

The Analysis of Students Learning Satisfaction based on the Environment Management System at Postgraduate Program *Universitas Kristen Indonesia*

Bintang R. Simbolon¹, Dameria Sinaga²

^{1,2}Universitas Kristen Indonesia, Jakarta, Indonesia

Email: bintang.simbolon@uki.ac.id

Abstract

The purposes of doing this research are finding out a) the level of student satisfaction with open learning spaces and finding, and b) the suggestions given by students for the improvement of open learning spaces at *the Postgraduate Program-UKI* by the needs of students. This research was carried out at *Post-graduate Program-UKI* and it was done from December 2019-April 2020. The research design was a survey method using a quantitative research approach and the respondents were students of the Post-graduate Program consisted 148 students which are distributed in six study programs. The research instruments that will be used in this study are questionnaires (quantitative data) and interviews (qualitative data). The result of this study is that the majority of students said agree (65.27%), strongly agree (23.58), disagree (10.37%) and strongly disagree (0.77) in the dimension of environment management. Then it can be conclude that that the score interpretation criteria of this study are in the 60%-77.99% numerical interval, namely "agree" in other words "good", and therefore, the UKI Postgraduate Program still needs improvements in terms of environmental management, so that the level of student satisfaction can be further improved

Keywords: *Learning Satisfaction, Environment Management System, Students.*

1. Introduction

Learning activities in tertiary institutions have experienced a lot of changes and developments. For the sake of the smooth teaching and learning process, both lecturers and students need a room or place. Aside from being in the classroom, this learning can also be done outside the classroom. A learning space is a space or meeting area for students (in this case students) in groups or individually to discuss with each other, express opinions about the task or lecture, with all facilities for learning convenience are equipped with a network or internet connection such as Wi-Fi and other learning resources to expand student interaction [1]. In the past, when talking about learning space (learning space) in the context of education, it must have been identical to a classroom, which is a space that was physically designed to support the teaching and learning process directly. The classroom itself has undergone many changes for the convenience of teaching and learning. However, currently, the place of learning is not only focused in the classroom. Although the classroom remains the primary place for learning activities, some many factors and opportunities make learning activities can be done anywhere.

One factor is that students are currently required to have more self-learning or lecture concepts that do not have to be face to face with lecturers. Students can study independently by utilizing open learning space facilities that have been provided by the campus, with Wi-Fi to facilitate students in accessing the Internet and other facilities. The

reason for this shift or change is to develop the concept of classroom learning, by utilizing information technology that has developed rapidly [1], for example, with wireless networking that makes the interaction between students with one another and between students and lecturers and institutions become more real without having to meet face to face. It is why learning in the classroom is not enough right now. Teaching and learning activities can be done in collaboration, namely by learning in the classroom as usual and learning outside the classroom at certain times. Students can be given a project or assignment either individually or in small groups to be completed outside the classroom. Learning outside the classroom model, students usually look for comfortable spaces to do their work, such as in a dormitory, library, computer laboratory or computing center. However, due to the limited capacity of the room and avoiding boredom in learning indoors, students more often utilize open study spaces such as food courts, student cafeterias or cafeterias, campus lobbies or halls, gazebos, student squares or student lounges, etc. provided by the institution.

New ideas about open learning spaces (open learning space) are enormous opportunities for higher education, to make teaching and learning activities more successful. Through the application of Information Technology, the existence of open learning space is now considered to have the potential to serve the learning paradigm with a new concept and at the same time be able to meet the needs and expectations of students regarding the convenience of learning. Because the success of education is the primary mission of higher education, open learning space is one of the essential facilities for the convenience of the educational process. It can be said to be necessary because the concept of teaching and learning activities that continue to experience change and development, one factor is the change in learning concepts such as this is the existence of self-learning or an independent learning concept in higher education by maximizing the use of Information Technology and other learning resources, as explained before. Another thing that can prove that open learning space is considered necessary is that the learning burden of students in activities lectures in 1 SKS is equivalent to 160 (one hundred sixty) minutes of learning activities per week per semester, i.e. 50 minutes face-to-face, 60 minutes of independent study, and 50 minutes of structured assignments. It confirms that the number of student study hours independently is more than the number of student study hours face to face with lecturers in the classroom.

Open learning space is not only students but also lecturers. The teaching and learning process or practice can be done outside the classroom or outdoors, by utilizing the surrounding environment or open learning space area that has been available as a form of refreshment so that students do not feel bored, especially for Teacher Training Education Institutions, which can use areas outside the classroom for teaching practice. The existence of open learning spaces can now be said to be urgent. Therefore there needs to be the right arrangement and management. One of the tertiary institutions in Jakarta that has a fairly wide area and is actively conducting campus development is *Universitas Kristen Indonesia (UKI)*. *Universitas Kristen Indonesia* is a tertiary

institution located at Jl. Mayjen Sutoyo No. 2 Cawang, East Jakarta. It has nine faculties and 34 study programs. In this study, the researchers will try to find out how the university organizes the environment management system, especially the "open learning space at the Postgraduate Program". The researcher will also look at how the level of student satisfaction is related to the quality of open learning spaces at *Postgraduate Program - UKI*, as well as how the expectations and suggestions given by students are related to the improvement of open learning spaces at *Postgraduate Program - UKI*, according to student needs.

The reason researchers chose *Postgraduate Program-UKI* is because *Postgraduate Program-UKI* is one of the developing campuses in Jakarta. *Postgraduate Program-UKI* has a reasonably large area, but now a lot of land or space is allocated for parking lots, along with the increasing number of students because of the higher interest of the community to study at *Postgraduate Program-UKI*. The increase in the number of students at *the Postgraduate Program-UKI* that is not matched by the construction or addition of appropriate learning spaces can cause students to feel the lack of comfortable space to study.

Based on preliminary observations, some problems arise related to the existence of open learning spaces (open learning space) at *the Postgraduate Program-UKI*. The number of open study spaces in the *Postgraduate Program - UKI* is quite large, but some of these areas have not been used optimally for learning. It can also be caused by the lack of management and exceptional attention to open learning space, so the arrangement is not yet suitable for the place of learning as it should be. Other problems are related to internet connections (Wi-Fi) that have not been spread evenly, there are still some areas that cannot be connected to Wi-Fi, and often experience problems with access speed. The availability of electrical plugs that are lacking or damaged but are not immediately repaired in the open study area is also a problem because now students study anywhere with gadgets and always need a socket to charge the gadget (charge). Cleanliness in the open study area is poorly maintained, and there is a lack of bins in some of these areas. The condition of the learning space that is less conducive results in student confusion looking for a place to study, so students look for spaces such as in the hallway or in the hallways of the campus, which should be access roads.

Students need a comfortable place to study since learning can now be done anywhere. Open learning space is no longer a desire but has become a necessity. Matters related to the lack of comfortable open study space provided by the campus positively affect student satisfaction. For this reason, it is essential to see student satisfaction with the quality of open learning spaces in their tertiary institutions. Therefore, the authors are interested in conducting further research on Student Satisfaction of Open Study Space at the *Postgraduate Program-UKI*.

Based on the background of the problems above, in this study the following problems can be identified: a) There is open space or study space allocated for parking

lots; b) The increasing number of students in line with the increasingly high interest of the community to study at *Postgraduate Program-UKI* is not matched by the development or addition of appropriate learning spaces; c) Open learning space at *Postgraduate Program-UKI* has not been optimized for learning activities; d) Lack of management and arrangement for open study spaces; e) Internet connection (Wi-Fi) has not been spread evenly, there are still some areas that cannot be connected to Wi-Fi, as well as problems with internet access speed; f) The availability of power outlets that are lacking or damaged but are not immediately repaired in the open study area, because students now study anywhere with gadgets and always need a socket to charge the gadget; g) Cleanliness in the open study area is not maintained and the availability of rubbish bins in some open study areas is still lacking; h) The condition of open study space is not conducive, so students look for space to study as in the hallway, in the hallways of the campus, which should be access roads in the campus area.

In order for this research to be focused and get good results, the following problem limits are given: a) Based on the problems associated with open learning spaces in tertiary institutions, this study will be limited to issues related to student satisfaction indicators that have been set on the instruments in this study, including features, reliability/reliability, design and aesthetics, comfort, environmental/physical conditions, and protection of public interests; b) The open study room under this study is the open study room in *Postgraduate Program-UKI*. The purposes of doing this research are finding out a) the level of student satisfaction with open learning spaces and finding, and b) the suggestions given by students for the improvement of open learning spaces at *the Postgraduate Program-UKI* by the needs of students.

2. Method

This research was carried out at *Postgraduate Program-UKI*. It is laid on at *Jl. Pangeran Diponegoro No.84-86, RT. 2/RW. 6, Kenari, Kec. Senen, Kota Jakarta Pusat, Daerah Khusus Ibukota Jakarta 10430 Postgraduate Program-UKI* and it was done from December 2019-April 2020. The research design was a survey method using a quantitative research approach [20; 21; 22]. The respondents of this study were students of the Post-graduate Program, which consisted of 6 study programs in all batches. The description and classification are as follows:

Table 1. Number of Students at Postgraduate Program - UKI

No	Study Program	Number of Students
1	Magister of Education Administration	90
2	Magister of Law	121
3	Magister of Christian Education Religion	70
4	Magister of Management	37
5	Magister of Electronical Technique	20
6	Magister of Architecture	20
Total		358

The respondents of this study were 148 students of the total number of students (358 students) determined using proportional random sampling. This is done to get a representative number of respondents. In order to produce representative data, the minimum number of samples for survey research is 10% - 20%, and it is stated that more and more participants are involved. So thus, the distribution of research respondents can be obtained as follows [20]:

Table 2. Subjects of the Research

No	Study Program	Number of Students	The subject of the Research
1	Magister of Education Administration	90	58
2	Magister of Law	121	26
3	Magister of Christian Education Religion	70	24
4	Magister of Management	37	12
5	Magister of Electronical Technique	20	13
6	Magister of Architecture	20	15
Total		358	148

The research instruments that will be used in this study are questionnaires (quantitative data) and interviews (qualitative data).

Table 3. Questionnaire Indicators

No	The dimension of Environment Management System	Indicator	Items Number
1	Design and Esthetics	Student satisfaction on physical appearance, arrangement, presentation, proportional open learning space	1, 2, 3
2	Comforts	Student satisfaction on everything that affects the comfort of learning in open learning spaces such as cleanliness, flexibility in activities (flexible design), beauty, calmness, shade, etc.	4, 5, 6, 7, 8, 9
3	Environment Condition/Physical	Student satisfaction with lighting in open study rooms and availability of electricity drains, electric sockets, lights, and so on.	10, 11

4	Feature	Student satisfaction with the availability of supporting facilities in open study rooms, such as the presence of desks, chairs (lounge), Wi-Fi, and others	12, 13, 14
5	Reliability	Student satisfaction on the reliability, quality, usefulness of everything in open study spaces such as the speed of internet access, adequacy of capacity, adequacy of open learning space	15, 16, 17, 18
6	Protection of public interests	Student satisfaction of security and safety of users (life and goods) in open study rooms and outreach posts/security officers	19, 20

3. Result and Discussion

In this section, the data will be analyzed and discussed in order to answer the research questions that have been mentioned in the research background section. The Postgraduate Program students who contributed to filling out this questionnaire were students of the Masters in Architecture, Masters in Electrical Engineering, Masters in Management, Masters in Christian Religious Education, and Masters in Educational Administration. The number of students who became respondents to filling out this questionnaire was 148 people. To be more transparent, the distribution of respondents can be seen in the following figure:

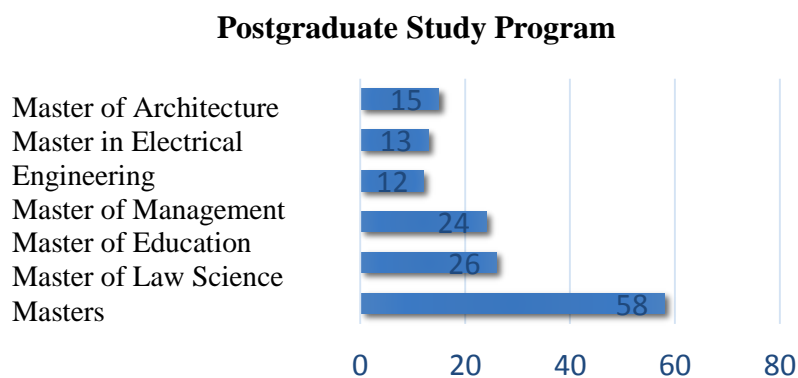


Figure 1. Distribution of Research Respondents

From the results of research and data analysis using tabulation techniques, the UKI Postgraduate Program student satisfaction rating can be described in each questionnaire item. The research analysis for each statement item on the research questionnaire can be described as follows:

Table 4. Classification of the Overall Student Answer Score Average

The dimension of the Environment Management System	Items Number	Categories			
		SDS	DS	A	SA
Design and Esthetics	1	2	7	99	40
	2	7	25	93	23
	3	1	20	90	37
	4	1	7	89	51
	5	0	6	88	54
Comforts	6	1	6	97	44
	7	1	16	98	33
	8	0	16	108	24
	9	3	30	105	10
Environment Condition/Physical	10	1	18	109	20
	11	0	15	87	46
	12	0	13	92	43
Feature	13	1	10	93	44
	14	0	11	86	51
	15	1	18	106	23
Reliability	16	1	13	104	30
	17	0	12	99	37
	18	1	32	87	28
Protection of public interests	19	1	13	99	35
	20	1	19	103	25
Total		23	307	1932	698
%		0.77	10.37	65.27	23.58

Based on the table, it shows that from the 148 study respondents: a) 65.27% of students agreed that they were satisfied with the physical appearance, arrangement, presentation, proportional open learning space; everything that affects the comfort of learning in open learning spaces such as cleanliness, flexibility in activities (flexible design), beauty, calmness, shade, etc.; on lighting in open study rooms and availability of electricity, drains, electric sockets, lights, and so on; on the availability of supporting facilities in open study rooms, such as the presence of desks, chairs (lounge), Wi-Fi, and others; on the reliability, quality, the usefulness of everything in open study spaces such as the speed of internet access, adequacy of capacity, adequacy of open learning space; and on security and safety of users (life and goods) in open study rooms and outreach posts/security officers; b) 23.58% of students stated strongly agree that they were satisfied with the physical appearance, arrangement, presentation, proportional open learning space; everything that affects the comfort of learning in open learning spaces such as cleanliness, flexibility in activities (flexible design), beauty, calmness, shade, etc.; on lighting in open study rooms and availability of electricity, drains, electric sockets, lights, and so on; on the availability of supporting facilities in open study rooms, such as the presence of desks, chairs (lounge), Wi-Fi, and others; on the reliability, quality, usefulness of everything in open study spaces such as speed of internet access, adequacy of capacity, adequacy of open learning space; and on security and safety of

users (life and goods) in open study rooms and outreach posts/security officers; c) 10.37% of students stated that they were satisfied with physical appearance, arrangement, presentation, proportional open learning space; everything that affects the comfort of learning in open learning spaces such as cleanliness, flexibility in activities (flexible design), beauty, calmness, shade, etc.; on lighting in open study rooms and availability of electricity, drains, electric sockets, lights, and so on; on the availability of supporting facilities in open study rooms, such as the presence of desks, chairs (lounge), Wi-Fi, and others; on the reliability, quality, the usefulness of everything in open study spaces such as the speed of internet access, adequacy of capacity, adequacy of open learning space; and on security and safety of users (life and goods) in open study rooms and outreach posts / security officers, and d) 0.77% of students stated strongly disagreed that they were satisfied with physical appearance, arrangement, presentation, proportional open learning space; everything that affects the comfort of learning in open learning spaces such as cleanliness, flexibility in activities (flexible design), beauty, calmness, shade, etc; on lighting in open study rooms and availability of electricity, drains, electric sockets, lights, and so on; on the availability of supporting facilities in open study rooms, such as the presence of desks, chairs (lounge), Wi-Fi, and others; on the reliability, quality, the usefulness of everything in open study spaces such as the speed of internet access, adequacy of capacity, adequacy of open learning space; and on security and safety of users (life and goods) in open study rooms and outreach posts/security officers.

It shows that the majority of students agree on the dimension of environment management system in the UKI Postgraduate Program in terms of Design and Esthetics, Comforts, Environment Condition, Feature, Reliability, and Protection of public interests.

For a clearer data description, see the following figure.

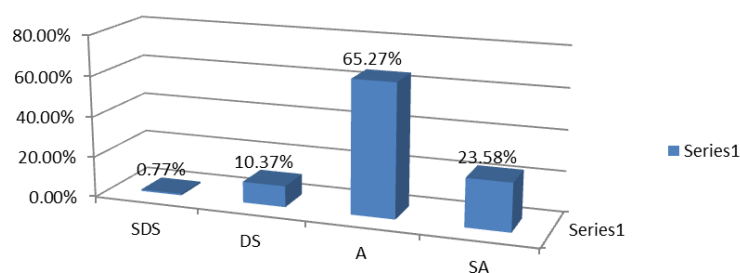


Figure 2. Classification of the Overall Student Answer Score Average

Thus, the "calculation score" can be determined for the assessment of the respondent's interpretation based on the questionnaire that has been filled in (with a value of $Y = x \cdot 148 = 592$ as follows:

$$\text{Index \%} = (\text{Total score} / \text{Total Statement} / Y) * 100$$

$$\text{Index \%} = (9225 / 20 / 592) * 100$$

$$\text{Index \%} = (0.77) * 100$$

$$\text{Index \%} = 77.91\%$$

While the calculation of the percentage index ends with the determination of the score interpretation criteria based on the following intervals:

Range 0% - 19.99%	= Strongly Disagree
Range 20% - 39.99%	= Disagree
Range 40% - 59.99%	= Neutral
Range 60% - 79.99%	= Agree
Range 80% - 100%	= Strongly Agree

Thus it can be concluded that the score interpretation criteria of this study are in the 60% - 77.99% numerical interval, namely "agree" in other words "good". Therefore, the UKI Postgraduate Program still needs to make improvements in terms of environmental management, so that the level of student satisfaction can be further improved. In connection with this, there are several suggestions for improvement that have been given by students, such as the following: a) It is necessary to add WIFI / Hotspot facilities to support the all-digital lecture process and the availability of electricity networks as power supply for laptops and mobile phones; b) Need to repair existing computers in the room, some of which are no longer suitable for use; c) The need for a beautiful garden arrangement, need to have flowers, painted chairs in the garden and clean floors, the front of the chapel hall facing the library needs attention; d) Increasing the quality of information in the learning room; e) please improve the internet network; e) Cleanliness of floors and rest rooms need to be improved; f) providing chairs in the corners of the campus, so that students can also study in open spaces with cool natural conditions; g) The teaching staff must be in accordance with the disciplines mastered in order to be able to convey to students well; h) Arranging the gazebo in an open area, please tidy up and repair the garden chairs, which are damaged and there is access to electricity around the park, and also please provide bicycle parking in the parking area and i) It is necessary to develop open learning facilities.

4. Conclusion

With the findings of this study, the research questions in the background section have been answered, namely that the majority of students said agree (65.27%), strongly agree (23.58), disagree (10.37%) and strongly disagree (0.77) in the dimension of environment management. Existing system in the UKI Postgraduate Program in terms of Design and Esthetics, Comforts, Environment Condition / Physical, Feature, Reliability, and Protection of public interest. Thus it can be said that the score interpretation criteria of this study are in the 60%-77.99% numerical interval, namely "agree" in other words "good". There are suggestions for improvement from students on environmental management in the UKI Postgraduate Program. They are increasing WIFI bandwidth, repairing computers that are not suitable for use in the room, gardening, improving the quality of in-focus, cleaning floors and bathrooms, providing chairs in the corner of the

room, the field of teaching staff must be by the courses taught, gazebo arrangement, and improvement of open study facilities.

References

- [1]. Brown, M., & Lippicott, K. (2003). *Learning Spaces: More than Meets the Eye*. Access <http://net.educause.edu/ir/library/pdf/EQM0312.pdf>.
- [2]. Educause. (2011). *7 Things You Should Know about The Modern Learning Commons*. Access <https://net.educause.edu/ir/library/pdf/ELI7071.pdf>
- [3]. Mudjiman, H. (2007). *Belajar Mandiri*. Surakarta: UNS Press.
- [4]. Agustin, M. (2011). *Permasalahan Belajar dan Inovasi Pembelajaran*. Bandung: Refika Aditama.
- [5]. McDaniel, S. (2014). *Every Space is a Learning Space*. Saint Paul: BWBR Architects.
- [6]. Long, P. D., & Ehrmann, S. C. (2005). *The Future of the Learning Space: Breaking Out of the Box*. Access http://espace.library.uq.edu.au/view/UQ:188925/UQ188925_OA.pdf
- [7]. Purnomo, Y., Lubis, M. S., & Nurhamsyah, M. (2014). Konsep Ruang Terbuka Publik Mahasiswa Sebagai Penghubung Antar Unit di Universitas Tanjungpura. *Langkau Betang: Jurnal Arsitektur*, 1(1), 1-14.
- [8]. Laurens, J. M. (2005). *Arsitektur dan Perilaku Manusia*. Surabaya: Gramedia Widiasarana Indonesia.
- [9]. Diana, D. G. (2006). *Learning Space*. Access http://classmod.unm.edu/external/educause/Educause_Chapter01_SpaceAsChangeAgent.pdf
- [10]. Frick, H. (2011). *Arsitektur dan Lingkungan*. Yogyakarta: Kanisius.
- [11]. Siahaan, J. (2010). *Ruang Publik: Antara Harapan dan Kenyataan*. Access <http://bulletin.penataanruang.net/index.asp?mod=fullart&idart=265>
- [12]. Mowen, J. C., & Minor, M. (2002). *Perilaku Konsumen*. Jakarta: Erlangga.
- [13]. Kotler, P., & Keller, K. (2007). *Manajemen Pemasaran*. Jakarta: Indeks.
- [14]. Tjiptono, F. (2006). *Manajemen Jasa*. Yogyakarta: Andi.
- [15]. Daryanto & Setyobudi, I. (2014). *Konsumen dan Pelayanan Prima*. Yogyakarta: Gava Media.
- [16]. Mahmud, M. (2012). *Manajemen Mutu Perguruan Tinggi*. Jakarta: Raja Grafindo Persada.
- [17]. Tjiptono, F. (2011). *Pemasaran Jasa*. Yogyakarta: Bayumedia Publishing
- [18]. Sukandi, P. (2010). *Hubungan antara Fasilitas Kampus terhadap Kepuasan Mahasiswa dalam Menghadapi Daya Saing Jasa Pendidikan*. The 4th PPM National Conference on Management Research Universitas Widyatama Bandung.
- [19]. Sopiadin, P. (2010). *Manajemen Belajar Berbasis Kepuasan Siswa*. Bogor: Ghalia Indonesia.
- [20]. Mills, G. E., & Gay, L. R. (2009). *Educational Research Competencies for Analysis and Applications*. Ohio: Pearson Education, Inc.
- [21]. Creswell, J. E. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Boston: Sage Publication. Inc.
- [22]. Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2006). *Methods in Educational Research: From Theory to Practice* (Vol. 28). John Wiley & Sons.