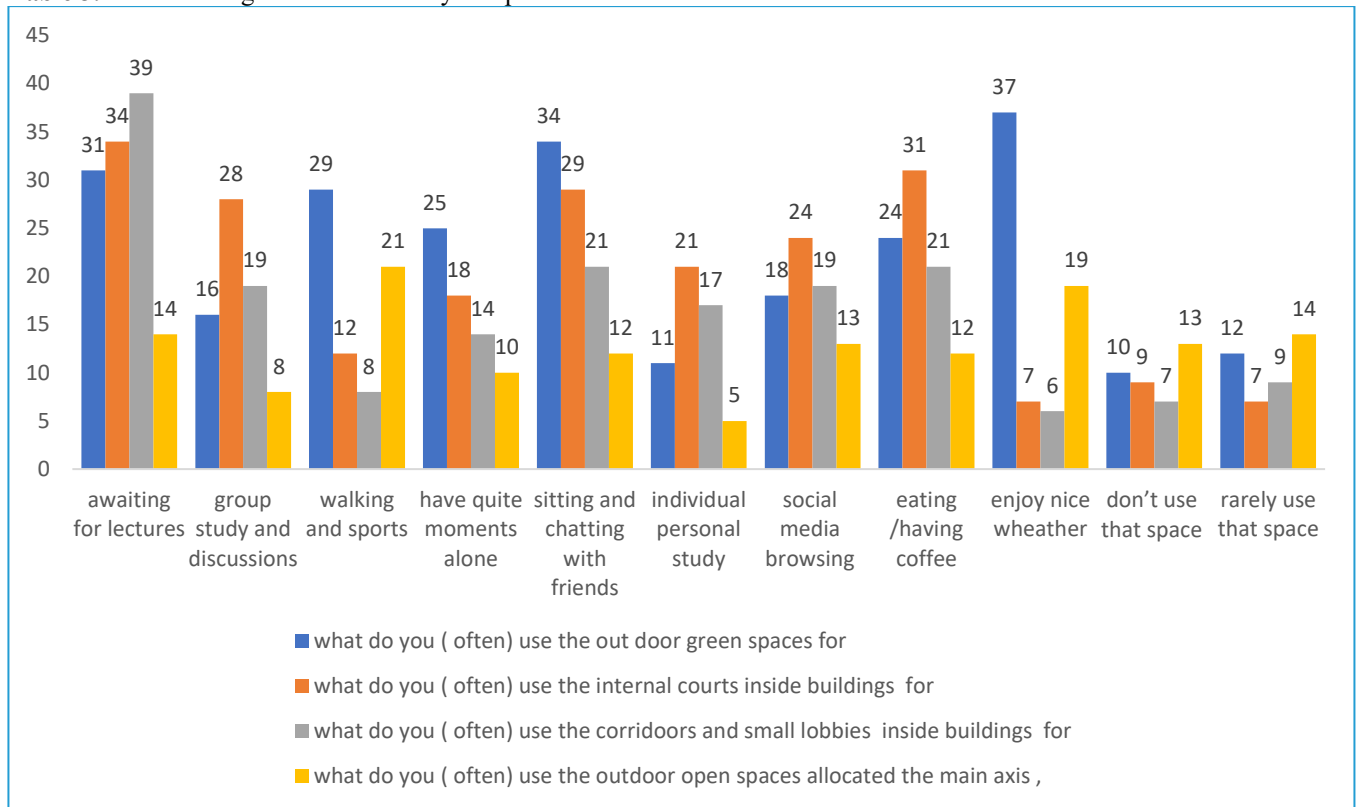


Figure 7. Students usage of the university campus built environment components.

Campus components		Students usage of the university campus										
		awaiting for lectures	group study and discussions	walking and sports	have quite moments alone	sitting and chatting with friends	individual personal study	social media browsing	eating /having coffee	enjoy nice wheather	don't use that space	rarely use that space
internal courts inside buildings	n	34	28	12	18	29	21	24	31	7	9	7
	%	56.67	46.67	20.00	30.00	48.33	35.00	40.00	51.67	11.67	15.00	11.67
Corri doors and small lobbies inside buildings	n	39	19	8	14	21	17	19	21	6	7	9
	%	65.00	31.67	13.33	23.33	35.00	28.33	31.67	35.00	10.00	11.67	15.00
outdoor green spaces	n	31	16	29	25	34	11	18	24	37	10	12
	%	52	27	48	42	57	18	30	40	62	17	20
outdoor open spaces allocated along the main axis	n	14	8	21	10	12	5	13	12	19	13	14
	%	23.33	13.33	35.00	16.67	20.00	8.33	21.67	20.00	31.67	21.67	23.33

4.4 Students’ needs and requirements

The respondants students were asked to select the most important qualitative criteria they need in the various campus components , to create the desired space quality for their activities , the qualitative criteria are categorized as :

- Functional : comfortable seating , well organized , clean , quite no crowds:
The results shows that the majority of respondents considered comfortable seating and well organized furniture as the most important qualitative criteria needed in the varios campus components with 80% for the activity of a waiting for lectures , and 70% for group study and discussions , and also 70% for the activities of eating and having coffee. Most of the students 60% required clean spaces for eating or having coffee, While preferring to have quite and no crowds for group study and discussions 51.7% , and 53.3% for individual personal study.
- Environmental : thermal comfort , natural lighting , shading.

The results shows unexpected lower rates for thermal comfort and shading as the respondents with an average of 15-35% for indoor and outdoor activities , while natural lighting scored a little higher rate with an average of 15-45% .

- Esthetical : green , nice view

The results shows that most of respondents considered green and nice view as the most important qualitative criteria needed with 51.67% for the activity of enjoying nice weather , and 46.67 % for walking and sports . 35% needed green and nice view for the activity of having a quite moments alone .

Table 4. Students’ needs and requirements.

Students’ needs and requirements								
Criteria needed in the space for the following activities		comfortable seating / well organized	clean	quite no crowds	thermal comfort	shading	natural light	green / nice view
a waiting for lectures	n	48	29	26	20	12	19	16
	%	80.00	48	43.3	33.33	20	31.67	26.67
group study and discussions	n	42	31	31	16	9	18	12
	%	70.00	52	51.7	26.67	15	30.00	20.00
walking and sports	n	26	28	12	21	19	15	28
	%	43.33	47	20	35	31.67	25.00	46.67
have quite moments alone	n	41	29	24	20	12	20	21
	%	68.33	48	40	33.33	20	33.33	35.00
sitting and chatting with friends	n	41	32	13	15	10	14	20
	%	68.33	53	21.7	25	16.67	23.33	33.33
individual personal study	n	41	29	32	18	11	19	14
	%	68.33	48	53.3	30	18.33	31.67	23.33
social media browsing	n	40	23	17	18	15	12	15
	%	66.67	38	28.3	30	25	20.00	25.00
eating /having coffee	n	42	38	19	17	14	27	22
	%	70.00	63	31.7	28.33	23.33	45.00	36.67
enjoy nice Weather	n	36	23	16	11	19	22	31
	%	60.00	38	26.7	18.33	31.67	36.67	51.67

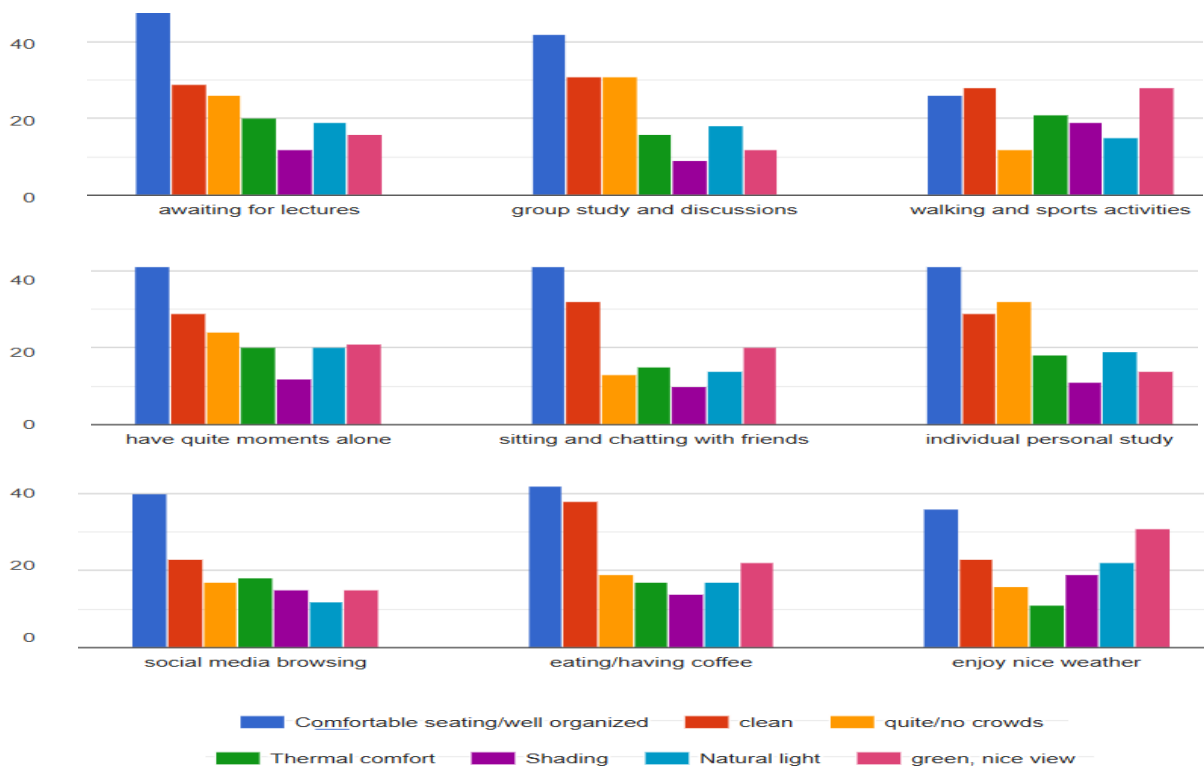


Figure 7. Students' needs and requirements.

5. Discussion

The research main objective is to investigate students' perception and attitudes towards the use of various spatial components and outdoor open space to identify influential factors, including buildings layout, physical features, and outdoor thermal conditions, as well as students' needs and behaviour. Based on collected and analyzed data, the results and findings highlight the following points:

- 1- The data collected from the evaluation of questionnaires reveals that the sub-dimensions with the greatest to least effects on students' satisfaction and quality of life are: students satisfaction with education spaces, satisfaction with academic development and administrative management, satisfaction with accessibility and transportation, satisfaction with university life quality, satisfaction with facilities and services, and satisfaction with outdoor components of the campus.
- 2- A notable finding is that the female students agreed on a relatively high score 4.17 for feeling safe inside the university campus, and also high score for feeling happy to belong to the university 3.78. The majority of students have a strong feeling of belonging to the university and they feel as a member of the university with 3.85 score. Most of the respondents confirmed they would choose the same university again if they face the choice again.
- 3- satisfaction with building blocks with covered internal courtyards: Students preferred gathering locations are indoor spaces in the covered internal courtyards and corridors and small lobbies inside the building blocks, this is related to the provision of central airconditioning system, and the food and coffee kiosk located indoor on the inner courtyards. In addition to the thermal comfort students also commented on inadequate shaded areas in outdoor openspace and green areas.
- 4- Outdoor open spaces and green landscape: contrary to our expectations, findings demonstrated that students scored higher rates of not using or rarely using outdoor open spaces allocated along the main axis, students commented that they prefer indoor spaces, and also because of the harsh weather in summer. Nevertheless they enjoy the green and nice view to these spaces.
- 5- Comfortable seating arrangements: Students spend a long time of their academic day sitting in the university campus, students selected the provision of comfortable seating and well organized furniture as the most important qualitative criteria needed in the various campus components. It is also observed that outdoor tables are rarely provided, and the students in Mahlia campus preferred to sit on the floor rather than sitting on seating chairs, it is culturally common practice in Jazan region. Furniture choices are critical issue in design, especially the choices of chairs and tables that reflects cultural preferences of the users.

6. Conclusions and recommendations

The following is a set of recommendations built on the above-presented study:

- For climatic reason of Jazan region, the design of outdoor open spaces and green landscape should include shading pedestrian paths, pergolas with comfortable seating arrangements and tables, planting, and natural to create a cool and attractive shaded place for students.
- The visual connection to the outdoor open spaces and green landscape is attractive for students. It is recommended to consider proper designing of campus landscape to increase students' willingness to use and enjoy their campus life activities.

- The importance of a comfortable and ergonomic seating and furniture is essential for students well-being and productivity.
- Well-designed seating and furniture do not only improve student comfort, but can also increase student satisfaction and performance.
- Seating arrangements should permit multiple usage alternatives for students.
- The choice of university chairs and study benches, and furniture, it is essential to consider cultural values and preferences of the users.

Acknowledgements

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interests

The authors declare no conflict of interest

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