



# EXTENDED ABSTRACT



**InViCCAID 2025**  
1<sup>ST</sup> INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE  
ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING



# Design Innovation Academic Show 2025



Organized by



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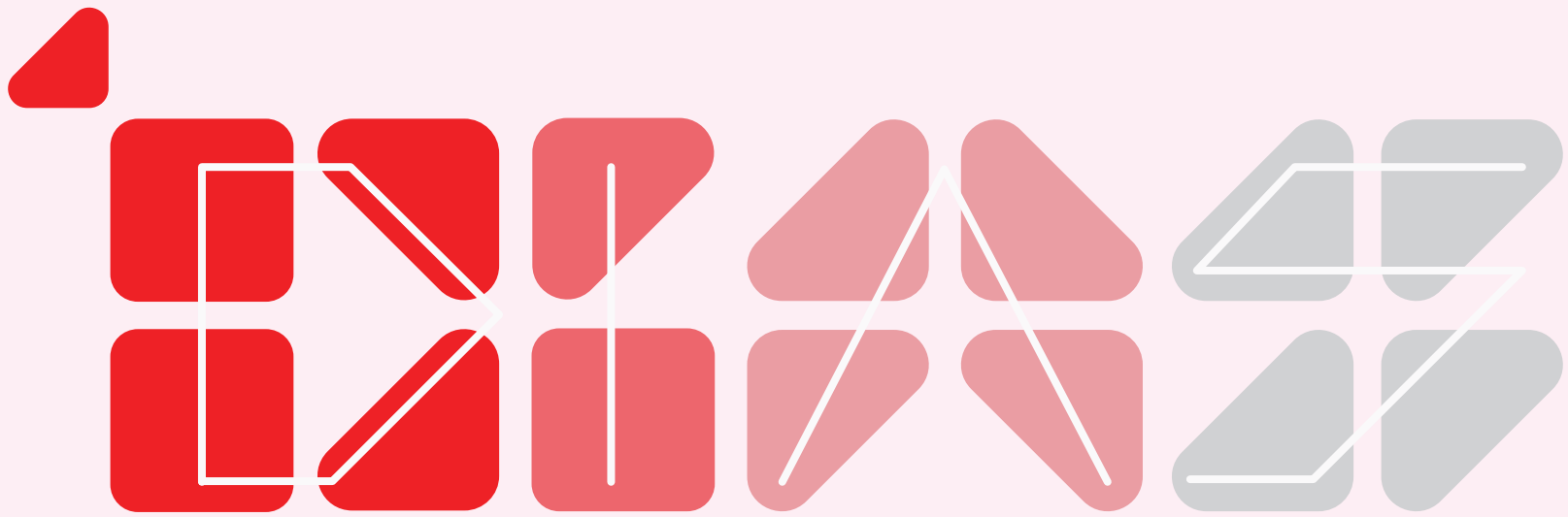
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#ADpilihanpertama



**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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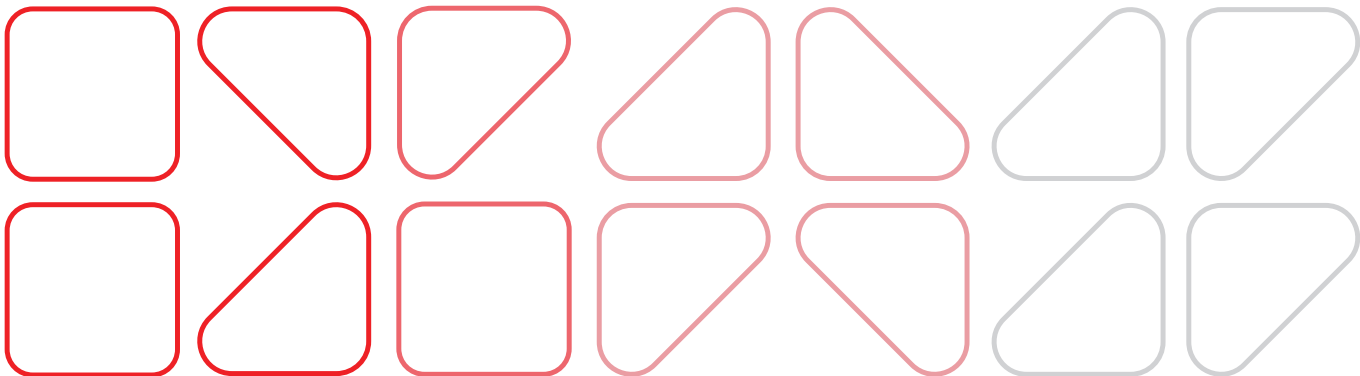
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***D***esign  
***I***nnovation  
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**Prof. Dr. Roshima Haji Said**  
Acting Rector  
UiTM Kedah Branch

## 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)***





## TO DEVELOP A MODULAR ISLAMIC EDUCATIONAL BOARD GAME TO PROMOTE INTERACTIVE LEARNING IN INFORMAL SETTINGS

Muhammad Aiman Bin Roslan, Fadila Mohd Yusof

Industrial Design Department,  
Faculty of Art and Design,  
Universiti Teknologi MARA (UiTM)

[m.aimanroslan18@gmail.com](mailto:m.aimanroslan18@gmail.com)

### ABSTRACT

This project aims to develop a modular Islamic educational board game designed to enhance informal learning experiences for children in spaces such as EduKidz, MADAD. The product addresses the lack of interactive, Islamic-themed tools that encourage hands-on play and parent-child collaboration. Guided by Human-Centered Design (HCD) principles, the board game features magnetic interaction, interchangeable panels, and vibrant Islamic visuals to reinforce knowledge of key concepts such as the Hijri calendar, Pillars of Islam, and Pillars of Iman. The prototype was developed using plywood, PLA plastic, acrylic, laser cutting, and 3D printing techniques. Usability testing and observational studies informed each design iteration, ensuring the product's effectiveness in promoting meaningful, faith-based learning through play.

**Keywords:** Islamic Education, Board Game, Human-Centered Design, Interactive Learning, Modular Design

### INTRODUCTION

Informal Islamic learning environments often lack tools that actively engage children and encourage collaboration with parents. The EduKidz Kids Zone at MADAD serves as an ideal case study for this design intervention, as it provides a safe, thematic

environment but currently lacks interactive educational content. The project explores how a modular board game can transform passive play into a more meaningful Islamic learning experience while supporting early childhood development through hands-on learning.



Figure 1.1 The picture of observation in Muslimah prayer area



Figure 1.2 The picture of final design of the product

## MATERIALS AND METHODS

The board game was developed using a combination of materials and fabrication technologies to ensure durability, interactivity, and child safety. The base structure was made from plywood for sturdiness, while PLA plastic was used for 3D-printed magnetic components, offering tactile engagement and precision. Acrylic

sheets added visual clarity and layering for the interchangeable learning panels. Laser cutting was applied to achieve accurate detailing for game layout and instructional cues. A 3D printer was used to fabricate complex, ergonomic shapes, including the magnetic hand controller. Data was collected through observation, mock-up testing, and structured feedback forms from children and adult users. These insights shaped iterative refinements throughout the design process.



*Figure 1.3 Plywood*



*Figure 1.4 PLA Plastic*



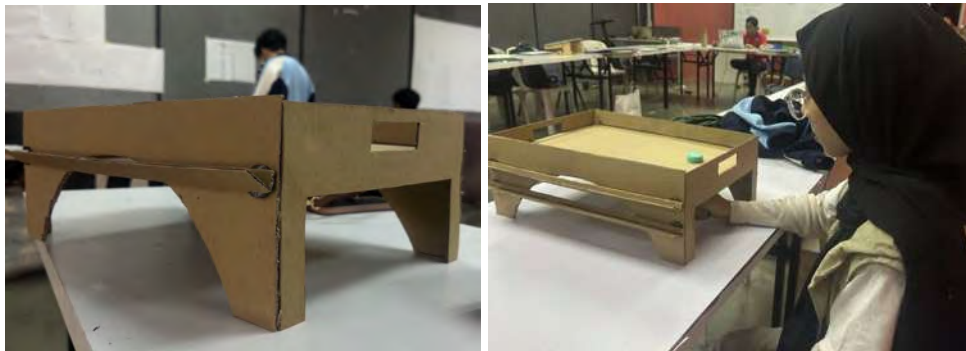
*Figure 1.5 Acrylic*



*Figure 1.6 The picture of 3D printing and laser cutting methods*

## RESULTS AND DISCUSSION

Findings from observation and usability testing highlighted a need for more dynamic, educational play tools. Users responded positively to the modular design, magnetic interaction, and culturally relevant visuals. Children showed high engagement during gameplay, while parents appreciated the ease of interaction and shared learning experience. Feedback emphasised the importance of clear instructions, ergonomic designs, and modular flexibility. The material choices ensured a strong balance between aesthetics, function, and safety, and the fabrication methods supported scalable production.



*Figure 1.5 The picture of usability testing*

## CONCLUSION & RECOMMENDATIONS

This project successfully introduced a modular Islamic educational board game that enhances informal learning environments. By combining user-centred design principles with practical materials and digital fabrication techniques, the final product promotes interactive, engaging, and faith-aligned education. Future improvements may include expanding educational modules, offer multilingual instructions, and develop a mobile app integration. The game has strong potential to be used in community centres, kindergartens, and religious education programs across Malaysia.



Figure 1.6 The picture of Environment

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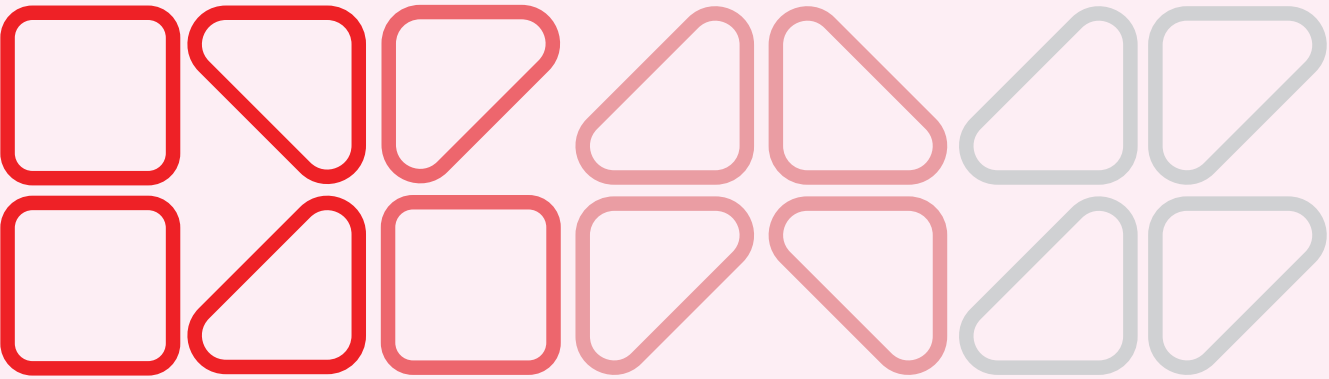
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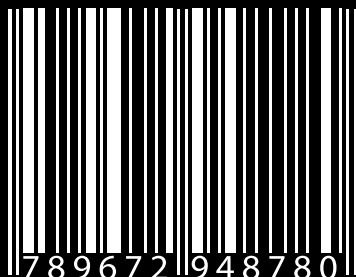
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