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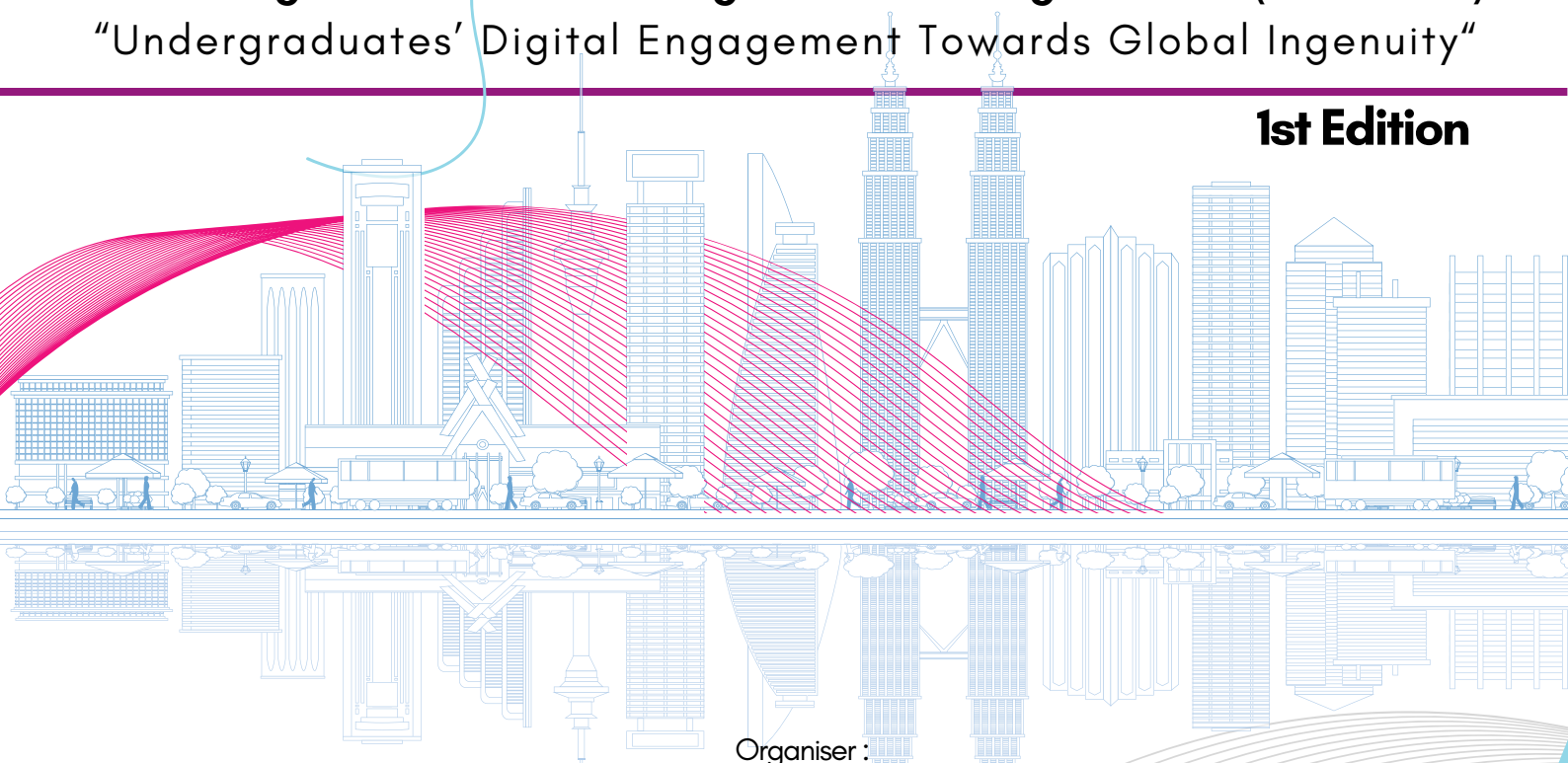
"Undergraduates' Digital Engagement Towards Global Ingenuity"

1st Edition



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Co-organiser :

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Verdant Haven: A Biophilic Pavilion

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ABSTRACT
Biophilic design, a method of reconnecting with the essence of humans in the modern world, strives to create atmospheres in interior spaces that promote both physical and mental comfort. Urbanisation has taken away green spaces, leading city dwellers to distance themselves from nature and yearn for it. Biophilic design elements are parts of a design approach that aims to reflect nature from the outside to the inside, creating a sensory atmosphere in which human beings can achieve comfort, health, and relaxation through connection with nature. Nature has a proven impact on our mental and physical well-being. By incorporating biophilic design into our pavilion, we can meet our innate desire to connect with nature in the modern world. When the library interior design embraces (or looks like) our natural environment, our visitors feel a greater sense of relaxation and calmness, making the library space a place that facilitates the necessary mental breaks that are essential for our well-being and quality of life.

KEYWORDS: Biophilic design, sustainability, sustainable architecture, nature-based solutions, terrarium design

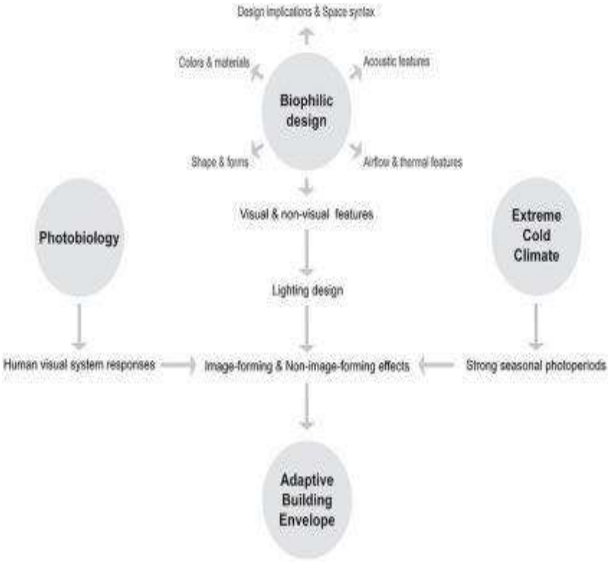
DESIGN DESCRIPTION
The ground floor of "Verdant Haven" houses a mini library, while the first floor serves as a space for group discussions and a charging port for students to complete their schoolwork while charging their devices. Inspired by the shape of a mushroom, the pavilion's structure consists of a foundation (mycelium), a pillar (stem), and a roof (cap). We have incorporated biophilic and terrarium design elements into our pavilion's highlight features. The design description of this pavilion incorporates natural elements, including the use of natural light throughout the building and the placement of greenery on the majority of the ceiling. In addition, the ground floor features a terrarium design, where plants grow beneath a floor of glass hexagons, encircling the central staircase of the pavilion. On the ground floor, a glass wall is undergoing the installation of a waterfall system. The design incorporates fusion timber aspects, which combine timber and biophilic design. In addition to enhancing the building envelope with biophilic design, the majority of the interior features timber for finishing touches, such as the addition of rows of timber strips to the ceiling and the incorporation of greenery between these strips. Overall, the design concept is suitable for university students, who are the target audience. Students could potentially enhance their learning experience in this pavilion by immersing themselves in the concept of biophilia, which improves their learning ability and emotion during the learning process.

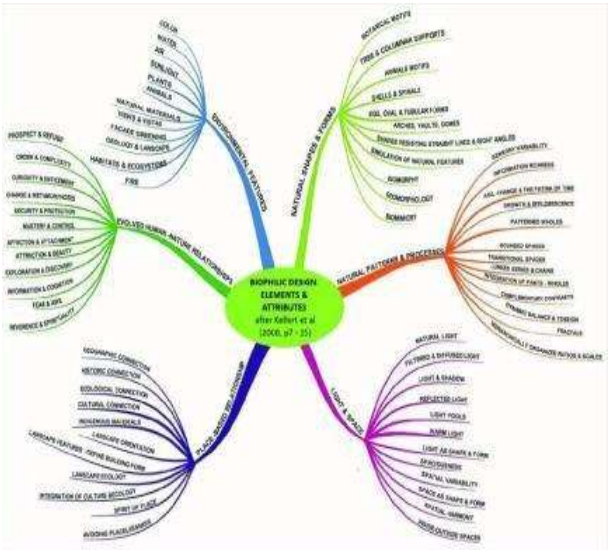
NOVELTY AND UNIQUENESS
Verdant Haven's unique design incorporates both biophilic and terrarium concepts, creating a mushroom-shaped pavilion. Research confirms that biophilic design offers numerous advantages, enhancing the sustainability of a library setting and enhancing the learning capabilities of UITM students. In addition, our pavilion stands out due to the unique design of the

terrarium concept within the building. We set it apart from the existing design by incorporating plants beneath the floor and covering the floor with a glass-shaped hexagon.

BENEFITS TO MANKIND

By incorporating the concept of biophilia into our pavilion design, we contribute to many benefits for mankind, such as reducing stress, improving cognitive function and creativity, improving our well-being, and expediting healing. As a result, our pavilion's biophilic design could improve the quality of life by incorporating natural elements such as plants, water, and natural light. We selected the biophilic design concept due to its sustainability and environmental benefits, which include promoting energy efficiency, reducing environmental impact, and enhancing human well-being through the creation of healthier living and working spaces. With the idea of having a mini library in our pavilion, biophilic design principles can create sustainable and healthy environments that enhance learning outcomes while promoting a deeper connection to nature as a strategy to increase students' learning ability in the library environment.





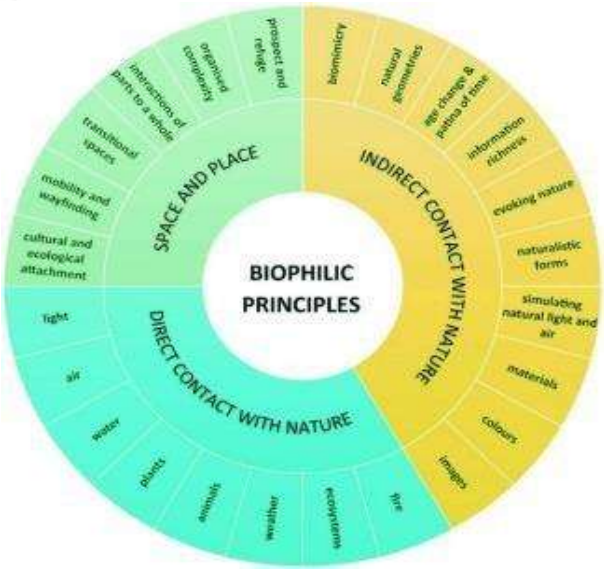


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Figure 1: Verdant Haven: A Biophilic Pavilion

COMMERCIAL POTENTIAL

Given that a combination of factors, including a focus on health and wellness and sustainability, drive our concept design, there is a high chance that Verdant Haven will be in demand on the market. Furthermore, as technology and design practices progress, scalable solutions are emerging to enhance the accessibility and adaptability of biophilic design across diverse settings and scales. Principles often align with green building certification programs such as LEED (Leadership in Energy and Environmental Design) and WELL Building Standard, based on our biophilic concept. As a result, we believe that our design has the potential to be in high demand in today's competitive marketplace.

CONCLUSION

In conclusion, we chose the concept of biophilic design to maintain sustainability and enhance our pavilion's connection to nature. Nature views have a significant role in providing students with opportunities for mental breaks during the class day, thus making a case for improved attention functioning rather than daylight being the cause of improved learning. Applying the biophilic method to our "Verdant Haven" could result in physical, mental, and behavioural benefits for university students.

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