

## GREEN CAMPUS AND ITS IMPACT ON THE QUALITY OF LIFE OF STUDENTS AT THE UNIVERSITY OF BAGHDAD

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### ABSTRACT

This study was aimed to investigate relationship between the utilization of the College of Agricultural Engineering Sciences students for green spaces and their impact on their life quality in its cognitive and social dimensions. The research adopted the descriptive analytical approach to the reality of the green spaces most frequented by students through a field survey, in addition to adopting a questionnaire form distributed among a sample of college students from various departments. After collecting and transcribing the data, it was analyzed statistically and the significant differences between the means were compared with the Least Significant Difference (L.S.D.) test. Results showed that the most important thing provided by the green space environment at the university for students to improve their quality of life was their feeling of joy and vitality as a result of the influence of the colors of the plant canopy of various types and their flower colors, as well as the various forms water elements of the water canal surrounding the academic campus of the university campus and the fountains and lakes from which their water is derived, which enhanced the students' feel of beauty, relax, and reduced stress in them which consequently encouraged them to walk around and spend an enjoyable and valuable time in various academic and social activities, thus improving their academic performance and their sense of responsibility towards preserving this environment.

**Key words:** Campus, Green, green spaces, quality of life, University



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### INTRODUCTION

Over the past two decades the concept of quality of life (QOL) has increasingly become a focus for research and application in the fields of education, special education, health care (physical and behavioral), social services (disabilities and ageing), and families. (Schalock, 2004). Quality of life has been increasingly used as a scientific concept in literature embracing a wide range of target groups and populations as a whole. Conceptualizations vary, but there is much common ground concerning the domain content embraced by the term. Commentators

are also clear that account needs to be taken of both objective life conditions and subjective personal appraisals, and the fact that what is important to each person varies. A synthesis of these perspectives provides a model of quality of life which integrates objective and subjective indicators and individual values across a broad range of life domains. Life domain issues may be categorized within six areas: physical, material, social, productive emotional and civic well-being. Whatever its precise specification, the model is put forward as a framework for organizing measurement relevant to the quality of life, There is still a

need for methodological flexibility (Felce, 1997 and McFarland *et al*,2010). Research has reported that under graduate students fell more positively in stressed situations when viewing plant or other views of nature (Uleich,1981) additional research found that undergraduate student use of campus green spaces and perceptions of quality of life were positively related to each other (McFarland *et al* ,2008). The scarcity of studies that dealt with the quality of life of students in Iraqi universities and how it is affected by the nature of the design of their green and open spaces and thus affects their awareness of its characteristics and advantages and raises the level of their environmental, social and cognitive awareness. The aim of the research study the perceptions of students at the University of Baghdad in the College of Agricultural Engineering Sciences about the green space environment, Its impact on their quality of life through two axes: cognitive and social. According to the world health organization (WHO) defines the term quality of life as an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to goals ,expectations , standards and concern, it is a broad concept that influenced in complex ways by persons physical health ,psychological state, level of independence ,social relationship, personal beliefs and their relationship to important features of their environment (Zhang and Liang,2024).The definition of QOL may vary depending on the context of use ,for example London mayor Boris Johnson defined QOL a sustainable as experience when living, working, visiting and moving around, how they feel about the city, how to perceived from outside (Higgins *et al*,2014). Study (Marans,2015) stated that may not have precise definition, it fell among the notions of wellbeing, satisfaction and happiness, QOL in the aspect of interests of policy makers and urban planners shall be named as quality of urban life. Campus open spaces are understood as accessible urban ecosystem, without building and made up of different elements connected to each other, green spaces and grey spaces ,university campus green spaces have recently earned a place in the ranking of

important urban green areas, receiving more attention than in the past, Universities efforts to attain sustainability are usually reflected in the level of awareness, knowledge, and interest in sustainability issue, students perception of sustainability and a green design for campus green spaces, at present, there are many universities that are endeavoring to design or improve their campus, creating the characteristics and functions of an urban ecosystem, to gain a" garden park" look many universities would like to become the world's greenest university, e.g. university college cork, trinity college Dublin, and the university of york, attractive university should apply eco-friendly principles for the wellbeing of the university community (Tudorie,*et al* ,2020). The researchers indicated to the slower adoption of green university concept in Malaysia compared to other nations, an increasing number of universities actively participating in assessments for environmentally – friendly campuses in alignment with support provided by governments for advancement of green university campuses in the nation ( Antony ,2021 and Nifa *et al* ,2016).In the challenges encountered during the establishment of green campus in university ,researchers identified that the primary reason for the majority of institutions not embracing green practices is a deficiency in understanding green campus paradigms among university management, stakeholders, and practitioners (Zhang and Liang , 2024) and inadequacy of campus infrastructure ( Muhiddin *et al* ,2023). Research has reported that undergraduate students fell more positively in stressed situations when viewing plant or other views of nature (Ulrich,1981and Waliczek *et al* ,2005), additional research found that undergraduate student use of campus green spaces and perceptions of quality of life were positively related to each other (McFarland *et al* ,2008) furthermore, Jasim and Kamel (2017) reported that individuals who had access to natural settings were happier with their home, job, and life in general ,similar positive results have been found with different types of natural settings ,including those with vegetation ,water. Thus one might suggest that

university priorities should creating an attractive and relaxing campus environment to help students mitigate stress and to help improve academic achievement (Griffith, 1994). This study was aimed to investigate relationship between the utilization of the College of Agricultural Engineering Sciences students for green spaces and their impact on their life quality in its cognitive and social dimensions.

## MATERIALS AND METHODS

### Site Study- University of Baghdad

The University of Baghdad location in Al-Jadriya was selected as a green space environment suitable for achieving the research objective and adopting the method of description and analysis during the field survey of the green spaces most frequented by students of the College of Agricultural Engineering Sciences due to its location close to the region of academic and recreational activities and events and the ease to reach them. The study area, “University of Baghdad,” is located in the heart of the city of Baghdad, on the Rusafa side, near the Tigris River in the Jadriya area of the Karrada district, according to coordinates N44°22'54"E"12'16"33. It was established in 1957 AD and is considered the largest scientific institution in Iraq. It is the first university in Iraq and includes more than 80,000 students within its colleges and educational annexes. The University of Baghdad was chosen as a green urban space

environment with a great diversity of environmental and aesthetic functions and as an example of a natural-style environment. It represents the university type that provides all facilities and services, and it is more like a university city in the middle of which several buildings for social, cultural, and public activities, and outside the annular path are the supporting spaces, including recreational, service, and residential. The total area of the university is 169 hectares, 43% of which is occupied by buildings, and the percentage of open space ranges from 56-57%, of which 45% is the percentage of green spaces(table 2)(Jasim and Kamel,2017) . As for the vegetation cover, the total number of plants in the university reached 3717 plants, belonging to 70 plant species, 63 plant genera, and 35 plant families, including trees, shrubs, climbers, herbs, and ground cover plants (Jasim and AL-Fatlawi,2023). A random sample of students was selected, constituting 34% of the total number of students of the College of Agricultural Engineering Sciences, which numbered 895 male and female students distributed among ten departments (Table 1) for the academic year 2021-2022 of stage four, morning study, for both genders while they were using the green spaces of the University of Baghdad campus and practiced various activities and seeing the components of the green space environment that dominate the nature of the site design of the university

**Table 1. Distribution of researched students among the departments of the College of Agricultural Engineering Sciences**

Departments of the College of Agricultural Engineering Sciences	Number of students in the college departments	Sample size	Percentage (%)
Machinery and Agricultural Machines	100	29	11.1
Agricultural Economics	89	25	10.7
Extension and Transfer of Agricultural Technologies	65	18	7
Desertification Combat	56	16	6.9
Animal Production	103	30	11.9
Horticulture and Landscape Gardening	94	27	10.4
Field Crops Sciences	95	27	10.4
Plant Protection	77	21	8.1
Food processing Sciences	148	53	16.4
Soil Sciences and Water Resources	68	19	7.1
<b>Total</b>	<b>895</b>	<b>265</b>	<b>100</b>

**Table 2. Land uses of university of Baghdad, Al- Jadriyah Complex**

Land uses	Total Area m <sup>2</sup>	% from total area
Buildings	733854	43.37
Green spaces	733445	43.34
Agriculture Area	33859	2
Play Fields	3750	0.22
Parking Area	33118	1.95
Roads	86297	5.10
Water channel	13629	0.80
Equestrian track	54485	3.22
<b>Total Area</b>	<b>1692036</b>	<b>100%</b>

Master thesis- kamel, 2017- depending on AutoCAD site plan 2030

**Data collection:** The questionnaire was adopted to obtain information from the respondents because of its appropriateness to the research nature and the data required to achieve the research objectives. The research relied on scientific literature related to the quality of life, meetings with specialists in the domain of education and psychology, and reviewing previous studies and literature related to designing green spaces for the university environment to achieve a better quality of life for students. The questionnaire comprised two parts, the first included the influence of the university campus on the life quality of students in the cognitive dimension, including 25 items, and the second part included 25 items related to the influence of the university campus on the life quality of students at the emotional and social dimension. Having the measurement tool of the apparent validity scale completed, it was examined by presenting to a group of experts in green space design, agricultural extension, education, and psychology to measure the apparent validity\*\*\*\*. To measure the content, a pre-test was conducted on 8-3-2022 on a sample of 20 students, chosen randomly from students in the various departments of the College of Agricultural Engineering Sciences. Data was collected beginning from 17-3-2022, relying on a personal interview approach. The statistical software Statistical Analysis System (SAS,2018) was used for analyzing the data to study the required relations according to the study objectives for the independent factors and items within the two dimensions included in the questionnaire (the effect of the green campus on the quality life of students). The mean of each item was calculated after multiplying numbers for each answer by the answer score determined according to the

importance (agree = 3, somewhat agree = 2, disagree = 1) and calculating the summation of them then, divided by 265, which is the sum of the degrees of importance mentioned above, after that, they were arranged from highest to lowest, and finally, the correlation coefficient was estimated between the independent factors and the information of the studied axes, as well as between the axes themselves, according to the simple correlation law and calculating the reliability and validity coefficient, table (6,7,8).

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## RESULTS AND DISCUSSION

### Analysis of the cognitive dimension results

The cognitive dimension refers to the regular changes that occur among students as a result of their interaction with the environmental stimuli of the green spaces of the green campus and their effects on the student's behavior, in addition to focusing on the emotional and intellectual state that the student is in while he is on the green campus (Abdullah et al ,2024,Choi et al, 2017 and Daminger ,2019). The analysis of the results of the cognitive dimension among the students of the College of Agricultural Engineering Sciences at the Green Campus of the University of Baghdad (Table 3) shows that one of the most important things that gives the students feeling of joy and satisfaction and their sense of vitality and activity is their viewing of the colors of the different plant species and the colors of their flowers, as well as viewing the water element in its various forms, including the water canal surrounding the academic area of the green campus, the fountains, and the lakes derived from it. They gave the green campus environment a

distinctive and lively character, ranking first, second, and 11th, with weights of 2.90, 2.87, and 2.70, respectively. The effectiveness of walking in the green spaces of the campus played a significant role in maintaining students' physical health, in addition to the role of the water element in increasing their desire to stay there for a longer period and their feeling of thermal comfort as a result of its softening the environment and reducing pollution levels compared to the environment of buildings, in ranks 3, 4, and 5, with weights of 2.86 and 2.85 and 2.83, respectively. The life quality of university students on the green campus of the University of Baghdad in its cognitive dimension was correlated with the role of elements of green spaces, such as water and natural shading elements, such as trees, shrubs, and artificial roofs, in maintaining the environment of the green campus free of pollutants, softening the atmosphere, which reflects on the physical and psychological health of students and increasing the period of their presence in the university campus, as shown in (Table 3) at the rank sixth with a weight of 2.81. On the other hand, the results of the cognitive dimension analysis referred to the presence of canopies to shade the walkways in the university, as well as the canopied benches to encourage students to stay and use them for a longer time, obtained rank 18 with a weight of 2.58, respectively. The quality of information about the structure of green spaces at the university also contributed to the expansion of the information amount about the campus, as well as the development of the imagination skill that helps the students to develop their ideas and meet their desires about planning and designing these green spaces in the future. The students confirmed the role of green spaces in their university in developing their ability to arrange and coordinate, ranking 7, 8, 9, and 10, weighted 2.78, 2.77, 2.75, and 2.73, respectively. The green space environment, with its various characteristics and features, contributed to improving the students' satisfaction with the quality of life on the green campus of the university, raised their sense of security and their responsibility towards preserving the green environment, and increased their

concentration in studying and learning, with ranks of 12, 13, and 14, and weighted 2.69, 2.68, and 2.76, respectively. It is worth mentioning what the college students confirmed in analyzing the results of the cognitive dimension that their role in arranging and coordinating the green space environment was ranked 15 out of 21 ranks, with a weight of 2.76, indicating to focus on activating their part in participating in developing and coordinating the green space scenes at the university they study in, proportionally to their desires and requirements to raise their level of satisfaction with the life quality on the green campus of the University of Baghdad. Results demonstrate the role of the phenotypic characteristics of plants in green spaces, including trees and shrubs, with their heights and vegetative canopy, and the diversity in the growth nature, in eliminating the students' feelings of boredom and tension and developing their sensory skills at ranks 16 and 17. In contrast, their role in developing the student's skills in various aspects of life at the university obtained the last rank with a weight of 1.59. Similarly, it provided students with the opportunity to practice walking and performing some simple exercises outdoors in the green spaces of the campus, yet it ranked last, with a weight of 2.42.

#### **Analyzing the emotional dimension results**

The emotional dimension is the ability of university students to interact with the green space environment and respond to it through their behavior and actions, focusing on the desired stimuli and their continuous effect on their behavior and working to maintain it and enhance its impact as well as eliminating the undesirable incentives in the environment and removing them to create an environment appropriate to achieve a better university life quality. (Zhang and Liang,2024). Results of the analysis of the student's answers to the emotional dimension questions in Table (4) show that the green spaces have affected enhancing the students' feeling of psychological comfort and relaxation and their sense of aesthetics in the elements of the natural and artificial landscape environment of the green campus, as well as their keenness to maintain the aesthetic level of these elements

through periodic maintenance and various plants service practices, including watering, fertilizing, pruning, cutting, shaping, etc. The above results obtained the first six ranks with weights of 2.86, 2.85, 2.83, 2.75, 2.74, and 2.73, respectively. It is worth mentioning that the presence of students in the green spaces of the University of Baghdad campus contributed significantly to the development of their imagination and tastes and raised their morale and their observation level of the distribution of complementary components of the green space environment at the university, including the distribution of waste containers, which may enhance the cleanliness and aesthetics of the place and thus their psychological comfort, as well as the importance of the sounds produced by the elements and shapes of water in the vicinity of the green campus in raising the happiness levels of them, in addition to increasing the opportunities for social meetings among them in the green spaces on the campus and strengthening social relations between them, which indicates the necessity of directing the green spaces design in a way that strengthens these relationships. The sample of students suggested that the lack of shading elements on the university campus to protect against environmental influences, especially solar radiation in Baghdad summer conditions, may significantly affect their ability to carry out various activities there, as it obtained ranks of 7, 8, 9, 10, 11, 12, and 15, with weights of

2.72, 2.71, 2.69, 2.64, 2.61, 2.58, and 2.42, respectively. The role of green spaces in increasing student friendships on campus ranked 17 with a weight of 2.24, confirming the need for these spaces to be redesigned to contribute to rapprochement and encourage acquaintance between students. The results of the respondents at the emotional dimension confirmed the effect of the presence of green spaces on raising the spirit of contribution to volunteer work for students on the green campus, as well as the necessity of taking into account the element of color in the cultivated plant groups, such as green color grades in the vegetative system, colorful leafy plants, and perennial and annual flowering herbaceous plants with various flower colors. It has been proven, through field surveys and plants mentioned in previous research to design the natural landscape of the University of Baghdad campus, that the color elements are few and limited only to some gardens compared to the percentage of green color for these spaces, in addition to diagnosing the distribution of movement passages between and across the green spaces, as they have affected the continuous student frequenting for these spaces, as the results above ranked 14 with a weight of 2.49, respectively. The same applies to bordering the green areas with plant fences, which may affect the privacy of their use by university students, as it obtained a rank of 16, with a weight of 2.38 .

**Table 3.Cognitive dimension**

No.	Statements	Agree	Fairly agree	not agree	Significance	Mean SD±	Ran k
1	Being present in green spaces contributes to increasing students' information about .nature and other students	210	45	10	**	0.44± 2.75	9
2	Water in green spaces increases the desire .to stay there	236	19	10	**	0.51± 2.85	4
3	Being in green spaces contributes to raising the rate of achievement and excellence	183	77	5	**	0.40± 2.67	14
4	Water in green spaces gives us a lively and distinctive character	195	62	8	**	0.39± 2.70	11
5	Plants of different colors give us a feeling of joy and contentment.	242	20	3	**	0.57± 2.90	1
6	Plants in green spaces help keep boredom away.	186	68	11	**	0.36± 2.66	16
7	Canopies over traffic passages increase the desire to spend more time on campus	176	66	23	**	0.38± 2.58	18
8	Canopies over the seating benches help .students stay in the green spaces	222	37	6	**	0.46± 2.81	6
9	Being in the green spaces of the university campus increases the feeling of the importance of harmonious surroundings	210	49	6	**	0.38± 2.77	8
10	Being in green spaces increases the feeling of safety.	193	60	12	**	0.33± 2.68	13
11	The colors of different plant flowers give a feeling of vitality and activity	236	24	5	**	0.54± 2.87	2
12	Being in green spaces helps with walking and has a great role in maintaining health.	232	30	3	**	0.45± 2.86	3
13	Being in the university gardens helps to run and do some exercise early in the morning or evening	150	78	37	**	0.28± 2.42	20
14	Being in green spaces contributes to improving students' performance and movement skills	168	76	21	**	0.36± 2.55	19
15	Being in green spaces contributes to .improving students' sense skills	177	76	12	**	0.40± 2.62	17
16	Being in green spaces contributes to increasing students' ability to arrange and coordinate them	187	68	10	**	0.42± 2.67	15
17	Green spaces are a good, pollution-free environment that gives us a feeling of comfort.	225	37	3	**	0.49± 2.83	5
18	Being in green spaces increases students' knowledge of how to deal with a healthy environment	209	53	3	**	0.56± 2.78	7
19	Being in green spaces makes us feel the importance of a healthy environment on the student's psyche	219	43	3	**	0.46± 2.81	6
20	Being in green spaces does not contribute to developing my information and skills.	49	58	158	**	0.17± 1.59	21
21	Being in green spaces contributes to knowing the importance of a healthy environment and how to maintain it	205	36	24	**	0.33± 2.68	13
22	Being in green spaces contributes to improving the ability to imagination	203	52	10	**	0.42± 2.73	10
23	Being in green spaces helps to study and learning	193	61	11	**	0.33± 2.68	13
24	Being in green spaces is considered an urgent necessity nowadays	189	63	13	**	0.42± 2.66	16
25	Being in green spaces contributes to the feeling of enhancing life quality	196	56	13	**	0.39± 2.69	12
	T-test (LSD)	--	--	--	--	* 1.038	--

(P≤0.05), significant, \*\* (P≤0.01) highly significant \*

**Table 4. Emotional dimension**

No.	Statements	Agree	Fairly agree	not agree	Significance	Mean ±SD	Rank
1	Being in green spaces alleviates feelings of frustration	205	50	10	**	0.48± 2.74	5
2	Being in green spaces contributes to developing the student's taste and imagination	197	61	7	**	0.53± 2.72	7
3	Being in green spaces contributes to improving social relations between students	146	83	36	**	0.37± 2.42	15
4	Being in green spaces raises students' morale toward the university	194	64	7	**	0.45± 2.71	8
5	Being in green spaces gives the place aesthetics	223	39	3	**	0.57± 2.83	3
6	Being in green spaces contributes to a feeling of well-being and development.	205	54	6	**	0.56± 2.75	4
7	Being in green spaces contributes to students' self-development	157	91	17	**	0.40± 2.53	13
8	Being in green spaces contributes to increasing the number of friends	115	99	51	**	0.26± 2.24	17
9	Being in green spaces contributes to feeling the beauty of the natural landscape	230	31	4	**	2.85	2
10	Being in green spaces, students feel the beauty of nature	199	60	6	**	0.565± 2.73	6
11	Being in green spaces has a good impact on psychological comfort	230	32	3	**	0.57± 2.86	1
12	Being in green spaces helps to relax and relax	231	30	4	**	0.57± 2.86	1
13	Being in green spaces increases the opportunity to meet friends	175	76	14	**	0.41± 2.61	11
14	Being in green spaces helps contribute to volunteer work	154	86	25	**	0.42± 2.49	14
15	Being in green spaces contributes to reducing stress	199	63	3	**	0.51± 2.74	5
16	Being in green spaces does not affect the student's psychology	49	33	183	**	0.22± 1.49	18
17	The bright colors plants do not attract my sight and attention	33	24	208	**	0.20± 1.34	20
18	There is no effect of green spaces on my feeling of place	40	32	193	**	0.26± 1.42	19
19	Running water sounds through green spaces makes us happy	189	57	19	**	0.43± 2.64	10
20	The lack of canopies and benches shaded by trees to protect from environmental influences and sunlight most of the working hours affects the overall events and activities in the green spaces at the university.	177	65	23	**	0.40± 2.58	12
21	The lack of organized entrances and passages to move on and direct me to green spaces affects my constant existence there	159	76	30	**	0.42± 2.49	14
22	The lack of plant fences surrounding the green spaces at the university affects the privacy of their use	143	79	43	**	0.31± 2.38	16
23	The lack of color in most types of plants grown in green spaces reduces my feeling of vitality, joy and activity	154	86	25	**	0.42± 2.49	14
24	The lack of distribution of waste containers and the lack of periodic cleaning of green spaces affects my psychological comfort	204	41	20	**	0.38± 2.69	9
25	Lack of regular maintenance and service of green spaces affects the aesthetics of the university campus	214	34	17	**	0.54± 2.74	5
	T-test (LSD)	--	--	--	--	* 1.166	--

(P≤0.05), significant, \*\* (P≤0.01) highly significant \*

**Table 5. Number and studied percentage of the questionnaire sample according to gender**

Gender	Number	Percentage (%)
Male	105	39.62
Female	160	60.38
Total	265	%100
Chi-Square $\chi^2$ ( )	---	13.334 **

( $P \leq 0.01$ ) highly significant \*\*

**Table 6. The correlation coefficient between the two dimensions, according to the questionnaire form**

Dimensions	Correlation coefficient -r	Significance level	
Cognitive dimension	Emotional dimension	0.71	**

\*\* ( $P \leq 0.01$ ) highly significant

**Table 7. The correlation coefficient between each of the two dimensions with gender, according to the questionnaire form**

Dimension	Correlation coefficient -r with gender
Cognitive	0.08
Emotional	0.13

NS: Non-significant

**Table 8. Reliability and validity coefficient for each of the two dimensions according to the questionnaire form**

Dimension	Reliability and validity
Cognitive	0.81
Emotional	0.75
Total	0.80

Researchers have increased their interest in studying the concept of life quality on a green campus, trying through their research to know the perception of students at universities about this concept, as it is one of the basic concepts through which skills, information, ideas, feelings, senses, and physical, psychological, and mental health can be improved their lives to become better (Choi *et al*, 2017, Fadhil and Waheeb, 2021 and Griffith, 1994). Since the university stage is one of the most critical and decisive stages of education in an individual's life, as it often determines the path of his professional future, his behavior, and the way he interacts with others, studying life quality among university students is extremely important for them. (Higgins *et al*, 2014, McFarland *et al*, 2008 and Pardo and Calvo, 2004) The analysis of the cognitive dimension and the social dimension results for

a sample of students from the College of Agricultural Engineering Sciences at the University of Baghdad - Al-Jadriyah - the site of the study, showed that the life quality with a level of satisfaction with quality depends a great deal on the quality of the characteristics of the components of the natural and complementary green spaces in them and the environmental, utilitarian and aesthetic functions they provide that would increase the period of the students stay there, their interaction with it, and their influence by it, reflecting in their academic performance and the development of their knowledge, skills, and observations about the green space environment, which increases the quality of life on the green campus (Jasim and Kamel, 2017). Also, it emphasizes the alternating flowering of plant species grown in various green spaces on the green campus of flowering trees and shrubs. It encourages the planting of flowering perennial herbs in flower beds because the flowering element gives students a feeling of beauty, joy, interaction, activity, and satisfaction with the life quality measure (Ramadan and Hassaan, 2018). activating the role of movement passages and taking into account the aspect of shading, like benches, in accordance with the environmental factors of the study site. It was evident from the nature of the site, and the site the Al-Jadriyah campus included the water canal surrounding the academic area and the rest of the forms of water present on the site, which has effectively contributed to improving the quality of the green space environment, reducing pollution levels and feeling of thermal comfortable (Akhir *et al* 2017 and Khudhair, 2022). The life quality in the University of Baghdad campus is correlated to the role of vegetation, its green cover, and the shading levels it provides, in addition to the artificial roofs, which is reflected in the quality of the psychological and physical health of students and the prolongation the period they stay in its green spaces in the various seasons of the year. The green space environment encouraged students to increase their focus on various academic tasks, develop their skills in imagination and creativity, develop ideas about the importance of designing green spaces, and emphasize the

activation of the role of the students of the College of Agricultural Engineering Sciences in the specialized departments, such as the Department of Horticulture and Landscape Engineering, and their distinguished role in coordinating with the students of other departments to arrange these spaces and maintain it, gave them a feeling of safety, reduced the level of stress and boredom, and enhanced their role towards maintaining the quality of this environment.(McFarland *et al* ,2008 and Zhang and Liang,2024). One of the most critical indicators of the life quality for students in the green space environment of the Green Campus - University of Baghdad, under study in the emotional dimension, is enhancing feelings of comfort, relaxation, and a sense of beauty with this environment characteristics and developing their imagination and level of observation for the distribution of complementary elements of the green space environment at the university where they study. Hence, enhancing the keenness of the students to preserve the value of this beauty through its regular upkeep and maintenance and to raise their level of satisfaction with activating the role of the water element in its various forms in raising levels of happiness, encouraging opportunities for their meetings, strengthening social ties among them, and creating appropriate environmental factors through natural shading elements with shrubs and trees with large canopies as well as the artificial shading elements and plant diversity, particularly colorful flowering perennial herbaceous plants, in addition to emphasizing the privacy aspect of the green space by using fencing plants or using fences made of sustainable, environmentally friendly materials (Jasim and Kamel , 2017 ,Jasim and AL-Fatlawi and 2023. Khudhair, 2022).

### CONCLUSION

In conclusion, the quality of life of students on the green campus is closely linked to the environmental, aesthetic, and functional characteristics of its green spaces. Investing in sustainable landscape design, diversified planting schemes, water elements, and appropriate shading structures is essential for promoting students' psychological well-being, social interaction, academic engagement, and

environmental responsibility. The study emphasizes the importance of integrating green campus principles into university planning policies to create a healthier, more attractive, and academically supportive educational environment.

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### CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

### AUTHOR/S DECLARATION

### AUTHOR'S CONTRIBUTION STATEMENT

### REFERENCES

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" الحرم الجامعي الاخضر وتأثيره في نوعية حياة الطلبة في جامعة بغداد "

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المستخلص

هدف البحث دراسة العلاقة بين استخدام طلبة كلية علوم الهندسة الزراعية للمساحات الخضراء وانعكاساتها على جودة الحياة لديهم ببعديها المعرفي والاجتماعي، اعتمد البحث المنهج الوصفي التحليلي لواقع الفضاءات الخضراء الاكثر ارتيادا من قبل الطلبة من خلال المسح الميداني، اضافة الى اعتماد استمارة الاستبيان الموزعة على عينة من طلبة الكلية باقسامها المتنوعة، وبعد جمع البيانات تم تحليلها احصائيا وقورنت الفروق المعنوية بين المتوسطات باختبار اقل فرق معنوي L.S.D، وقد اظهرت النتائج ان اهم ما قدمته بيئة الفضاءات الخضراء في الجامعة للطلبة لتحسين جودة حياتهم هي شعورهم بالبهجة والحيوية نتيجة تاثير الوان المجموع الخضري للنباتات بمختلف انواعها والوان ازهارها وكذلك عنصر الماء باشكاله من قناة الماء المحيطة بالنطاق الاكاديمي للحرم الجامعي والنافورات والبحيرات المستمدة مياهها منها، مما عزز لديهم شعورهم بالجمال والاسترخاء وتقليل التوتر وشجعتهم على التجوال فيها وقضاء وقت ممتع ومفيد بمختلف الفعاليات الاكاديمية والاجتماعية وبالتالي تحسين ادائهم الاكاديمي وشعورهم بالمسؤولية تجاه الحفاظ على هذه البيئة.

الكلمات المفتاحية: الحرم الجامعي الاخضر، نوعية حياة طلبة الجامعة، مساحات خضراء، جامعة بغداد