



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
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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)***





CLOXBOX: DEVELOPMENT OF A SMART STORAGE SOLUTION TO IMPROVE EFFICIENCY FOR FACTORY WORKERS

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ABSTRACT

CloxBx is a smart storage system created to make work easier and faster for factory workers at the MADAD clock factory. This solution was designed using the human-centred design approach, where the needs and problems of the workers were studied through observations, interviews, and surveys. The storage system helps keep tools and materials in one place so that workers can find what they need without wasting time. It is simple, lightweight, and safe to use. Its design allows it to be placed neatly in the workspace and used easily during daily tasks.

Keywords: Smart Storage System, Factory Efficiency, Human-Centered Design, Tool Organization, Worker Productivity

INTRODUCTION

In a busy factory environment, having a well-organised and efficient workspace is very important. Workers at the MADAD clock factory frequently struggle to find tools and supplies because of a disorganised storage system. This not only slows down their work but also causes confusion and reduces productivity.

The goal is to improve their daily work experience by offering a better way to store and access the items they need. The storage system is designed to make the workspace more organised and comfortable, helping workers save time and complete their tasks more efficiently. This project shows how thoughtful design can

make a real difference in everyday factory operations.

MATERIALS AND METHODS

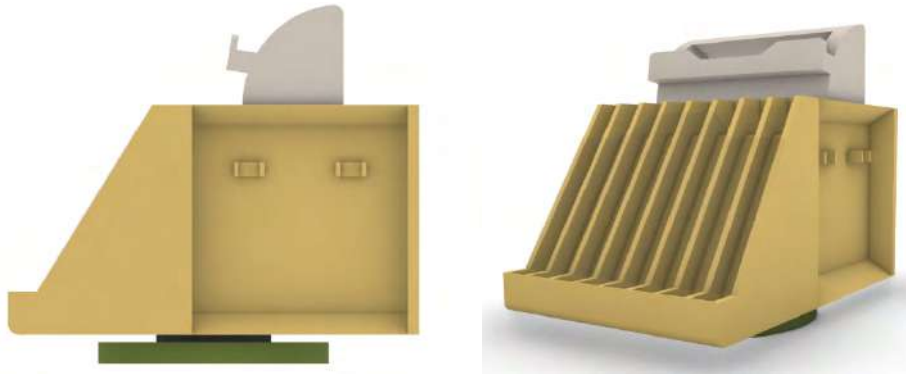


Figure 1.1 The picture of final body structure

This smart storage system was developed using a combination of 3D-printed parts and acrylic sheets. The main and upper bodies of the unit were 3D-printed, allowing for detailed features, smooth integration between components, and ease of customisation. The front panel was made from 1 mm acrylic, chosen for its transparency and lightweight properties, which help users quickly identify stored items.

A rotatable base mechanism was included to allow users to turn the unit easily and access different sections without having to move around. This improves usability, especially in tight workspaces.

The design was first created using CAD software to plan the structure, fit, and movement. After fabrication using 3D printing and laser cutting, the parts were assembled and tested in a simulated factory setting. Based on worker feedback, adjustments were made to improve reach, comfort, and overall function.



RESULTS AND DISCUSSION/FINDINGS

The outcome of this project is a smart storage system designed to meet the needs of factory workers at the MADAD clock factory. After observing the existing workspace, it was clear that the lack of organised storage caused confusion and wasted time during daily tasks. Using the human-centred design approach, the new storage system was developed through user research, ideation, prototyping, and testing.

The completed prototype includes a rotatable base for easy access, a lightweight structure made from 3D-printed parts, and a front section made of 1 mm acrylic to help workers quickly see stored items. During testing in a simulated work setting, workers reported that the new system made it easier to identify and return tools and components. It also helped reduce clutter and improved the flow of their work.

The storage system received positive feedback for being easy to use, compact, and visually accessible. Its rotating feature was especially advantageous in tight workspaces, allowing workers to reach tools from multiple angles without needing to move around. The results show that the solution successfully addressed the original problem of disorganisation and inefficiency in the factory's storage system. Overall, the project demonstrated how thoughtful design based on real user input can lead to practical improvements in the workplace.

CONCLUSION & RECOMMENDATION

This project successfully developed a smart storage solution to improve efficiency for factory workers at the MADAD clock factory. Using the human-centered design approach, the product was created based on real feedback gathered through observations, interviews, and surveys. The smart storage system, made from 3D-printed components, 1 mm of acrylic, and a rotatable base, helped reduce the

time workers spent searching for tools and improved the overall organisation of the workspace. The system is practical, user-friendly, and well-suited for factory environments. It is recommended that this solution be implemented in the factory to support a more efficient and comfortable working experience for the staff.



Figure 1.2 The picture of Environment (CloxBox)

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