



EXTENDED ABSTRACT



InViCCAD 2025
1ST INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE
ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING



Design Innovation Academic Show 2025



Organized by



Fakulti
Seni Lukis & Seni Reka
Cawangan Kedah



اوسها تقوى موليا

Collaboration with



#perubahanluarbiasa
#ADpilihanpertama



**EXTENDED
ABSTRACT**

**Design
Innovation
Academic
Show 2025**





DIAS 2025 (Design Innovation Academic Show) is all about "Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st Century Education." This vibrant program shines a spotlight on how creativity and innovation are reshaping modern education.

It consists of three key components. First up is the Mindareka Design Show, an exhibition that showcases students' final year projects and creative designs, giving them a chance to connect with industry professionals and the wider community. Next, we have the Northern Innovation Academic Tour (NIAT), which takes participants on an academic adventure to select institutions and innovation centers in the northern region, aimed at promoting knowledge sharing and building strong academic and professional networks.

Finally, there's the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID), a global competition that recognizes outstanding practices in teaching and learning by blending art, technology, and innovative design. But DIAS 2025 is more than just a talent showcase; it's a powerful platform for empowering both students and educators, while also strengthening collaborations between universities, creative industries, and global communities. With its inclusive and interdisciplinary approach, this initiative strives to spark relevant, competitive, and impactful ideas and innovations that truly benefit society and push the future of education forward.



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Design
Innovation
Academic
Show 2025



Prof. Dr. Roshima Haji Said
Acting Rector
UiTM Kedah Branch

Rector's Message

I am delighted to extend my heartfelt congratulations to the College of Creative Arts, UiTM Kedah Branch, for bringing MINDAREKA 2024 - Unleashing Your Visual Creativity to fruition. The triumphs of past MINDAREKA editions undoubtedly fueled the organization of this year's event, making MINDAREKA 2024 a reality.

MINDAREKA 2024 - Unleashing Your Visual Creativity stands as a testament to the dedication of students at the College of Creative Arts, UiTM Kedah Branch, providing them with a platform to showcase their final art projects. Beyond serving as a space for the exploration of fresh, innovative, and entrepreneurial concepts, this exhibition is poised to connect aspiring talents with potential clients and employers.

I extend my sincere gratitude to all participants whose enthusiasm and support have contributed to the success of MINDAREKA 2024 - Unleashing Your Visual Creativity. Their unwavering belief and commitment have truly brought this event to life, marking it as a resounding triumph!





Head of Faculty Message

It is an honour to introduce DIAS 2025 – Design Innovation Academic Show, held under the theme “Transcending the Boundaries of Creativity: Innovation in Art & Design for 21st-Century Education.” This significant event reflects the faculty’s ongoing commitment to fostering a culture of innovation, critical thinking, and creative exploration among our students and academic community. As we navigate the complexities of the 21st century, it becomes increasingly clear that education must go beyond traditional boundaries to embrace multidisciplinary approaches that are both relevant and future-forward.

The three core components of DIAS 2025, Mindareka Design Show, Northern Innovation Academic Tour (NIAT), and the 1st International Virtual Competition of Creative Arts & Innovative Design in Teaching & Learning (InViCCAID) which is serve as vital platforms to highlight the convergence of design, technology, and pedagogy. These initiatives not only empower our students to showcase their talents and ideas, but also create opportunities for engagement with industry leaders, academic peers, and global collaborators. The Mindareka Design Show celebrates student creativity and innovation through compelling final year projects. NIAT fosters knowledge sharing and institutional partnerships through academic visits and exchanges, while InViCCAID offers international recognition for excellence in integrating art and design into teaching and learning.

I would like to express my deepest appreciation to the organising committee, faculty members, students, and strategic partners who have worked tirelessly to bring this programme to life. Your dedication and collaborative spirit have made DIAS 2025 a reality and a reflection of our shared vision for transformative education. It is my hope that this platform will continue to inspire meaningful dialogue, cultivate groundbreaking ideas, and spark a new wave of innovation that enriches both education and society.



Mohamat Najib Mat Noor
Head of Faculty
Faculty of Arts & Design
UiTM Kedah Branch





**Industrial
Design
(Bachelor)**





MODIG | NIPAH STOOL

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ABSTRACT

MODIG is a sustainable seating design project that takes its cues from the unique traits and natural beauty of the *Nypa fruticans*, or Nypa Palm (Lidi Nipah). This initiative delves into the potential of Lidi Nipah, the midrib of the Nypa Palm leaflets, as a key material for crafting functional furniture, particularly a stool. By focusing on local, renewable, and often overlooked resources, **MODIG** beautifully marries eco-friendly innovation with cultural identity. At the beginning of this project, the goal is to harness the physical properties, strength, and usability of Lidi Nipah fiberboard to create a seating product that is not only lightweight and durable but also visually appealing. The design process involves compressing Lidi Nipah into panels that function similarly to MDF, which are then shaped into ergonomic and structurally sound furniture pieces. The result is a minimalist design that showcases clean lines and natural textures, all while celebrating the raw beauty of the material. **MODIG** goes beyond just promoting sustainable material practices, it also shines a light on the significance of local craftsmanship and resource awareness. This project responds to the growing environmental concerns within the furniture industry, offering a solution that seamlessly blends nature, design, and innovation. With its tagline “Seating Inspired by Nypa Palm Fibers,” **MODIG** stands as a testament to a commitment to eco-friendly design that remains deeply rooted in cultural and material authenticity, resulting in a functional piece that fosters a greater appreciation for Malaysia’s natural resources.

Keywords: Sustainable, Nypa Palm, Fiberboard, Furniture, Minimalist

INTRODUCTION

MODIG is the seating Inspired by Nypa Palm Fibers is a sustainable furniture design initiative that emerged from an industrial design course. It investigates the potential of Lidi Nipah, the midrib of the Nypa Palm stick, as an eco-friendly material for creating fiberboard seating. The project highlights a minimalist design approach, the use of local materials, and a commitment to environmental responsibility. Beyond just creating products, **MODIG** also focuses on material experimentation, ergonomic design, and functional aesthetics, showcasing how natural materials can play a significant role in modern furniture. Through this endeavor, industrial design serves to foster sustainability, transforming neglected resources into functional, meaningful, and user-centered design solutions.

MATERIALS AND METHODS

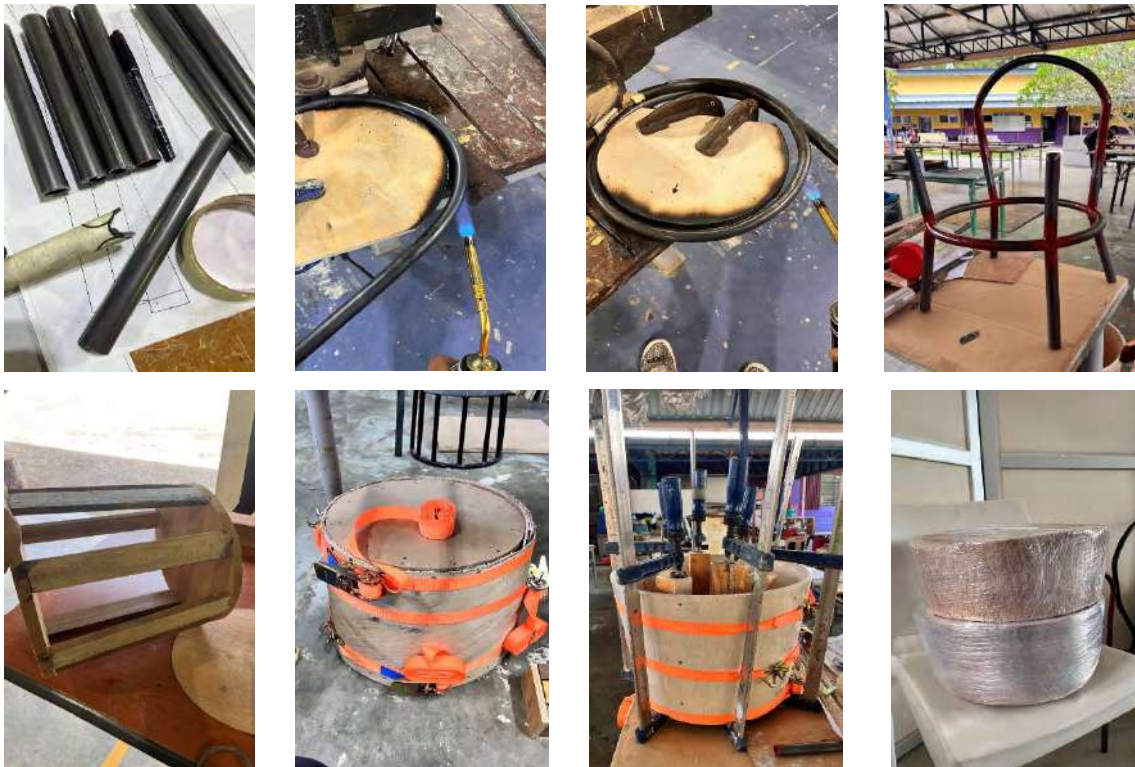


Figure 1.1 The picture of process making for final model



This project revolves around two key materials that are Nypa palm fibers (Lidi Nipah) and steel. The Nypa palm fibers act as the main body and surface material, while steel forms the sturdy structural framework that provides strength and support. To create the Nypa palm fiberboard, the fibers are cleaned, shredded, and mixed with urea formaldehyde adhesive, which acts as a binder. This blend is then compressed in a specially shaped mold to produce panels or components with the desired dimensions and textures. The pressing process ensures that the fibers bond tightly together, resulting in a material that resembles Medium-Density Fiberboard (MDF).

For the structural parts, steel tubes are cut and welded according to the frame design. The steel adds durability, stability, and the ability to bear loads for the seating structure. After both components are crafted, the Nypa palm fiberboard is attached to the steel frame using suitable joining techniques, like adhesive bonding. The final assembly is then polished with sanding and coated to enhance its appearance and provide protection. This approach merges natural fiber technology with industrial metalwork, showcasing a blend of sustainability and contemporary structural design that's perfect for functional furniture.

RESULTS AND DISCUSSION/FINDINGS

The project successfully showcased how Nypa Palm (Lidi Nipah) fibers, when combined with urea formaldehyde and pressed into a mold, can create a robust and smooth fiberboard that's perfect for furniture. This material excelled in durability, surface quality, and structural strength, particularly when paired with a welded steel frame. The result was a stable and visually appealing seating design that boasts a minimalist and natural look. There were some hurdles, like ensuring fiber consistency and managing compression, but these were tackled with some adjustments to the materials. All in all, the results highlight Lidi Nipah's promise as a sustainable option for contemporary furniture.

CONCLUSION & RECOMMENDATION

In summary, the **MODIG** project effectively showcases the promise of Nypa Palm (Lidi Nipah) fibers as a sustainable choice for functional furniture design. When mixed with urea formaldehyde and backed by a steel framework, this material has proven to be durable, visually appealing, and perfect for minimalist seating solutions. The project highlights the significance of merging natural materials with industrial processes to foster environmental consciousness in design.

For future advancements, it's advisable to investigate alternative eco-friendly binders to substitute urea formaldehyde, enhance mold precision, and perform long-term strength assessments to further support its practical application in commercial furniture.



Figure 1.2 The picture of environment (**MODIG**)

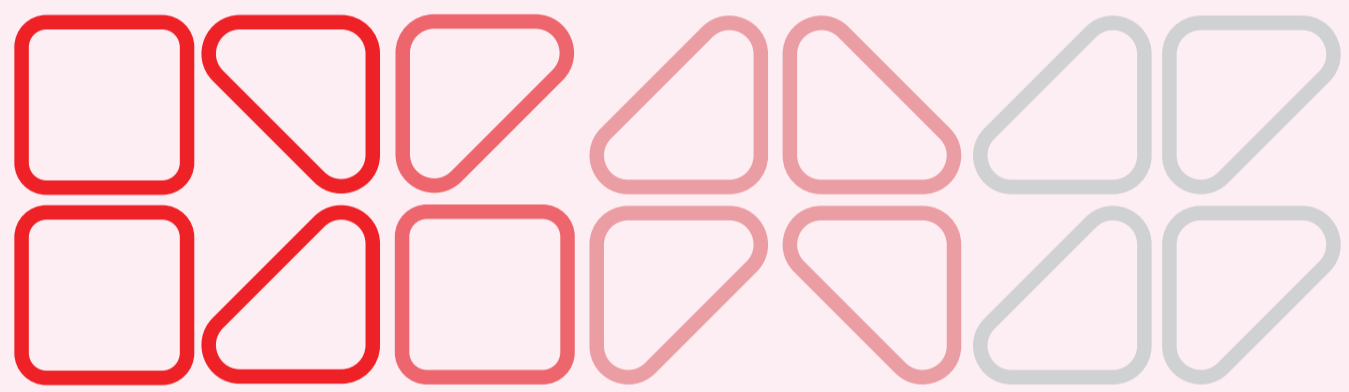
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DMS



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