

Effect of Common Outdoor Spaces on Social Interaction: The Case of College of Engineering Campus at Salahaddin University – Erbil, Iraq

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Abstract

University is not only the place of learning and teaching sciences but also it is a place where the students start their social interactions that lead to encourage the students for superiority in their academic courses. It is noted that the outdoor spaces inside college of engineering at Salahaddin University-Erbil did not receive sufficient attention in terms of locating and distribution which may adversely affect the lack of communication and social interaction among students. This research is carried out to study the effect of common outdoor spaces on social interaction between students: the case of the college of engineering campus at Salahaddin University-Erbil, Iraq. A quantitative survey was conducted as a research methodology to achieve its aim and objectives. 80 questionnaires were randomly distributed to 80 students (40 male and 40 female), data have been collected and principal components analysis with Varimax rotation by SPSS has been used. The results indicate that there is a significant difference among the factors and components, the highest value of satisfaction is found at the quality of open spaces/amount of flora and green area/walkthrough which has achieved 69%, as for all participants the satisfaction ratio is 61.63%; six variables under the first factor, the quality of open spaces have been strongly loaded. The study ends with a set of conclusions and recommendations concerning the design of common open spaces within educational campuses to achieve efficient social interaction between users/students.

Keywords: Outdoor spaces, Social interaction, Space quality, College of Engineering, Salahaddin University – Erbil.

1. Introduction

The physical environment of the university campuses provides an appropriate context and incubator for learning and social interactions. These interactions have the vital role in contributing students in building their society, and lively university campuses, in turn, contribute to the student continuity and academic success [1-5]. Universities consist of buildings where teaching, research, and education, are carried out as well as social and cultural activity spaces and physical structures [6]. The floor and the surrounding architectural surfaces usually form outdoor space enclosure [7].

Between buildings, there are open spaces that work as joints of surrounding environments. They provide a sense of direction in a campus by integrating and organizing different places and elements; they also can provide an aesthetic sense by involving attractive surroundings and creating visual surprises. Many creative and innovative ideas occur in outdoor environments, away from formal classes and discussions [8]. The starting point for students is the university to interact with the world and to have real relationships with others.

Universities are just like small cities or small communities. They are places that improve and provide social interaction for the majority of the community. Universities heavily contribute to enhancing society to reach a prosperous future [9]. The aim of this research is to study the effect of common outdoor spaces on social interaction. The campus of college of engineering at Salahaddin University-Erbil, Iraq has been selected as a case study.

1.1. Definition and Classification of Outdoor Spaces

The main functions of the campus outdoor spaces are: firstly, the social activities of students which include sittings, studying/reading, social assembly, eating and sport; secondly, the control of surrounding building internal environment by ensuring the prerequisites for appropriate internal performance of daylighting, ventilation, sun heating and view; and thirdly, transition of pedestrian and vehicles [10]. Moreover, space is considered as the container for social interactions, where values, information, suitable behavioural patterns and sensations are delivered to other peoples.

There are four groups of outdoor space that can be identified in contemporary western cities. The first one includes private outdoor space is reachable only to the owners, or those invited onto their land. In this group, there would be yards of private estates and private homes, so on. A second group comprises what is generally called as public space, areas such as streets and neighbourhood parks which are accessible to all and publicly owned. A third group consists of spaces such as a university campus or corporate plazas, which are privately owned but reachable to the general public. A final group are shared outdoor spaces usually accessible only to members of that group owning the space. Examples of these would be the landscaped areas of community gardens, assisted living facilities, clustered housing, as well as historical precedents and cohousing [11].

University campuses are similar to urban patterns in that both consist of buildings, spaces and roads. As elements of the physical environment, when these components are considered in terms of the concept of structured environment and space, they may be distinct as the environment's utility for social uses and individual. The quality of campus is known by the activities occurring within it and its scenes of place [12].

1.2. Social Interaction

The attitude and behaviour of the interacting persons are changed by social interaction. It is a social association among at least two persons. It changes the societal conditions of people life. Interaction is the soul of relationship and social life. It yields a group which is the base of society. In sociology, social interaction is an active sequence of social actions between individuals who alter their actions and reactions due to actions by their interaction partners. The term "social" points to humans alive together in structured groups. The interaction displays different association in different disciplines. It indicates to vibrant action between individuals and others [13]. "The way people make a relationship with each other plays an important role in shaping the environment and directly influences interactions among human beings as well as interactions between human beings and the environment. The kind of spatial performance, position, spatial dimensions, and the way relationships take place can affect the enhancement of social interactions" [14].

2. Literature Review

Many studies have been conducted to evaluate the effect of outdoor spaces on campuses and education buildings; Abu-Ghazzeh [15] worked on "the environmental quality of the campus outdoor spaces at the University of Jordan" and found three major components including aesthetic and visual quality, behavioural/functional quality and physical/ecological quality. Aydin and Ter [16] conducted a study to evaluate the quality of the outdoor space at Plaza University. The results regarding behavioural and functional quality indicated "how frequently the optional and the social activities will be carried out in the plaza. The quality of the elements constituting the plaza is a reason why users prefer to sit underneath the trees or on the green". McFarland et al. [17] found that students who used the campus green spaces more frequently, when compared with those students who used green spaces less frequently, perceived their quality of life as higher when studied the relationship between students' use of campus green space and perceptions of quality life at Texas State University-San Marcos.

Parallel to the same context, Shooshtarian et al. [18] examined the seasonal usage pattern of outdoor spaces in educational precincts. The results show the seasonal usage pattern of the precinct and the significance of the function of place in the presence of people outdoors. The results show that seasonal change may influence the frequency of usage, length of stay, type of use, thermal adaptive measures, type of activity and finally the number of people's attendance in the outdoor spaces. Gheibi et al. [14] conducted a study to "explore factors affecting social interaction on university campuses". They evaluated "the performance of spaces that enhance social interaction in Islamic Azad University, Arsanjan Branch in Iran". The results indicated that the conditions for social interactions will be higher when the spatial quality is more suitable. The study argued that designing new attractive buildings and friendly external spaces inspire students to take part in different social activities. As well as providing walking routes beside the green landscape with enough seats, and providing conditions for navigation and accessing open and closed spaces easily will improve social interactions on the campus. Hossini et al., [19] in their study attempted to evaluate the effect of vitality level of university campuses on increasing the social interactions of students. The results indicated that participation in the spaces increased by increasing the sense of places.

Through an investigation study from the users' perspective, Salama [20] carried out an evaluation of the performance of Qatar University (QU) campus outdoor spaces after over that 20 years of occupation. The study exposes a number of problems in the performance of different types of QU campus

users. The study concludes by knowing "how well university campus outdoor spaces respond to the needs of faculty, students, and staff". An important difference between the statements made by the architects and users' expectations is shown in the overall analysis of the results. In the same vein, Hanan [21] studied open space as a meaningful place for students in ITB Campus Students ITB (Institut Teknologi Bandung, Indonesia). The findings reveal that the outdoor environment that maximizes collegial encounters and exchange of ideas will also maximize formal indoor learning process. Variety of open spaces in proximity and different departmental classrooms improve the likelihoods that a student will cross paths with other students. This condition will increase the likelihood of interdisciplinary communication and collegiality. The visually attractive and active outdoor environment can considerably affect the flourishing of sense of community.

To scrutinize the role of the landscape at Mosul University Campus, Iraq, Matloob et al. [22] carried out a study on sustaining university campuses through physical character. The study found that the three main design aims that were proved as significant for Iraqi campus sustainability are namely, the quality of public realm, accessibility and the ease of movement. Every one of these goals included a number of design qualities that were found important for various aspects of sustainability on Iraqi campus. Really, this is based on community culture and local climate. Therefore, these groups of design qualities can establish the viable physical character for landscape in Iraqi campuses. Uslu and Gökçe [23] studied physical characteristics of space and their social "interaction with individuals, the relation between social interaction and space and the possibilities of landscape design which can enhance social interaction have been investigated. The research area chosen for this purpose is Çukurambar Quarter in Ankara". The findings indicated that landscape design has the potential of contributing to the improvement of the existing conditions and increasing the communication between the people through spatial design. In a similar topic, Emmanuel and Olufemi [24] stated that the outdoor spaces and landscape of campus environment have the potential of supporting relationship among students, improve quality of university community, and enhance psychological and social behavioural values of students.

Other researchers studied the effect of outdoor spaces on urban and neighbourhoods, for these purposes, Al-Homoud and Abu-Obeid [7] reported that analysing the variance pointed out that perception of seclusion decreased when a pedestrian flow happened and increased when the spatial enclosure occurred, whereas compared to that of spatial enclosure incidence, the perception of the interaction increased with increased pedestrian flow. Huang [25] reported that social interaction, visual focus, play area, and open space are higher than primary and secondary paths as a part of circulation spaces in high-rise housing. At the level of the urban fabric, Zhang and Lawson [26] conducted a study to evaluate meeting and greeting. The study addressed activities in public outdoor spaces outside high-density urban residential communities. The results indicated that activity patterns in public outdoor spaces outside residential communities are different from general urban public outdoor spaces. Liao, et al [27] found that social behaviour in the public sphere tends to concentrate in centrally located as a result of social behaviour effect in public spaces in a college town.

As for shared/common spaces, Grey and Siddall [28] carried out an investigation on home zones, shared space, and shared surfaces from a universal design as an approach for the urban environment in Ireland. The results clearly indicated that stakeholders were supportive of the main principles of shared space design which focus on increased pedestrian priority and the overall improvement of the street environment. Farida [29] studied the relationship between the shared outdoor space design of housing estates and residents' social interaction. The study specifically focuses on a housing project called *laciédés*, in Biskra, a city in South Algeria. They found that the layout of buildings and the quality of common outdoor spaces in residential neighbourhood substantially influence the use of the spaces and the social interaction among residents. Heidari et al. [30] reported that students prefer nature to vaster spaces and the location of the yard also has a determining role in the interaction of the students. Omer et al., [31] indicated that the open space is vital to city sustainability. Human interaction is important in relation to the open spaces, nature and human interactions need elements of open spaces such as green spaces, water elements, and physical attributes to enhance interaction between human and nature. Wilson [32] studied the influence of shared internal spaces on residents of a housing block in semi-private courtyards. He found that the main use for the shared spaces was to pass through to get to other facilities.

From the research studies reviewed, it can be concluded that the topic of studying the impact of shared outdoor spaces in university campuses is one of the issues that need to be addressed because of its importance in diagnosing its impact in stimulating students and creating an efficient atmosphere of social interaction among them. For this purpose, common outdoor spaces were selected in the College of Engineering, Salahuddin University - Erbil as a case study to demonstrate the effectiveness and efficiency of these spaces. Accordingly, the present study is an attempt to answer a research question that: does the

quality of these spaces has a role in generating academic, social and life communication between students with each other? Research outcomes may contribute to the diagnosis of deficiencies in the distribution and design of these spaces in order to rearrange and organize them to perform their best function, namely the establishment of an environment full of interaction and communication between users.

2.1. Problem Statement

The academic institutions must start considering not only to invest in classes but also in all spaces, especially those “outdoors” since more than 50% of students’ activities including social, learning, and teaching in university campuses occurs outside the classrooms. Even academically, although students may spend more than 40 hours per week on academic pursuits, they spent only 12 to 16 hours in class per week. Furthermore, many institutions have plans and targets that support the vision that the task of the institution is not only concerned with academic purposes but also have the aim of helping students to “improve and develop their social lives, acquire leadership skills and create their personality” [33]. It is noted that the outdoor spaces inside College of Engineering at Salahaddin University – Erbil did not receive sufficient attention in terms of locating and distribution which may adversely affect the lack of communication and social interaction among students, which are important factors of performance and effectiveness of such spaces. Based on the previous scenario, this paper is an attempt to know how these spaces support students’ outdoor activities, and whether they are achieving student satisfaction.

2.2. Objectives of the Study

The present research aims to achieve the following objectives:

- To study factors affecting social interaction at the College of Engineering, Salahaddin University - Erbil.
- To examine how different outdoor space factors influence in social activities of the students.
- To determine the type of activities carried out by the students mostly.
- To relate the analysis of social interactions to the contested use of space.
- To study the quality of outdoor spaces and their effects on students’ activities.

3. Methodology

This study is conducted to evaluate the effect of common outdoor spaces on social interactions of the student of College of Engineering campus which is one of the most important and largest colleges of the Salahaddin University-Erbil (Fig. 1). It is characterized by the presence of common spaces designed and distributed between the buildings and departments of the college. It consists of 8 departments and different management offices and academic facilities. A field survey has been done for the purpose of interviewing students, observing the places of their gathering and making an initial classification for the open public spaces of the college campus. An initial questionnaire has been prepared based on this information. In order to conduct interviews, these questionnaire forms have been distributed to random samples of students to make the most recent modifications that may create new factors affecting the research problem. In the end, eight variables have been identified in the questionnaire form. These variables include shading areas, amount of flora and green Area, number of seats, accessibility, walkability (width of path), the sense of enclosure, continuity of path, and enjoyable scenery. These variables were associated with five activities carried out by students in the outdoor public spaces, these five activities included, arrange to meet someone, eat lunch there, walk through it, stop there to someone and finally arrange to read there. Questionnaires (table 5) have been prepared, distributed randomly among the students of the college at zone A, B and C (Fig. 2) for both 40 male and 40 female students, and the data were tabulated, Factor Loadings Analysis with Varimax Rotation was conducted by SPSS to analyse the obtained data from questionnaires.

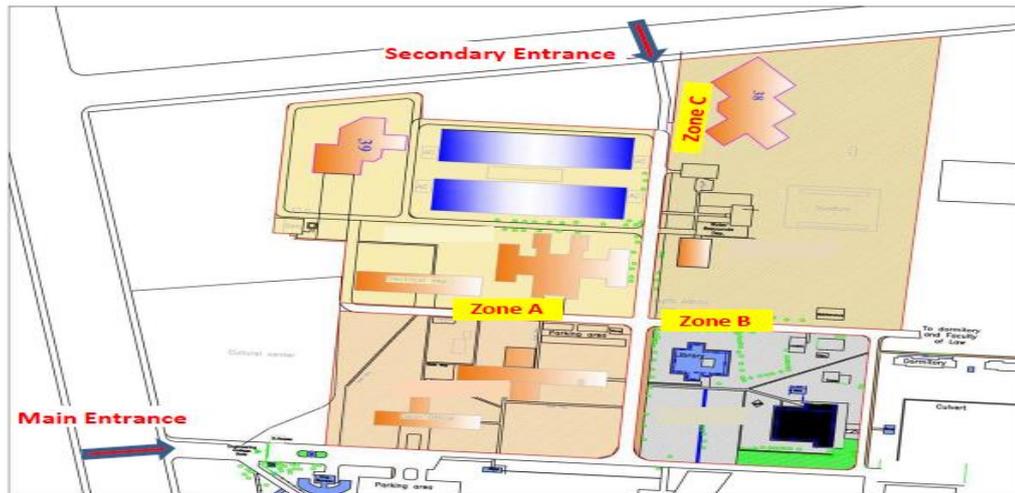


Figure 1: Site plan of Engineering College, Slahaddin University – Erbil (Authors).



Figure 2: Common outdoor spaces at the college campus (Authors).

4. Results and Discussion

According to Table 1, significant differences were found among factors, variables and activities applied in the survey.

Table 1: Adequacy of the sample (Authors).

Kaiser-Meyer - Olkin Measure of Sampling Adequacy		
Bartlett's Test of Sphericity		.617
Bartlett's test of sphericity interpretation	Approx. Chi-Square	571.118
	df	253
	Sig.	.000

Data from Table 2 show that the highest percentage value of satisfaction is found at the quality of open spaces/amount of flora and green area/walkthrough is 69%, while the lower value was found at the quality of open spaces/shading area/arrange to meet someone there with 54%. But as a total, the satisfaction ratio is 61.63% for all participants.

Table 2: Descriptive statistics (satisfaction percentages and means), (Authors).

Factors	Independent	Activities	Mean	SD	S %
The Quality of Open Spaces	Shading area	Arrange to meet someone there	2.70	1.08	54
		Eat lunch there	3.06	1.21	61
		Walkthrough it	3.23	1.16	65
		Stop there to talk to someone	2.96	1.13	59
		Study or read there	3.08	1.36	62
	Amount of Flora and Green Area	Arrange to meet someone there	3.21	1.29	64
		Eat lunch there	3.20	0.97	64
		walkthrough it	3.44	0.98	69
		Stop there to talk to some one	3.25	1.10	65

	Number of Seats	Study or read there	3.23	1.12	65
		Arrange to meet someone there	3.05	1.19	61
		Eat lunch there	2.96	1.10	59
		Study or read there	3.06	1.17	61
The Spatial Arrangement of Outdoor Spaces	Accessibility	Arrange to meet someone	2.99	1.23	60
		Walkthrough	3.10	1.19	62
	Walkability (Width of Path)	Walkthrough	3.04	1.08	61
		Arrange to meet someone	2.83	1.11	57
	The Sense of Enclosure	Study or read there	2.93	1.17	59
		Relaxing	3.16	1.21	63
Connectivity of the Outdoor Space	Continuity of Path	Walkthrough it	3.09	0.97	62
		Relaxing	3.08	1.12	62
	Enjoyable Scenery	Eat lunch	3.06	1.15	61
		Arrange to meet someone	3.19	1.26	64
Average			3.08	1.15	61.63

M=Mean, SD= Standard Deviation, S=Satisfaction

Factor Loadings Analysis with Varimax Rotation is conducted to assess how eight “achievement” variables clustered. Eight components have been rotated (Table 3), after rotation, the first component accounted for 11.63 % of the variance, and the second component accounted for 10.19 % of the variance, the same table displays the activities and component loadings for the rotating components, six variables under the first factor (The Quality of Open Spaces) had strongly loaded:

1. The quality of open spaces /shading area /arrange to meet someone there.
2. The quality of Open Spaces/Amount of Flora and Green Area/Arrange to meet someone there.
3. The quality of open spaces/shading area /eat lunch there.
4. The quality of open spaces/amount of flora and green area/stop there to talk to someone
5. The quality of open spaces/amount of flora and green area/walkthrough it.
6. The quality of open spaces/shading area/ walkthrough it.

It is clear that the quality of outdoor spaces of campuses has a great influence on social activities and students life. As obtained from the results, the quality of open spaces is strongly overloaded, especially in the walking activity.

Table 3: Factor Loadings Analysis with Varimax Rotation (Authors).

Item	Factor Loading								C.*
	1	2	3	4	5	6	7	8	
Quality of open spaces /shading area/meet someone	.786								.70
Quality of open spaces/amount of flora and green area/arrange to meet someone there	.656								.68
Quality of open spaces/shading area/eat lunch there	.555					.538			.80
Quality of open spaces/amount of Flora and green area/stop there to talk to someone	.554								.53
Quality of open spaces/amount of flora and green area/walkthrough it	.539								.53
Quality of open spaces/shading area/walkthrough it	.522								.61
The Quality of open spaces/amount of flora and green area/study or read there		.815							.79
Quality of open spaces/number of seats/studyread		.753							.75
Quality of open spaces/shading area /study or read		.726							.68
Connectivity of the outdoor space/relaxing			.788						.64
Connectivity of the outdoor space/continuity of path/walkthrough it			.555						.51
Spatial arrangement of outdoor spaces/walkability/walkthrough			.528						.41
Spatial arrangement of outdoor spaces/sense of enclosure/relaxing				.764					.77
Spatial arrangement of outdoor spaces/sense of enclosure/arrange to meet someone				.743					.75
Spatial arrangement of outdoor spaces/sense of enclosure /study or read there				.684					.61
Connectivity of the outdoor space/enjoyable scenery /arrange to meet someone					.828				.76
Quality of open spaces/shading area/stop to talk					.616				.76

Quality of open spaces/number of seats...etc.						.802			.69
Quality of open spaces/number of Seats/eat lunch						.803			.72
Connectivity of the outdoor space/enjoyable scenery/eat lunch						.638			.71
Spatial arrangement of outdoor spaces / accessibility/arrange to meet someone there							.707		.56
Spatial arrangement of outdoor spaces/accessibility/walkthrough							.619		.68
Quality of open spaces/amount of flora and green a								.800	.77
Eigenvalues	2.67	2.34	1.9	1.89	1.89	1.78	1.63	1.31	
Variance %	11.63	10.19	8.27	8.24	8.22	7.75	7.10	5.71	

C= Communalities

5. Conclusion and Recommendation

Based on the results obtained from this study, the following conclusions can be indicated:

- Significant differences have been obtained among the factors.
- Six activities under the factor of (the quality of open spaces) are strongly overloaded.
- The overloaded activities reflect the real social activities for students at the campus of College of Engineering, Salahaddin University - Erbil.
- It noticed that five activities from the six activities mentioned above are concerning the walking which means that this activity could involve strongly in improving the social activities of the students.

It is noteworthy that the external spaces within the campus of the College of Engineering, Salahaddin University - Erbil did not receive enough attention in terms of location and distribution. This has affected the lack of communication and social interaction among students due to the important role played by these factors in the performance and effectiveness of these spaces. The results obtained from the questionnaire revealed a flaw in the design, organization and distribution of these spaces. This is supported by the low satisfaction rates of students towards the activities offered by these spaces. The following points could be recommended based on the findings achieved in this study.

- Further consideration should be given to other parts of outdoor spaces in educational campuses.
- All student needs should be taken into consideration during the designing of the universities campuses.
- More research concerning factors that affect the perception and use of outdoor spaces in a variety of campus design examples is needed.

Finally, it can be concluded that the quality of spaces and the way they are distributed and located are important aspects that should be taken into account because of their vital role in achieving social interaction and academic communication among students within any campus.

Conflicts of Interest

The author declares that they have no conflicts of interest.

References

- [1] C.C. Strange and J.H. Banning, "Educating by Design: Creating Campus Learning Environments That Work". San Francisco, CA: Jossey-Bass, 2001.
- [2] V. Tinto and A. Goodsell Love, "Building Community". *Liberal Education*, Vol. 79, No. 4, pp. 16-21, 1993.
- [3] G. Kuh, T. Cruce, R. Shoup, J. Kinzie and R. Gonyea, "Unmasking the Effects of student engagement on First-Year College Grades and Persistence". *The Journal of Higher Education*, Vol. 79, No. 5, pp. 540-563, 2008.
- [4] R. Palmer, D. Maramba and T. Dancy, "A Qualitative Investigation of Factors Promoting the Retention and Persistence of Students of Color in STEM". *The Journal of Negro Education*, Vol. 80, No. 4, 491-504, 2011.
- [5] M. Al-Homoud and N. Abu-Obeid, "University Outdoor Spatial Layout Effect on the Perception of Students' Interaction and Group Seclusion". *Journal of Architectural and Planning Research*, Vol. 20, No. 3, pp. 221-233, 2003.

- [6] K.D. Harrington, "Community on campus: The role of physical space". PhD Dissertation, Georgia State University, 2014.
- [7] D.G. Özkan, E.M. Alpak and M. Var "Design and Construction Process in Campus Open Spaces: A Case Study of Karadeniz Technical University". *Urban Design International*, Vol. 22, No. 3, pp. 236–252, 2017.
- [8] S.S.Y. Lau, Z. Gou and Y. Liu, "Healthy Campus by Open Space Design: Approaches and Guidelines". *Frontiers of Architectural Research*, Vol. 3, No. 4, pp. 452-467, 2014.
- [9] P.S. Waite, "Applying a Model of Sustainability on Campus". *Planning for Higher Education Journal*, Vol. 31, No. 3, pp. 82-87, 2003.
- [10] M.M.S. Almumar and F.A.M. Mzoori, "Assessing the Optimum Proportion of Outdoor Spaces of Educational Sites, College of Engineering in Erbil City as a Case Study". *Sulaimani Journal for Engineering Sciences*, Vol. 3, No. 3, pp. 37-50, 2016.
- [11] C.C. Marcus, "Shared Outdoor Space and Community Life". *Places*, Vol. 15, No. 2, pp. 32-41, 2003.
- [12] R.P. Dober, "*Campus Landscape Function, Forms, Futures*". John and Wiley Sons, 2000.
- [13] K. Kumari, "*Social interaction spaces in campus accommodation*". MSc. Thesis. Indian Institute of Technology, India, 2014.
- [14] D. Gheibi, F. Miraki, S. Fijani and F. Miraki, "Evaluating the Effective Factors on Social Interactions Enhancement in University Spaces: A Case Study in Islamic Azad University, Arsanjan Branch". *Cumhuriyet Science Journal*, Vol. 36, No. 4, Special Issue II, pp. 1467-1475, 2015.
- [15] T.M. Abu-Ghazze, "Communicating Behavioral Research to Campus Design: Factors Affecting the Perception and Use of Outdoor Spaces at the University of Jordan". *Environment and Behavior*, Vol. 31, Vol. 6, pp. 764–804, 1999.
- [16] D. Aydin, and U. Ter, "Outdoor Space Quality: Case Study of a University Campus Plaza". *International Journal of Architectural Research*, Vol. 2, No. 3, pp. 189-203, 2008.
- [17] A.L. McFarland, T.M. Waliczek and J.M. Zajicek, "The Relationship between Student Use of Campus Green Spaces and Perceptions of Quality of Life". *Hortechonology*, Vol. 18, No. 2, pp. 232-238, 2008.
- [18] S. Shoosharian, A. Sagoo and P. Rajagopalan, "Seasonal usage pattern of outdoor spaces in educational precincts". In: Marsha Lamb (editor). *AUBEA 2017: Australasian Universities Building Education Association Conference*, Vol. 1, pp. 253—262, 2017.
- [19] S.B. Hossini, S. Azemati, N. Elyasi and F. Mozaffar, "The Effect of the Vitality Level of University Campuses on Increasing Social Interactions and Makin". *Procedia - Social and Behavioral Sciences*, Vol. 170, pp. 225 – 233, 2015.
- [20] A.M. Salama, "When Good Design Intentions Do Not Meet User's Expectations: Exploring Qatar University Campus Outdoor Spaces". *International Journal of Architectural Research*, Vol. 2, No. 2, 57-77, 2008.
- [21] H. Hanan, "Open Space as Meaningful Place for Students in ITB Campus". *Procedia - Social and Behavioral Sciences*, Vol. 85, pp. 308 – 317, 2013.
- [22] Matloob, F.A., Sulaiman, A.B., Ali, T.H., Shamsuddin, and Mardyy, W. N. Sustaining campuses through physical character: the role of landscape. *Procedia - Social and Behavioral Sciences*, Vol. 140, pp. 282 – 290, 2014.
- [23] A. Uslu and S. Gökçe, "Social Interaction in Urban Transformation Areas and the Characteristics of Urban Outdoor Spaces: A Case Study from Turkey". *African Journal of Agricultural Research*, Vol. 5, No. 20, pp. 2801-2810, 2010.
- [24] I.A. Emmanuel and A.V. Olufemi, "Impact of Quality and Usage of Outdoor Spaces on Sustainable Campus Environment in Akure, Nigeria". *American Journal of Environmental Protection*, Vol. 6, No. 5, pp. 105-111, 2017.
- [25] S.L. Huang, "A Study of Outdoor Interactional Spaces in High-Rise Housing". *Landscape and Urban Planning*, Vol. 78, No. 3, pp. 193–204, 2006.

- [26] W. Zhang and G.M. Lawson, "Meeting and Greeting: Activities in Public Outdoor Spaces Outside High-Density Urban Residential Communities". *Urban Design International*, Vol. 14, No. 4, pp. 207-214, 2009.
- [27] T.F. Liao and A. Rula, R. Ardisana, A. Knicher, A. Mayo and C. Sarcu, "Social Behavior in Public Spaces in a College Town". *Sociologija i Prostor*, Vol. 50, No. 1, pp. 3-26, 2012.
- [28] T. Grey and E. Siddall, "*Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland*". TrinityHaus, Trinity College Dublin, the University of Dublin, 2012.
- [29] N. Farida, "Effects of Outdoor Shared Spaces on Social Interaction in a Housing Estate in Algeria". *Frontiers of Architectural Research*, Vol. 2, No. 4, pp. 457–467, 2013.
- [30] A.A. Heidari, M. Farhadian and S. Foroozandeh "The Effect of the Quality of Outdoor Space on the Interaction of Students. *Journal of Applied Sciences and Agriculture*, Vol. 8, No. 6, pp. 785-794, 2013.
- [31] D.B. Omer, F.I.B. Ibrahim and N.H.N. Mohamad, "Human Interaction in Open Spaces". *Social and Behavioral Sciences*, Vol. 201, pp. 352 – 359, 2015.
- [32] S. Wilson, "*Shared spaces, shared lives*". MSc. Thesis, Utrecht University, Netherland, 2016.
- [33] D. Kenney, R. Dumont and G. Kenney, "*Mission and Place Strengthening Learning and Community Through Campus Design*". USA. American Council on Education, Praeger Publishers, pp. 35-49, 2005.

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الخلاصة:

الجامعة ليست فقط مكاناً للتعليم وتدرّيس العلوم، بل هي أيضاً مكان يبدأ فيه الطلاب تفاعلاتهم الاجتماعية التي تؤدي إلى تشجيع الطلاب على التفوق في فصولهم الأكاديمية. تجدر الإشارة إلى أن الفضاءات الخارجية داخل كلية الهندسة بجامعة صلاح الدين في أربيل لم تحظ بما يكفي من الاهتمام من حيث تحديد الموقع والتوزيع مما قد يؤثر سلبيًا على قلة التواصل والتفاعل الاجتماعي بين الطلاب. الهدف من إجراء هذا البحث هو لدراسة تأثير الفضاءات الخارجية المشتركة على التفاعل الاجتماعي بين الطلاب: كلية الهندسة في جامعة صلاح الدين - أربيل، العراق، كدراسة حالة. تم استخدام مسح ميداني - كمي كمنهجية بحثية لتحقيق أهداف البحث. تم توزيع 80 استبياناً بشكل عشوائي على 80 طالباً (40 ذكراً و40 أنثى)، وقد تم جمع البيانات واستخدام تحليل المكونات الرئيسية بواسطة الاداة الاحصائية (Varimax rotation - SPSS) للحصول على تفسير أسهل وأدق للنتائج. أشارت النتائج إلى وجود اختلاف كبير بين العوامل والمكونات، حيث تم الحصول على أعلى قيمة من الرضا في جودة الفضاءات المفتوحة/ نسيه النباتات والمساحة الخضراء/التجول، والتي حققت ما نسبته 69 %، كما أن نسبة الرضا لجميع المشاركين كانت 61.63 %؛ ستة متغيرات خاصة بالعامل الأول، جودة ونوعية الفضاءات المفتوحة حملت قراءات متباينة. تنتهي الدراسة بمجموعة من الاستنتاجات والتوصيات المتعلقة بتصميم الفضاءات المفتوحة المشتركة داخل المباني الجامعية لتحقيق تفاعل اجتماعي فعال بين المستخدمين/الطلاب.

الكلمات الدالة: الفضاءات الخارجية، التفاعل الاجتماعي، جودة الفضاء، كلية الهندسة، جامعة صلاح الدين - أربيل.