



PLANNING MALAYSIA:
Journal of the Malaysian Institute of Planners
VOLUME 23 ISSUE 6 (2025), Page 394 – 406

THE INFLUENCE OF COMPLEXITY AND COHERENCE IN PLANTING DESIGN ON STUDENT PREFERENCES AND WELL-BEING

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Abstract

Preference indicators such as complexity, coherence, legibility, and mystery play a crucial role in landscape planting design. Among these, complexity and coherence are often associated with high preference ratings in perceived landscapes. This study examines how students perceive landscapes with varying levels of complexity and coherence in planting compositions and the way these factors influence their preferences and well-being. Understanding these relationships is essential for promoting outdoor engagement and maximizing the benefits of nature for students. A photo-based questionnaire survey was conducted to assess preferences for 51 planting images. Data analysis, including descriptive and exploratory factor analysis using SPSS, revealed significant correlations between landscape complexity, coherence, and preference ratings. The findings highlight how this design elements affect students' psychological responses and overall well-being, offering valuable insights for campus landscape planning. This study contributes to integrating public perception into landscape design decision-making and enhances understanding of the relationship between planting composition and student experiences.

Keywords: Coherence, Complexity, Planting Design, Preference, Well-Being

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INTRODUCTION

The design of outdoor environments plays a fundamental role in shaping human experiences, particularly in educational settings where students spend a significant amount of time. University campuses are more than just academic spaces; they also serve as social and recreational environments that contribute to students' overall well-being. Research has shown that exposure to natural environments can reduce stress, enhance cognitive function, and improve psychological health (Jimenez et al., 2021; Liu & Green, 2023). However, the specific attributes of landscape design that maximize these benefits remain an area of ongoing research. Among the various landscape design principles, preference indicators such as complexity, coherence, legibility, and mystery are widely recognized as crucial factors influencing how individuals perceive and interact with outdoor spaces (Kaplan, 1987).

Complexity and coherence, in particular, are often associated with higher preference ratings in landscape perception. Complexity refers to the richness and variety of elements within a landscape scene, including plant species diversity, layering, and textural contrasts (Nasar, 1987). On the other hand, coherence is relevant to the visual organization and orderliness of these elements, as it ensures a harmonious and structured appearance. While both factors contribute to aesthetic appreciation, their combined effects on individuals' psychological responses and well-being have yet to be fully understood. Prior studies suggest that environments with balanced complexity and coherence tend to be more restorative and engaging (Kaplan, 1995; Herzog et al., 2003). However, few studies have specifically explored how these attributes influence students' perceptions of campus landscapes and their overall well-being.

University students often experience high levels of stress due to academic pressures, social expectations, and personal challenges. Access to well-designed green spaces has been identified as a key factor in promoting relaxation, mental restoration, and social interaction (Hartig et al., 2014; Taylor & Kuo, 2009). Therefore, understanding how planting composition particularly complexity and coherence affect students' landscape preferences and well-being is essential in creating effective outdoor spaces that support academic success and overall mental health. With proper designs, campus landscapes can function as restorative environments that encourage outdoor engagement, alleviate stress, and improve cognitive performance.

Despite the increasing recognition of landscape design's impact on psychological well-being, there remains a gap in empirical research concerning the direct relationship between complexity, coherence, and student preferences. This study aims to address this gap by examining the way university students perceive planting compositions with varying degrees of complexity and coherence. Through a photo-based questionnaire survey, this research

investigates students' preference ratings for different landscape compositions and analyses their potential influence on well-being. By identifying key patterns and correlations, the study seeks to provide valuable insights for campus landscape planning and contribute to evidence-based design strategies that enhance students' experiences in outdoor spaces.

This study contributes uniquely to the existing body of literature by focusing on planting design and student well-being within the Malaysian context, where tropical climatic conditions, campus culture, and landscape typologies differ markedly from those commonly examined in Western research. By situating the findings within Malaysia's educational and environmental setting, this research provides localized insights that support culturally relevant landscape design strategies for university campuses.

COMPLEXITY AND COHERENCE IN LANDSCAPE PLANTING DESIGN

Complexity Preferences

Complexity is a fundamental concept in landscape design that refers to the variety, richness, and diversity of elements within a given environment. It encompasses the number of different visual components, their arrangement, and the interactions between plant species, textures, and colours (Kuper, 2017). In the context of planting design, complexity is determined by factors such as species diversity, layering of vegetation, textural contrast, and spatial arrangement (Xie et al., 2024). Complexity is often associated with a higher level of visual stimulation, which can influence how individuals perceive and respond to landscapes (Kaplan & Kaplan, 1989). Studies in environmental psychology suggest that moderately complex landscapes tend to be more engaging and aesthetically appealing, while overly simplistic or excessively intricate environments may reduce visual interest or cause cognitive overload (Ulrich, 1983; Babington et al., 2023). Therefore, complexity in planting design contributes to aesthetic preference, as people tend to be drawn to landscapes that offer a balance of variety and create a sense of depth and visual richness.

Coherence Preferences

A coherent landscape exhibits clear spatial patterns, consistent plant arrangements, and an overall sense of unity, reducing cognitive strain and making the space more inviting (Hami & Abdi, 2019). Coherence is achieved by maintaining repetitive patterns or motifs in plant selection, colour schemes, textural harmony, and spatial organization (Yilmaz, 2018). Landscapes that exhibit coherent planting designs often group the plants species that complement each other in form and texture, have gradual transitions in height and density, focal point and typically have structured pathways or recognizable pattern, as this

enhances the overall readability of the space. Coherence plays a critical role in environmental preference and psychological well-being. According to the Kaplan and Kaplan Preference Matrix (1989), coherence is one of the four primary predictors of landscape preference, alongside complexity, legibility, and mystery. Landscapes that are visually well-structured and balanced tend to be rated more positively because they provide a sense of order and predictability, which enhances comfort and relaxation (Zhang et al., 2021). In contrast, environments that lack coherence and appear chaotic or disconnected, can cause visual discomfort and cognitive fatigue (Gungor & Polat, 2018).

Balancing Complexity with Coherence in Landscape Planting Design

While complexity enhances visual interest and engagement, it must be balanced with coherence to create a harmonious and legible environment (Kaplan, 1995; Kuper, 2017). Coherence refers to the sense of order and organization in a landscape, ensuring that elements fit together cohesively rather than appearing disorganized. Research suggests that landscapes that successfully integrate both complexity and coherence are rated as more aesthetically pleasing and psychologically beneficial (Kaplan & Kaplan, 1989). A study by Liu et al. (2021) found that participants preferred landscapes with high complexity when they also exhibited clear structural patterns, such as distinct plant groupings and visible pathways. This finding aligns with the Prospect-Refuge Theory (Appleton, 1975), which suggests that humans are naturally drawn to environments that offer both visual stimulation and a sense of order or safety. In contrast, landscapes with excessive complexity but low coherence can be perceived as chaotic and may lead to cognitive fatigue rather than restoration. Therefore, striking a balance between complexity and coherence is essential in planting design to ensure landscapes are both engaging and psychologically restorative.

Well-Being Benefits of Complexity and Coherence in Planting Design

Beyond aesthetics, complexity and coherence in landscape planting design has significant implications for psychology and well-being. Research in restorative environments suggests that exposure to nature, particularly biodiverse and visually rich landscapes, can reduce stress, improve mood, and evoke positive emotional responses (Ulrich, 1983; Hartig et al., 2014) while, coherence, structured, harmonious landscapes promote relaxation, reduce mental fatigue, and support cognitive functioning (Hartig et al., 2014). The Attention Restoration Theory (Kaplan & Kaplan, 1989) argues that environments with clear visual structure are more restorative, as they require less cognitive effort to process as well as complexity helps to restore directed attention by engaging the mind without causing mental fatigue. Studies have found that complex yet organized landscapes revealed that people exhibited lower stress levels and increased

feelings of restoration when exposed to landscapes with high visual richness and well-organized green spaces. In addition, Kurzi et al., (2024) demonstrated that coherent landscapes in urban areas were linked to lower crime rates and increased community cohesion, suggesting that visually structured environments can have broader social benefits.

Understanding the role of complexity and coherence in planting design is particularly important in university campus settings, where outdoor environments serve both functional and restorative purposes. Well-designed campus landscapes can enhance students' engagement with nature, provide spaces for relaxation, and support cognitive performance (Li & Sullivan 2016; Scholl & Gulwadi, 2018). By incorporating diverse yet organized planting compositions, universities can create outdoor spaces that are not only visually appealing but also contribute to students' well-being.

In summary, complexity and coherence is a key factor influencing landscape perception and preference, with significant implications for aesthetic appreciation and psychological well-being. While complex landscapes can enhance visual interest and mental engagement, they must be carefully balanced with coherence to avoid cognitive overload. The integration of complexity in campus planting design can contribute to more engaging, restorative, and functional outdoor spaces that support students' well-being and academic success. Future studies should continue to explore the nuanced relationships between complexity, coherence, and individual preferences to inform evidence-based landscape planning and design.

METHODOLOGY

Research in the field of landscape preference often involves surveys, interviews, or observations to gather data on people's preferences for different landscape features, styles, and characteristics. The findings can guide decision-making in landscape design, allowing designers to create environments that are visually appealing, emotionally engaging, and well-received by the intended users. This study employed a methodological approach focused on coherence and complexity design in planting, with the aim of catering to students' preference and wellbeing.

To gather preference ratings, a photo-based method was utilized, and 319 participants were involved in the study. A five-point Likert-scale questionnaire was administered to assess the participants' preferences. The questionnaire comprised 51 planting images obtained from Universiti Putra Malaysia, which were categorized into four groups based on Kaplan's Information Processing Theory. In this theory, coherence, complexity, legibility, and mystery serve as the four preference predictors. To analyse the collected data on existing plant types and configurations in the green landscape of each faculty,

SPSS or statistical analysis tool was used. It was employed to explore and derive meaningful insights from the data, shedding light on the connection between preference predictors (coherence and complexity) and students' wellbeing. By examining the associations between these variables, the study aimed to provide valuable insights for designing plant arrangements that enhance the students' overall satisfaction and comfort within the university environment.

In addition, factor analysis was conducted to further explore the relationships among the 51 planting images and to group them into the four preference predictors: coherence, complexity, legibility, and mystery. The factor analysis technique allowed for a comprehensive examination of the underlying dimensions or factors influencing participants' preferences. Through factor analysis, the 51 planting images were assessed based on their visual characteristics and attributes. This analysis aimed to identify the key factors that contributed to participants' preferences within each predictor category. By evaluating the interrelationships among the variables (planting images) and extracting underlying factors, the study aimed to gain a deeper understanding of how coherence, complexity, legibility, and mystery influenced participants' preferences and well-being. Figure 1 shows the methodological process of this study.

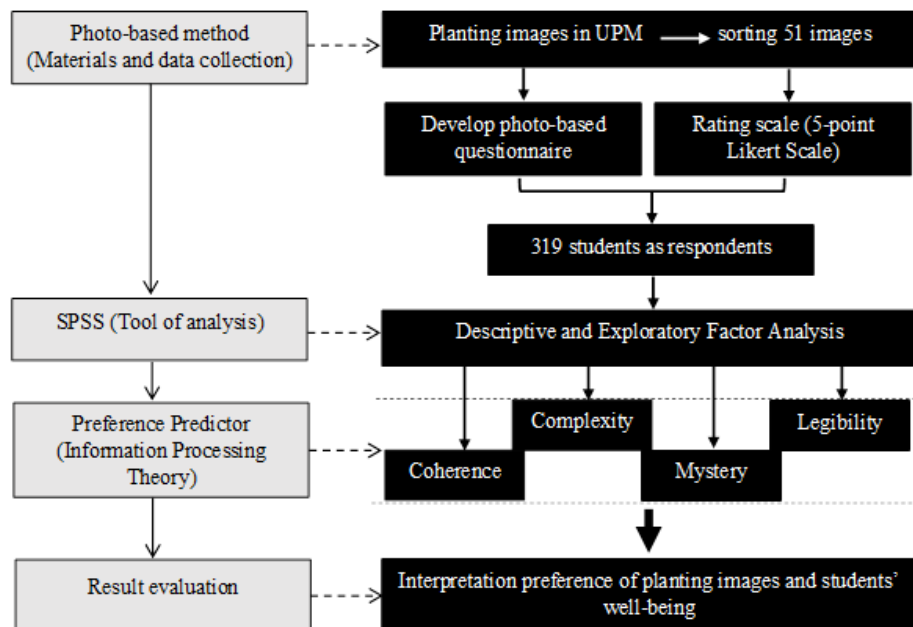


Figure 1: The flowchart of methodological process

The results of the factor analysis provided valuable insights into the patterns and groupings within the dataset. These groupings helped in categorizing the planting images based on their shared attributes and qualities, thereby facilitating a better understanding of the factors that contribute to students' preferences and wellbeing in the context of green landscapes.

This study was conducted in accordance with the ethical research standards of Universiti Teknologi MARA (UiTM). All participants were informed about the purpose of the research, provided written consent prior to participation, and their responses were kept confidential and anonymous. The survey was approved by the Head of the Student Affairs Division, Universiti Putra Malaysia (UPM), who granted permission for the authors to conduct the study among UPM students.

FINDINGS AND DISCUSSION

The survey findings indicate that certain factors significantly contribute to higher preference ratings. To determine which components of planting principles, have a substantial impact on preference and students' well-being, factor analysis was conducted. This analysis plays a crucial role in grouping landscape planting scenes into ten components that share similar characteristics.

These ten components were identified and labelled as follows: Factor 1 (A01) — *Complexity: Variety of Plant Properties*; Factor 2 (A02) — *Coherence: Balance and Symmetry*; Factor 3 (A03) — *Mystery: Layer*; Factor 4 (A04) — *Legibility: Visual Weight*; Factor 5 (A05) — *Legibility: Scale and Proportion*; Factor 6 (A06) — *Complexity: Contrast of Texture*; Factor 7 (A07) — *Complexity: Density of Mixed Planting*; Factor 8 (A08) — *Mystery: Visual Enclosure*; Factor 9 (A09) — *Coherence: Order and Openness*; and Factor 10 (A10) — *Mystery: Visual Connection* (see Table 1). Each factor comprised more than five images representing distinct planting composition characteristics. The mean scores for each factor, presented in Table 1, provide insights into the relative preference ratings across the different planting design attributes.

According to Table 1, Factor A07, which pertains to complexity with a density of mixture plants, received a higher rating. Similarly, Factor A02, associated with coherence and balance through symmetrical arrangement, and Factor A04, representing legibility of visual weight, also obtained high ratings. However, it is worth noting that Factor A04 had only one photograph of a planting scenery with a high rating, in comparison to Factor A02. This result highlights that coherence and complexity are dominant factors in evaluating landscape characteristics, within a campus setting (Mt Akhir et al., 2021).

Table 1: Four preference characteristics with element of planting design

Planting Preference Predictors	Factor Label	Elements of Planting Design	Mean Value
Complexity	Factor 1 (A01)	Variety of plant properties	3.613
	Factor 6 (A06)	Contrast of texture	3.576
	Factor 7 (A07)	Density of mixture plants	4.156
Coherence	Factor 2 (A02)	Balance and symmetry	3.833
	Factor 9 (A09)	Orderly and openness	3.212
Mystery	Factor 3 (A03)	Layer	3.752
	Factor 8 (A08)	Visual Enclosure	3.453
	Factor 10 (A10)	Visual Connection	3.629
Legibility	Factor 4 (A04)	Visual weight	3.847
	Factor 5 (A05)	Scale and Proportion	3.673

Source: Author (2024)

Table 2 below shows a comprehensive overview of planting scenes ranked with high preference. Conversely, the remaining factors and photographs of the planting scenes tend to receive modest ratings.

Table 2: Photographs of planting scenery with high ranking

Factor	Photo number	Mean Value	RII	Rank
A07 (Complexity)	Photo 47	4.370	0.874	1
	Photo 46	4.194	0.839	2
	Photo 48	4.122	0.824	4
A02 (Coherence)	Photo 24	4.194	0.839	2
	Photo 22	4.132	0.826	3
	Photo 30	4.000	0.800	6
A04 (Legibility)	Photo 3	4.066	0.813	5

Source: Author (2024)

Coherence: Factor A02 and A09

The coherence predictor aligns with two dimensions: A02 (Balance and Symmetry) and A09 (Orderly and Openness). These dimensions meet the coherence criteria by incorporating symmetrical arrangements and orderly repetition of themes, while also allowing for clear directional views. However, it is clear that although A09 meets the coherence criteria, it does not receive high

preference ratings. This dimension, characterized by fewer plants and an open layout, resulted in a perceived discomfort and increased exposure to heat. It is aligned with previous studies (Ozer & Baris, 2013) that mentioned students mostly prefer the semi-open landscapes more than very open landscapes and highly trimmed plants. In contrast, the dimension of A02, which exhibits symmetrical balance, emerged as a significant contributor to preference ratings. The arrangement of planting spaces that are divided equally could increase cohesive influence. The researcher believes that coherence plays a role in increasing the rating preferences of this factor.



Factor A02 (Photo 24)



Factor A09 (Photo 7)

Figure 2: These two figures fall under the category of Coherence design in planting. Notably, Photo 24 holds the second highest position in the ranking of students' preferences.

Complexity: Factor A01, A06 and A07

The complexity predictor encompasses a wide range of visual elements. The factors A01 (Variety of Plant Properties), A06 (Contrast of Texture), and A07 (Density of Mixture Plants) are pertinent in defining complexity in terms of the intricacy and richness of the scenes. Among the respondents, the majority expressed a strong preference for planting sceneries associated with this complexity predictor, particularly in relation to dimension A07. This dimension reflects the number and density of plants within the scenes. Complexity is the involvement component of a scene's capacity to keep an individual busy watching, occupied without being bored or overstimulated. It also refers to the amount of the diversity of the visual elements presented in the scene which people are interested in seeking how much is going on in the scene (Kaplan & Kaplan, 1989). Additionally, the inclusion of diverse plant features in the scenes received high ratings, thus contributing to enhanced visual preference and overall well-being within the space.

In the context of human psychology, well-being also can be referred as better quality of life, emotion, satisfaction and performance (Kaiserman, 2017;

Li & Sullivan, 2016; Southon et al., 2018; Wang et al., 2016). There is a strong relationship between high preference and human well-being. When individuals have a high preference for certain aspects of their environment, such as complexity and coherence planting scenes, it can positively impact their overall well-being. Preferences are often linked to psychological and emotional factors, and when people are surrounded by environments, they find visually appealing and enjoyable, it can contribute to their happiness and satisfaction.



Factor A07 (Photo 47)



Factor A07 (Photo 48)

Figure 3: These two figures fall under the category of Complexity design in planting. Notably, Photo 47 holds the highest position in the ranking of students' preferences.

In summary, the findings highlight significant correlations between students' preference ratings and the complexity and coherence of planting designs. The results indicate that students favoured planting compositions with higher complexity, particularly those featuring diverse species, varied textures, and layered densities. Moreover, well-organized and visually balanced landscapes were positively associated with a sense of calmness and psychological well-being.

Moreover, exposure to planting designs that achieved an optimal balance of complexity and coherence contributed to greater psychological comfort and cognitive restoration. These findings align with Attention Restoration Theory (ART) and Stress Reduction Theory (SRT), reinforcing the role of natural environments in promoting relaxation, mental rejuvenation, and overall well-being (Kaplan, 1995; Ulrich, 1983). The study underscores the importance of integrating complexity and coherence in landscape design to enhance students' experiences and foster more restorative outdoor spaces on university campuses.

CONCLUSION AND RECOMMENDATION

This study concludes that complexity and coherence in planting design play a significant role in shaping students' landscape preferences and overall well-being.

The findings indicate that well-balanced and visually engaging planting compositions contribute to stress reduction, cognitive restoration, and enhanced psychological comfort. Landscapes that feature a diverse range of plant species, textures, and densities tend to be more aesthetically preferred, while coherent and well-organized arrangements create a sense of order and tranquillity. These results align with established environmental psychology theories, such as Attention Restoration Theory (ART) **and** Stress Reduction Theory (SRT), reinforcing the positive impact of natural settings on mental rejuvenation and well-being (Kaplan, 1995; Ulrich, 1983).

Given the increasing recognition of green spaces as essential components of academic environments, it is imperative that university landscapes are designed with a thoughtful balance of complexity and coherence. Well-planned planting compositions not only enhance visual appeal but also foster restorative experiences that support students' academic performance, social interactions, and emotional resilience.

RECOMMENDATIONS

Based on the study's findings, the following recommendations are proposed to improve campus landscape planning and promote student well-being. University planners should prioritize a planting design that balances complexity and coherence. They should also increase biodiversity by incorporating a diverse range of plant species, textures, and densities which can enrich visual interest while supporting ecological sustainability. At the same time, maintaining coherence through strategic plant arrangement such as structured layouts, consistent design themes, and well-defined spatial organization can create visually harmonious environments that foster psychological comfort and ease navigation.

Lastly, future research should focus on real-time interactions between students and green spaces to provide deeper insights into the long-term effects of planting design on well-being. Investigating behavioural responses, physiological indicators, and qualitative experiences can help refine landscape planning strategies, ensuring that campus environments effectively support cognitive function, emotional resilience, and academic engagement. By integrating these principles into campus landscape planning, universities can create outdoor spaces that not only enhance aesthetic quality but also serve as restorative environments that promote student well-being. A thoughtful approach to planting design can contribute to healthier, more engaging academic settings, ultimately supporting students' cognitive function, emotional resilience, and overall quality of life.

LIMITATIONS

This study offers insights into students' perceptions of planting design but has limitations which photo-based questionnaires method cannot capture multisensory experiences such as sound, scent, or spatial depth. The sample, limited to Malaysian university students, may restrict generalizability, and variations in image quality and size could have influenced responses. Future research should use on-site or cross-cultural approaches for a more comprehensive understanding of planting design and well-being.

ACKNOWLEDGEMENTS

We extend our heartfelt appreciation to the participants who generously contributed their time and insights, making this research paper possible. Their valuable cooperation was vital in gathering the necessary data and ensuring the success of our study. We would like to thank Gresafe Cities UiTM Perak Branch for the opportunities and Research Management Centre (RMC) UiTM for the support and the incentive.

REFERENCES

- Babington, A., Hughes, M., Farrell, C., Chambers, J., & Standish, R. J. (2023). Preference for multi-layered, flowering, woody streetscape plantings in a mediterranean-type climate. *Urban Forestry & Urban Greening*, 89, 128094.
- Gungor, S., & Polat, A. T. (2018). Relationship between visual quality and landscape characteristics in urban parks. *Journal of Environmental Protection and Ecology*, 19(2), 939–948.
- Hami, A., & Abdi, B. (2019). Students' landscaping preferences for open spaces for their campus environment. *Indoor and Built Environment*, 1–12.
- Hartig, T., Mitchell, R., Vries, S. D., & Frumkin, H. (2014). Nature and health. *Annual Review of Public Health*, 35, 207–228.
- Herzog, T. R., Maguire, C. P., & Nebel, M. B. (2003). Assessing the restorative components of environments. *Journal of Environmental Psychology*, 23(2), 159–170.
- Jimenez, M. P., DeVille, N. V., Elliott, E. G., Schiff, J. E., Wilt, G. E., Hart, J. E., & James, P. (2021). Associations between nature exposure and health: A review of the evidence. *International Journal of Environmental Research and Public Health*, 18, 4790.
- Kaiserman, J. (2017). *Urban nature for well-being: Design recommendation for psychological benefits in urban public spaces* (Publication No. 10598891) [Master of Urban Planning, University of Washington]. ProQuest Dissertations and Theses Global.
- Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge University Press.
- Kaplan, S. (1987). Aesthetics, affect, and cognition: Environmental preference from an evolutionary perspective. *Environment and Behavior*, 19(1), 3–32.

- Kaplan, S. (1995). The restorative benefits of nature: Toward an integrative framework. *Journal of Environmental Psychology*, 15, 169–182.
- Kuper, R. (2017). Evaluations of landscape preference, complexity, and coherence for designed digital landscape models. *Landscape and Urban Planning*, 157, 407–421.
- Kurzi, N. S., Schroth, O., Wan Ismail, W. A., & Mohamed, S. A. (2024). Fostering perceived safety in neighbourhood parks: Exploring the influence of planting design, scenic vistas and maintenance factors. *Planning Malaysia Journal*, 22(3), 409–424.
- Li, D., & Sullivan, W. C. (2016). Impact of views to school landscapes on recovery from stress and mental fatigue. *Landscape and Urban Planning*, 148, 149–158.
- Liu, J., & Green, R. J. (2023). The effect of exposure to nature on children's psychological well-being: A systematic review of the literature. *Urban Forestry & Urban Greening*, 81, 127846.
- Liu, Q., Zhu, Z., Zeng, X., Zhuo, Z., Ye, B., Fang, L., Huang, Q., & Lai, P. (2021). The impact of landscape complexity on preference ratings and eye fixation of various urban green space settings. *Urban Forestry & Urban Greening*, 66, 127411.
- Mt Akhir, N., Md Sakip, S. R., Abbas, M. Y., & Othman, N. (2021). Analyzing the criteria of planting design for visual landscape quality in campus. *Planning Malaysia Journal*, 19(16), 39–37.
- Nasar, J. L. (1987). Effects of signscape complexity and coherence on the perceived visual quality of retail scenes. *Journal of the American Planning Association*, 53, 499–509.
- Ozer, B., & Baris, M. E. (2013). Landscape design and park users' preferences. *Procedia - Social and Behavioral Sciences*, 82, 604–607.
- Scholl, K. G., & Gulwadi, G. B. (2018). College campus landscapes within a learning ecosystem. *Planning for Higher Education Journal*, 46(2), 50–64.
- Southon, G. E., Jorgensen, A., Dunnett, N., Hoyle, H., & Evans, K. L. (2018). Perceived species-richness in urban green spaces: Cues, accuracy and well-being impacts. *Landscape and Urban Planning*, 172, 1–10.
- Taylor, F. A., & Kuo, F. E. (2009). Children with attention deficits concentrate better after walk in the park. *Journal of Attention Disorders*, 12(5), 402–409.
- Ulrich, R. S. (1983). Aesthetic and affective response to natural environment. *Human Behavior and Environment*, 6, 85–125.
- Wang, R., Zhao, J., & Liu, Z. (2016). Consensus in visual preferences: The effects of aesthetic quality and landscape types. *Urban Forestry and Urban Greening*, 20, 210–217.
- Xie, X., Jiang, Q., Wang, R., & Gou, Z. (2024). Correlation between vegetation landscape and subjective human perception: A systematic review. *Buildings*, 14(6), 1734.
- Yılmaz, S., Özgüner, H., & Mumcu, S. (2018). An aesthetic approach to planting design in urban parks and greenspaces. *Landscape Research Group*, 1–19.
- Zhang, G., Yang, J., Guowei, W., & Hu, X. (2021). Exploring the interactive influence on landscape preference from multiple visual attributes: Openness, richness, order, and depth. *Urban Forestry and Urban Greening*, 65(3), 127363.

Received: 30th April 2025. Accepted: 4th September 2025