



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
(Diploma)***





“Exploring the Ways to Enhance the Facilities in MADAD”

CLARIVO | WINDOW CLEANING TOOL

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ABSTRACT

This project takes a Human-Centred Design (HCD) approach to create a portable, ergonomic, and efficient cleaning tool organiser specifically for the cleaning staff at MADAD, a multifunctional religious and community service centre. By conducting on-site observations, interviews, and user analysis, the study uncovers the challenges mosque staff face in keeping prayer zones, staircases, and shared public areas clean. Some of the main issues include disorganised tools, the physical strain of carrying equipment up and down floors, and workflow inefficiencies caused by inconvenient storage spots. These challenges not only hinder productivity but also impact the cleanliness and sanctity of spaces that are vital for worship and community gatherings. The research utilised a mixed-method approach, blending qualitative insights from naturalistic observations and interviews with quantitative data gathered through structured questionnaires. Analysing this data revealed common patterns in staff behaviour, cultural sensitivities like gender-specific work zones, and the limitations of the current tools used on different surfaces such as tiles and carpets. These findings guided the design of a compact, multi-compartment cleaning organiser that enhances mobility, operates quietly, and is easy to use in prayer halls. The proposed solution aims to enhance the overall work experience for MADAD's cleaning staff while maintaining the spiritual atmosphere of the mosque. It aligns with Sustainable Development Goals (SDGs) related to health, decent work, and community well-being, showcasing how thoughtful design can lead to practical, empathetic, and culturally respectful innovations. The insights gained from this project could serve as a valuable model for other religious institutions dealing with similar maintenance

challenges.

Keywords: Human-Centered Design, Ergonomic Cleaning Tools, Mosque Maintenance, Portable Organizer, Workflow Efficiency

INTRODUCTION

Keeping a mosque like MADAD clean goes beyond just ticking off tasks; it's about respecting cultural practices and minimizing disruption. The cleaning crew has a hefty workload, tackling everything from prayer halls to staircases and ablution areas, all while being considerate of gender boundaries, prayer times, and noise levels. Currently, they're managing with individual cleaning tools, which can create a bit of chaos, lead to fatigue, and slow down their work.



Figure 1.1 The picture of student entering MADAD for observation purpose



Figure 1.2 The picture of final design of the product (Clarivo)

That's where Clarivo steps in. It's designed to consolidate all the essential tools into one easy-to-carry handler that can be operated with just one hand. The design is rooted in real-world feedback and user experiences, aiming to foster a respectful,

efficient, and comfortable working environment.

MATERIALS AND METHODS

The research phase kicked off with naturalistic observations carried out in MADAD's main service areas, like prayer halls, staircases, and transitional spaces. These observations were made without any interference, which allowed real behavioural patterns and environmental challenges to come to light. At the same time, we handed out questionnaires featuring a Likert scale to the cleaning staff to gauge how often they faced tool-related issues and how severe those issues were. We also conducted semi-structured interviews to dive deeper into the staff's experiences and routines, including how they transported tools, managed cleaning during busy times, and navigated gender-specific areas.



Figure 1.3 The picture of the 3d print filament (PETG)

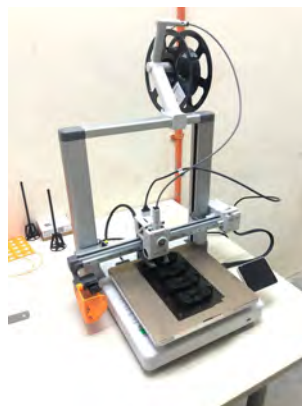


Figure 1.4 The picture of the 3D printer structure

The insights gained from this process shaped the design development and led to the creation of a functional prototype. The Clarivo cleaning handler was crafted using a

3D printer from Bamboo Lab, utilising durable PETG filaments to create a lightweight yet robust structure. This product combines three existing cleaning tools: a standard squeegee, a refillable 300 ml spray bottle, and a microfibre cloth designed specifically for glass and window surfaces. These components fit neatly in the handler through integrated slots and clips, ensuring compact organisation without the need for any tool modifications. The design was refined through several iterations to guarantee ergonomic balance, a comfortable grip, and compatibility with the narrow, multi-levelled spaces found in MADAD.

RESULTS AND DISCUSSION/FINDINGS

Keeping a mosque like MADAD clean goes beyond just ticking off tasks; it's about respecting cultural practices and minimizing disruption. The cleaning crew has a hefty workload, tackling everything from prayer halls to staircases and ablution areas, all while being considerate of gender boundaries, prayer times, and noise levels. Currently, they're managing with individual cleaning tools, which can create a bit of chaos, lead to fatigue, and slow down their work.



Figure 1.5 The picture of the cleaning staff

That's where Clarivo steps in. It's designed to consolidate all the essential tools into one easy-to-carry handler that can be operated with just one hand. The design is rooted in real-world feedback and user experiences, aiming to foster a respectful, efficient, and comfortable working environment.

CONCLUSION & RECOMMENDATION



Figure 1.6 The picture of Environment (Clarivo)

Clarivo shows how human-centred design can address specific, real-world challenges in sacred and culturally sensitive environments. The integration of essential tools into a lightweight, 3D-printed handler improves workflow efficiency, reduces physical strain, and maintains the respectful atmosphere necessary in mosque spaces. The thoughtful combination of existing functional components with a custom ergonomic shell enables a solution that is both practical and culturally appropriate.

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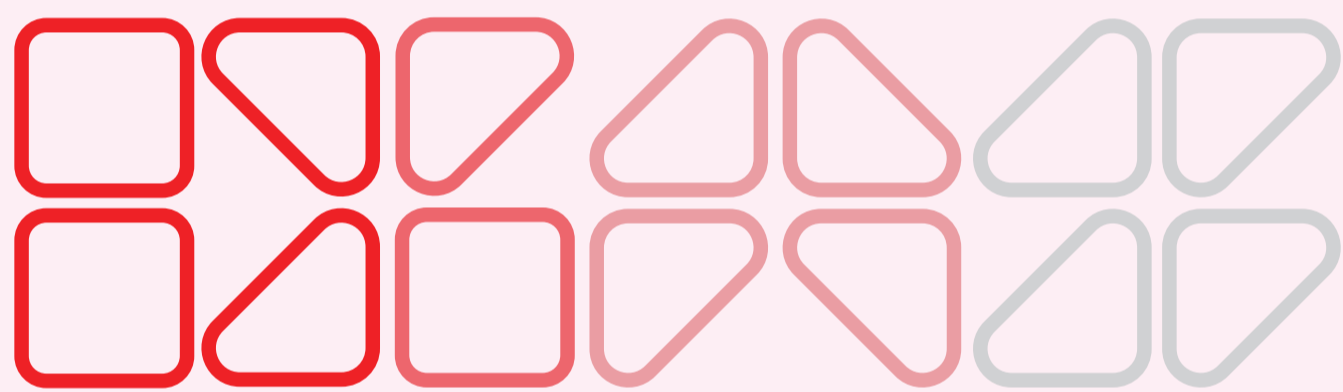
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