

Exploring The Green Outdoor Learning Space Toward Producing a Happier Graduate

Marina Abdullah^{1*}, Sreetheran Maruthaveeran^{2*}, Mohd Zulhaili Teh³, Khalilah Hassan⁴

^{1,2,3}Faculty of Design & Architecture, University Putra Malaysia

^{1,3}Department of Built Environment Studies & Technology, College of Built Environment, UiTM Perak Branch

⁴Faculty of Architecture and Ekistics, University Malaysia Kelantan

*Corresponding author

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.923MIC3ST250022>

Received: 12 August 2025; Accepted: 20 August 2025; Published: 24 October 2025

ABSTRACT

Outdoor learning has now begun to regain its place after being largely absent for almost two years, during which time it was conducted primarily through virtual classes due to the COVID-19 pandemic in 2020. Green outdoor learning space is outside of the door and outside of the wall, merged with an atmosphere of natural surroundings of living and non-living elements on Earth. Nowadays, adolescents' prevalence experience mental disorders, accounting for 13% of the global burden of disease in the age group of 10-19 years old, especially depression, anxiety, and stress (National Healthcare Quality and Disparities Report, 2022). This study aims to foresee the correlation between gender and outdoor learning space in increasing the happiness level of graduates. Therefore, a green outdoor learning space will boost their happiness levels and act as a health therapy. A descriptive analysis using online questionnaires was carried out to obtain the students' happiness levels. This study reveals the preferences of landscape architecture students who were exposed to both outdoor and indoor learning styles. Analyzed data using SPSS Statistics 23 reveals female and male students were highly correlated. Outdoor classes in the morning session increase happiness levels compared to the afternoon and evening. This study seeks to guide higher institutions in allocating the appropriate schedule of time to undergo outdoor learning to increase the happiness level of the students.

Keywords— green, outdoor learning, gender, happiness

INTRODUCTION

A stress-free and happy learning atmosphere is the dream of every student. Fostering a positive learning atmosphere can be enhanced by addressing certain challenges, such as heavy workloads and health considerations. Additionally, encouraging more interactions among students can help counteract the distractions caused by excessive use of gadgets. By focusing on these areas, we can create a more engaging and supportive educational environment. Therefore, to achieve a level of happiness during the learning session, the objective is to observe the availability of a suitable time preference and duration for outdoor learning. Space imposed significant due served as the main platform for teaching and learning, especially at the higher education level, regardless of whether it is indoor or outdoor.

Statistics released by the World Health Organization (WHO) in 2022 showed globally, an estimated 5% of adults suffer from depression. The Institute for Youth Research Malaysia (IYRES) & United Nations Children's Fund (UNICEF) noted that mental health issues became worse due to the increase among Malaysians especially regarding depression, anxiety, and stress. The statistics of individuals seeking support through the Psychosocial Support Service Helpline (MHPSS), increased fivefold in 2022 compared to 2020 (Ministry of Health Malaysia, 2020). Mental health problems among adolescents aged 13-17 years based on National Health & Morbidity Survey (NHMS 2015), revealed that females were more affected compared to

males. Adults (>16 years old) had a higher prevalence of depression than children (5-15 years old). Therefore, students are targeted at health crisis problems.’

The data showed that depression and stress factors are due to the feeling of sadness caused by many factors that plague individuals (webmd.com, 2023). Due to that, the study aimed to seek the correlation and preferences of outdoor learning spaces that can increase positive feelings such as happiness, which need to be studied to strengthen mental health, in achieving the National Security Policy 2021-2025, Strengthening Mental Health, and People's Resilience.

LITERATURE REVIEW

Outdoor learning is an out of a building enriched with the natural surrounding environment including water, animals, and vegetation (M. Abdullah et al., 2022). Green outdoor learning space is an outside medium for learning process, either formally or informally, outside of the classroom wall (indoor) that is surrounded by natural elements such as floras and faunas serving a comfortable, spacious, and airy atmosphere. According to the theory of behavior setting (Ju et al., 2020), green environmental conditions that connect humans with their environment can enhance a positive aura, particularly in children's education (Grindheim et al., 2021) influencing emotions, behavior, and interest in teaching, and learning.

Green outdoor learning space is an outside medium for learning process, either formally or informally, outside of the classroom wall (indoor) that is surrounded by natural elements such as floras and faunas that forms a comfortable, spacious, and airy atmosphere. It offers more active, dynamic movement, experience in learning (M. Abdullah et al., 2018) and not too limited use of space.

Most of these spaces are composed of layers of floras, such as trees, palms, shrubs, groundcovers, and climbers, engaged with other natural elements either living or non-living things, such as insects, climate, rock, sand, and water. Multiple studies showed that green outdoor spaces significantly have a positive impact on teaching and learning, especially in educational institutions. A study done by Hodson & Sander (2019) revealed that greenness and nature affect educational opportunities and student performance in school, especially in the increment of academic, and student motor coordination (Li et al., 2024), promote senses opportunity (Loebach & Cox, 2022) and indulge happiness (M. Abdullah et al., 2023). Furthermore, classrooms with windows that offered outdoor visuals of greenness show a correlation with high school students' graduation rates and academic merit awards (Matsuoka, 2010). All these outdoor learning characteristics benefit the gendered happiness level during teaching and learning.

Table 1: The Significant of Outdoor Learning

Authors	Outdoor Learning Character	Benefits
Akarsu (2025)	Outdoor experiential learning	Improves participants' life-based experiential learning and reflective social and emotional skills
Li et al., (2024)	Outdoor public space	Mental performance and wellbeing
Abdullah et al., (2023)	Outdoor and indoor play learning- (sensory learning and play learning)	Skills and communication development
Yi Shi, Yong Adilah Shamsul Harumain, (2023)	Walking activities	Males are more attention to healthy walking, and likely to engage in walking behavior than females

Loebach & Cox, (2022)	Natural play space	Health benefits, appreciation of nature, and pro-environmental behaviors into adulthood
F. Abdullah et al. (2021)	Outdoor space for learning activities	Improving students' learning experience
Dring et al., (2020)	School gardens (Natural environment)	Improve academic performance, student behavior and social improvement
Ju et al., (2020)	Nature exploration	Physically active and to socialize with friends
Hodson & Sander (2019)	Nature exposure	Increase educational and academic attainment
Wyver (2019)	Independent outdoor play	Opportunities for independent mobility
M. Abdullah et al. (2018)	Outdoor nature environment	Improving self-experience

METHODOLOGY

This research employed a quantitative approach and revealed a correlation between happiness and gender. However, the respondents were limited to students of Faculty of Built Environment (FBE), who were exposed to both indoor and outdoor learning environments. Online structured questionnaires were distributed to students aged range between 19 to 20 years old, with a total of 100 students. This study was conducted using a Likert scale and suggestion to explore time preferences at outdoor learning that interest their happiness and concentration in teaching and learning. A descriptive analysis of the frequency and correlation between gender and happiness in green outdoor learning spaces was conducted using SPSS 23.

A. Respondent Profile

This study actively engaged students from the Faculty of Built Environment (FBE), who participated by completing a series of online questionnaires. The selection of these students is purposeful, as they have had valuable exposure to both outdoor and indoor learning environments, which enhances the depth of insights gathered in this study. By carefully selecting a diverse range of respondents, we effectively minimize any potential biases related to the learning mediums and ensure a robust foundation.

B. Study Design

A total of 100 students, comprising both male and female participants from the Faculty of Built Environment (FBE), agreed to participate in this study. These students were exposed to both outdoor and indoor learning methods. After the indoor and outdoor classes, an online structured questionnaire was conducted. The researcher provided instructions to all respondents regarding the two parts of the questionnaire. Part 1 focused on the background information of the students, while Part 2 explored their happiness levels regarding their time preferences and the duration spent in outdoor learning. Respondents were required to answer all questions in both parts. Part 1 included general profile questions about the respondents' backgrounds, and Part 2 consisted of questions related to their emotional responses to the outdoor learning environment. This included a Likert scale to measure the level of happiness experienced during outdoor learning sessions, as well as inquiries about the duration spent outdoors and suggestions for the optimal time allocation and preferences for outdoor learning to enhance happiness levels during the teaching and learning experience.

RESULTS

A total of 100 students (respondents) participated in the study, with ages ranging from 19 years (97.6%) to 20 years (2.4%). The group consisted of 50 female students (50%) and 50 male students (50%) who completed the questionnaires.

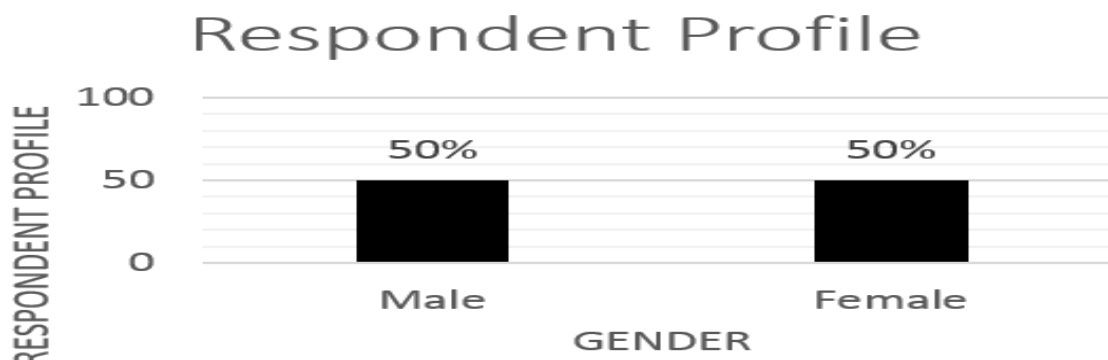


Fig. 1 Respondent Profile

Table 2: Analysis of Student Preferences Towards Happiness Level, Duration Preferences and Time Preferences for Green Outdoor Learning Space

Preferences		Percentage (MALE)	Frequency (FEMALE)	Percentage
Happiness Level	Not happy	0	0	0.0
	Less happy	0	0	0.0
	Happy	20	48	68
	Very happy	30	52	82
Duration Preferences	1 hr	14	4	18
	2 hr	18	24	42
	3 hr	14	12	26
	> 3 hr	4	10	14
Time Preferences	7-9 am	18	16	34
	9-11 am	28	28	56
	11-1 pm	4	4	8
	5-7 pm	1	2	3

Table 2 presents the students' preferences regarding happiness levels, duration of outdoor activities, and time preferences for engaging in green outdoor learning spaces. Remarkably, both male and female students reported high levels of happiness while interacting outdoors with their lecturers and peers, with 82% feeling "very happy" and 68% feeling "happy." It is noteworthy that no students indicated feeling "unhappy" (0%) in these green learning environments. When it comes to the ideal duration for outdoor educational activities, 42% suggested a preferred duration of about 2 hours, while 26% felt that extending this to 3 hours would foster an even greater sense of belonging in the outdoor setting. Conversely, 18% opted for 1 hour, and 14% preferred to stay for more than 3 hours. This variety in preferences highlights the diversity of opinions on how long students feel they can effectively engage while studying outdoors.

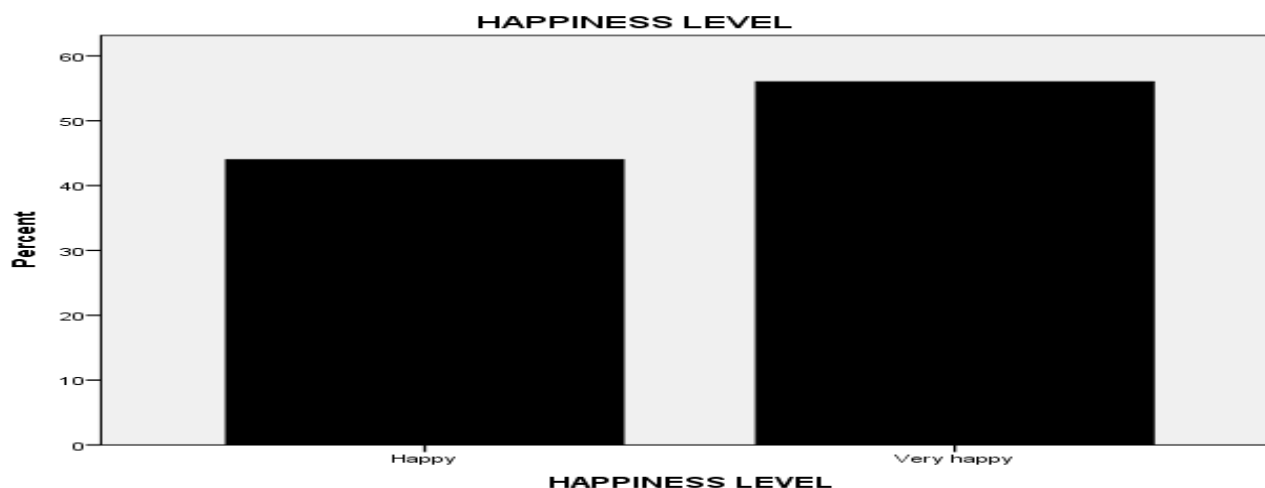


Fig. 2 Happiness level

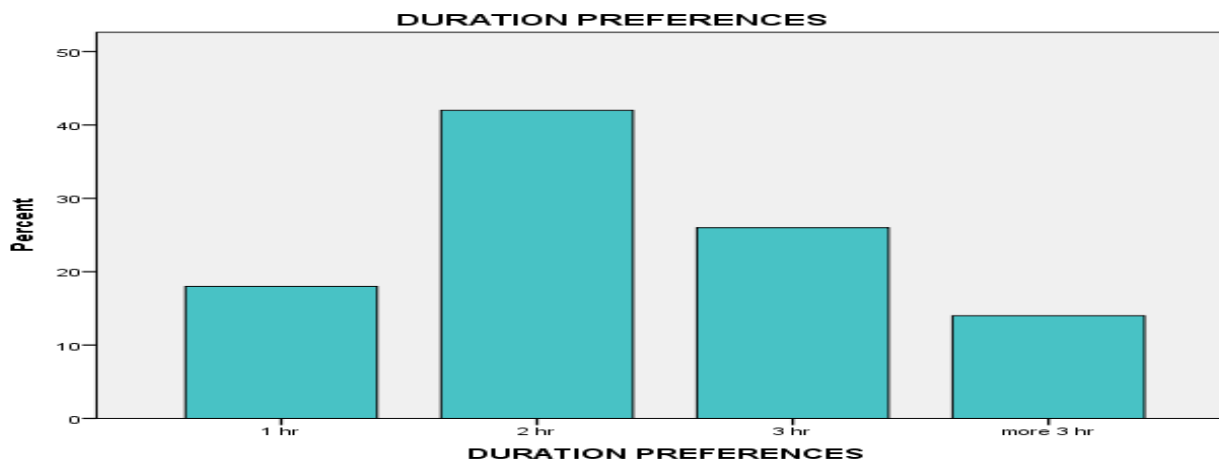


Fig. 3 Duration preferences

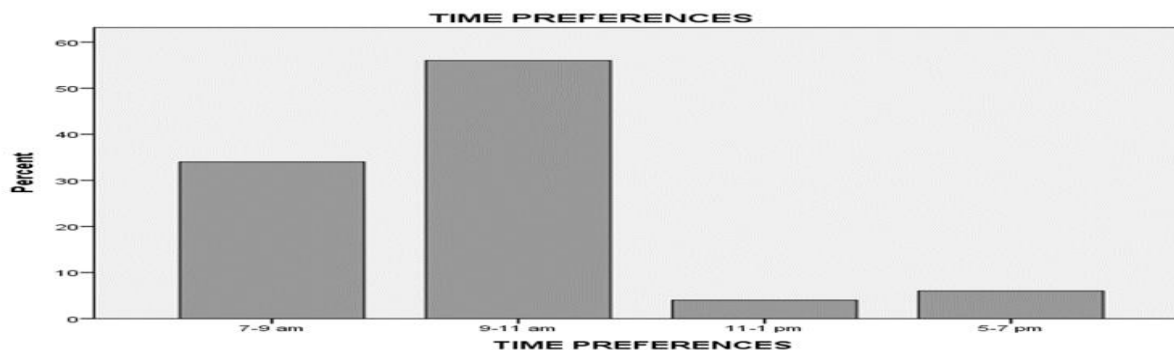


Fig. 4 Time preferences

The outdoor learning experience serves as an excellent platform for students to explore and connect physically and socially, encouraging them to engage with their environment in meaningful ways (Vujičić et al., 2021). Being active in a physical space allows students to learn and discover at their own pace, as supported by research (Björklid & Nordström, 2003). Interestingly, the majority of students identified the best times for outdoor teaching and learning activities as being in the morning, specifically between 9 a.m. and 11 a.m. (56%), with a considerable number also favoring the period from 7 a.m. to 9 a.m. (34%). The preference for these times reflects the students' desire for a fresh, cool atmosphere conducive to learning. They mention that, "the morning outdoor environment is fresher, promoting mental clarity, interest in learning, and improved focus", and "the cool weather is invigorating, providing a refreshing start to the body and the day". Furthermore, "a comfortable and relaxed atmosphere greatly enhances the understanding of knowledge during teaching and learning".

The findings of this study suggest a strong correlation between both male and female students' happiness levels while studying in green outdoor spaces, particularly in the morning when they feel most alert, fresh, comfort, improved focus and ready to learn. The enthusiastic response to outdoor learning indicates that students appreciate these spaces for their natural, expansive qualities, which create a refreshing and stress-reducing environment. Green spaces play a vital role in enhancing well-being by promoting physical activity (such as walking) (Yi Shi, Yong Adilah Shamsul Harumain, 2023) reducing stress, improving eyesight and cognitive abilities, and contributing to better academic outcomes (North Carolina (NC) State University, 2012). Students perceive outdoor learning as more informal and relaxed, enhancing their willingness to share thoughts and experiences, appreciate nature, and develop a sense of responsibility toward the environment (Tun Ismail et al., 2023), and feel courageous.

Figure 5 illustrates a significant correlation between male and female students regarding happiness levels, duration preferences, and time preferences. This highlights the essential role of fostering happiness and freedom in learning environments, which promotes not only the mental well-being of students but also increases their interest in feeling attached and valuing outdoor ecosystems. Ultimately, providing students with conducive and open spaces for learning supports their overall growth and well-being, allowing them to recharge and find ease in their educational journey.

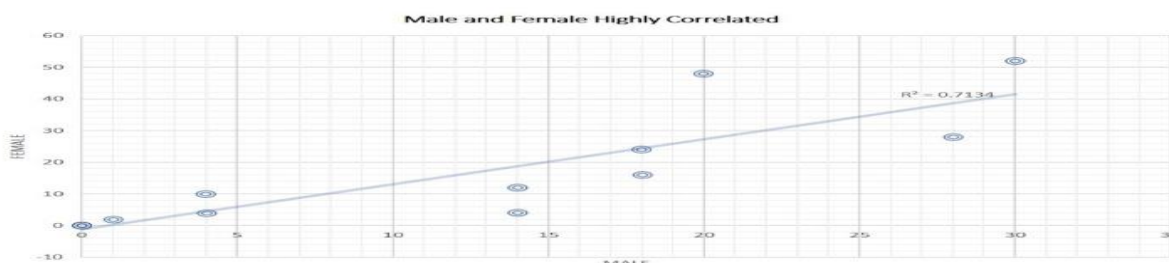


Fig. 5 Gender Correlation towards Happiness Level, Duration Preferences and Time Preferences

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CONCLUSION

This study provides important insights into the needs and preferences of students regarding outdoor learning spaces, which are essential for effective teaching and learning practices. The research focuses on landscape architecture students who experience both indoor and outdoor educational methods, thereby restricting the ability to generalize findings to a broader context. In light of Malaysia's climate conditions, students recommend scheduling outdoor learning sessions from 7 a.m. to 11 a.m. This timeframe takes advantage of the refreshing morning atmosphere, which enhances the overall educational experience. Responses from the

questionnaires indicate that students value the expansive, green natural settings, which significantly contribute to their learning process. Many respondents noted that outdoor environments reduce stress levels and promote a sense of freedom, allowing them to explore and engage in light recreational activities while learning. They describe these outdoor experiences as therapeutic for their mental and physical well-being, particularly when managing substantial workloads. Furthermore, outdoor learning cultivates a greater capacity to utilize the surrounding environment more effectively, enhancing the educational experience. This study serves as a valuable resource for improving teaching and learning methodologies by considering spatial characteristics, delivery methods, and optimal scheduling. By emphasizing these factors, educators can create a more positive and productive environment for both instructors and students, ultimately fostering the development of highly capable graduates.

ACKNOWLEDGMENTS

This paper is part of a Ph.D. research study titled "Developing Conceptual Design Strategies of Outdoor Learning Spaces for Children with Autism Spectrum Disorder (ASD)." Conducted at the Faculty of Design and Architecture, University Putra Malaysia (UPM), this research is made possible through the generous support of a Ph.D. scholarship from Majlis Amanah Rakyat (MARA) and University Technology MARA (UiTM), Malaysia. I am particularly thankful for the enthusiasm and valuable contributions of the students of the Landscape Architecture Program, whose participation has greatly enriched this study. Their support exemplifies the collaborative spirit that drives meaningful research and development in this field.

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