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e - Proceedings



Proceeding for International Undergraduates Get Together 2024 (IUGeT 2024)
"Undergraduates' Digital Engagement Towards Global Ingenuity"

1st Edition



Organiser :

Department of Built Environment Studies and Technology, College of Built Environment, UiTM Perak Branch

Co-organiser :

INSPIRED 2024. Office of Research, Industrial Linkages, Community & Alumni (PJIMA), UiTM Perak Branch

Bauchemic (Malaysia) Sdn Bhd

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Universitas Tridinanti (UNANTI)

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Mycelium Core

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ABSTRACT

In recent years, educators and fellow students have explored the benefits that student hubs provide to the community and their significance as community assets. Student hubs have become essential, serving as a secondary location for users to carry out tasks such as completing assignments and studying. These spaces introduce alternative learning techniques, allowing students to discover more complex and educational methods through exchange and communication. They also provide a sense of community and relationship between users, improving their emotional state and personal growth. Properly designed buildings are both fully functional and pleasing to the eye. The preliminary research encompasses the planning of study areas, interior environments, furniture, lighting, ventilation, user safety, and ambience. The research conducted beforehand includes study area planning, interior environment, furniture, lighting, ventilation, user safety, and ambience. The building is composed of eco-friendly materials such as recycled plastic and timber, it is also self-sustaining because of solar panels that help power electrical units. The inspiration behind the design is oyster mushrooms (*Pleurotus ostreatus*), and the anatomy of the fungi heavily influenced the overall shape. This is evident in the similarities between the cap, spore print, gills, stalk, and mycelium with the roof, designed centre structure, mini public library, and floor pattern. Furniture, lighting, and user flow are among the other elements that influence the design. The project used the Cambridge Central Mosque in the United Kingdom and Gardens by the Bay in Singapore as case studies, as all buildings are influenced by nature. The product is a student hub that encompasses all the necessary requirements and supports students' wellbeing and education in various fields of study.

KEYWORDS: Functionality, sustainability, pleasing to the eye

DESIGN DESCRIPTION

The overall look of the student hub closely resembles an oyster mushroom, with a centre core and an extruding roof. Two distinct sections, one for studying and academic purposes and the other for lounging and relaxing, divide the hub. The first half has a large communal study desk, fitted with chargers. The other section has a large grass ramp where students can climb up the slight incline and take a breather. Underneath, there are hanging chairs, suspended from the ceiling. In the central core, there is a library designed for students who are studying and seeking a quiet place to read. Adding on to that, lighting plays an important part, where the lights in the centre core are constantly changing LED lights, and the other lights are sensor triggered, so that it only turns on at night, allowing less electrical waste. Apart from that, important features of the student hub include recycled plastic floors, grass ramps, libraries, furniture such as tables and benches with organic designs, a garden roof, and solar panels. Timber panels serve as the primary construction material for most features, owing to their excellent insulation properties and reduced energy consumption.

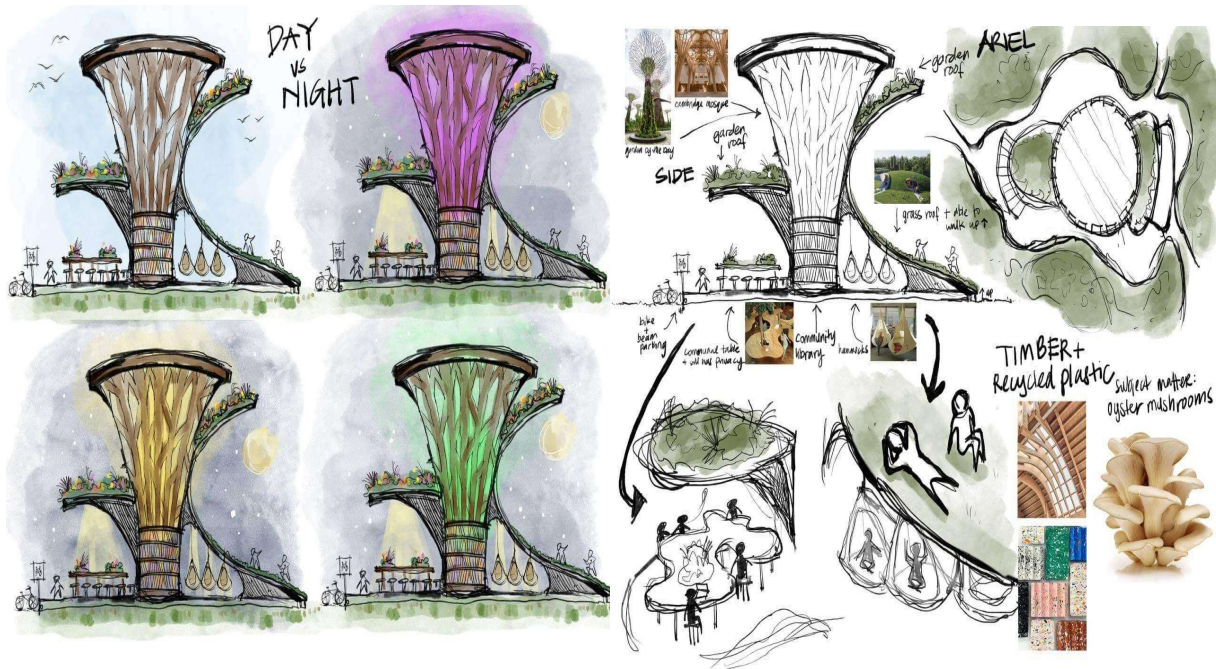


Figure 1: Mycelium Core

NOVELTY AND UNIQUENESS

The organic shapes, asymmetrical patterns, and intriguing silhouette further emphasize the unusual nature of this design. Each nook and cranny have been utilised to its extent. For instance, the central core serves as a library, the grass ramp provides a space for lounging, its underside serves as a reading nook, and each roof boasts its own garden, brimming with nature.

BENEFITS TO MANKIND

A student hub dedicated to serving mankind can have a profound impact in several ways, including education and skill development, where the student hub can offer a wide range of educational resources, workshops, and seminars aimed at enhancing students' knowledge and skills. A well-designed student hub can yield benefits such as social innovation and entrepreneurship, community engagement and service learning, research and innovation, well-being, and mental health support. Overall, a student hub dedicated to serving mankind serves as a catalyst for positive social change, equipping students with the knowledge, skills, and values needed to make meaningful contributions to the world around them.

COMMERCIAL POTENTIAL

First and foremost, the advantage lies in the target demographic of students, specifically those within the age range of 18 to 25. Additionally, the proximity of the student hub to UiTM Seri Iskandar facilitates easy access for students. Secondly, a student hub has significant commercial potential, especially if it leverages its resources, networks, and capabilities effectively. Some avenues where a student hub can explore commercial opportunities are emphasising the importance of a co-working space. The hub can accomplish this by offering shared learning spaces, amenities such as charging ports, and a suitable ambience. Additionally, the hub can offer specialised incubation and learning programs tailored to the needs of specific faculties or courses.

CONCLUSION

A unique mushroom-shaped student hub is not something you see on the daily, but it offers more than just architectural novelty; it cultivates an environment conducive to learning, collaboration, and creativity. Its unconventional design symbolises growth, echoing the students' educational journey as they expand their knowledge and skills. Within its walls, the hub fosters a sense of community, providing spaces for both focused study and social interaction. By embracing innovation in both form and function, this mushroom-shaped hub becomes not only a landmark but also a catalyst for intellectual and social development on campus.

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Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

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Sekian, terima kasih.

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Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

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