



# EXTENDED ABSTRACT



**InViCCAD 2025**  
1<sup>ST</sup> 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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**A**cademic  
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**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  
(Diploma)***





## ZETAGROW | STUDY CHAIR FOR KIDS

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### ABSTRACT

The ZetaGrow Study Chair for Kids is an ergonomic, adjustable chair designed for children aged 4 to 12 years old. Inspired by the need for furniture that adapts to growing users, the chair features three seat height levels and sliding adjustable armrests to provide personalised comfort. ZetaGrow is carefully constructed using safe materials—durable hardwood for the structure and soft, child-friendly foam for the seat and backrest. The rounded edges ensure safety, while its minimal and modern design fits into both home and educational settings. The ZetaGrow chair enhances posture support, encourages focused study, and supports activities such as reading, drawing, and digital learning. Its modular concept supports growth without the need for new furniture. From sketching and mock-ups to 3D modelling and prototyping, the development process involved iterative testing to ensure ergonomic suitability. This project highlights how functional furniture design can improve children's daily study routines and reduce physical discomfort. The integration of adjustability and child-focused design principles in ZetaGrow offers a long-term, cost-effective, and aesthetic solution for modern study environments.

**Keywords:** ZetaGrow, Ergonomics Design, Adjustable Chair, Children, Study Chair

## INTRODUCTION

The ZetaGrow Study Chair for Kids was designed to respond to the evolving physical needs of children as they grow. Traditional study chairs are often fixed in height and fail to support good posture, which can lead to discomfort and poor focus. ZetaGrow fills this gap by incorporating a flexible and ergonomic design that adapts to the user's size and activities. Taking cues from child-centred environments and developmental ergonomics, the design emphasises comfort, adaptability, and safety. With soft forms and stable materials, the chair also ensures that children feel secure and comfortable in their learning space. The clean design and muted color palette allow it to fit seamlessly into homes, libraries, and classrooms.

## MATERIALS AND METHODS



Figure 1.1 The picture of final body structure in 3D

The body structure is made from high-quality solid wood, which is rubberwood, offering durability and natural aesthetics. The adjustable seating system uses slot-based wooden panels fastened with a secure locking mechanism. The sliding armrest system made of shaped wood allows for multiple arm positions based on activity. 3D modelling in Rhinoceros was used to test proportions and anthropometric compatibility. The prototype includes a cushioned liner wrapped in washable denim fabric, ensuring hygiene and comfort. The edges are rounded and polished to eliminate sharp corners. The design was tested in the 4–12 age range based on



Malaysian anthropometric data.

## **RESULTS AND DISCUSSION/FINDINGS**

The ZetaGrow chair successfully accommodates a wide age range by offering three seat heights, a sliding armrest, and proper back support. The design improves focus and reduces restlessness during seated activities. In trials with child participants, the adjustable features were found to be intuitive and comfortable.

Feedback from children, parents, and educators indicated strong approval for the chair's aesthetics, comfort, and usability. Compared to traditional chairs, children showed improved sitting posture and more stable seating behavior. The aesthetic blend of modern minimalism and child-friendly comfort proved appealing across environments.

## **CONCLUSION & RECOMMENDATION**

In conclusion, the ZetaGrow Study Chair for Kids combines form, function, and flexibility. It demonstrates how good furniture design can support growing users and enhance their learning experience. Its sustainable and ergonomic features make it suitable for schools, homes, and educational facilities.

Future recommendations include exploring eco-friendly materials, offering multiple color variations, and integrating modular desk attachments. Collaborations with child development experts can also further improve design refinement and impact.



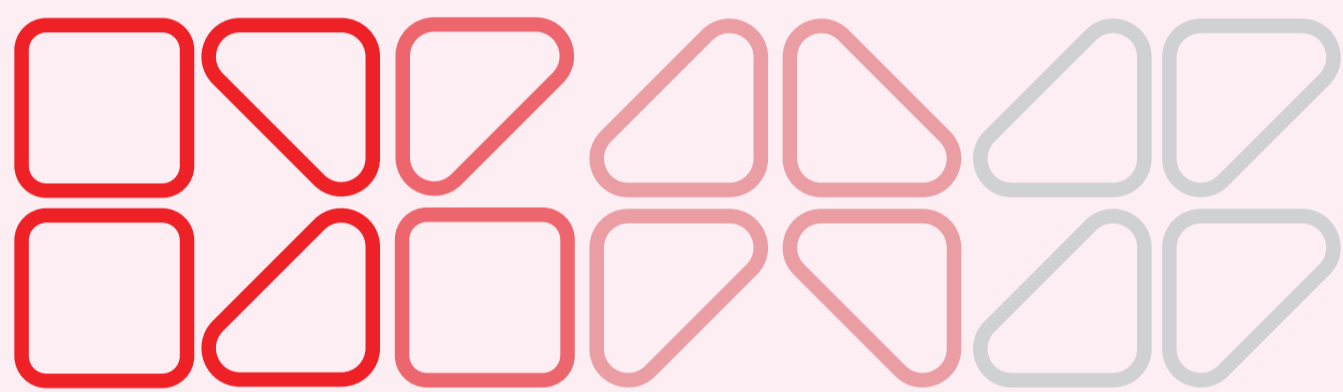
Figure 1.3 The picture of Environment

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