



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)***





A CASE STUDY ON CAPSULE HOTEL OBSERVATION FOR MUSAFIR (GRIP MATE)

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ABSTRACT

This project introduces a compact and ergonomic handgrip support specifically designed for use in hotel capsule environments. As capsule hotels continue to grow in popularity due to their space-saving and cost-effective nature, accessibility and user safety remain key concerns, especially for guests with limited mobility or unfamiliarity with the confined space. The proposed product offers a stable, easy-to-install grip that aids users when entering or exiting their capsules, enhancing safety, comfort, and user confidence. Its modular design allows for seamless integration into various capsule layouts without compromising space efficiency. The grip is made from lightweight, durable materials and features a non-slip surface for secure handling. By addressing ergonomic and functional needs within limited spaces, this product contributes to a more inclusive and user-friendly capsule hotel experience.

KEYWORDS: Ergonomic, Accessibility, Capsule Hotel, Stability, Space-saving

INTRODUCTION

Gripmate is a thoughtfully designed handgrip support tailored for the ladders used in capsule hotels. As capsule accommodations stack sleeping units vertically to maximise space, ladders become an essential part of accessibility but often lack proper ergonomic support. This can pose challenges, especially for guests experiencing fatigue or those with limited mobility. Gripmate enhances safety, stability, and user confidence by offering a reliable grip point when ascending or descending the ladder. Its compact and minimal form ensures seamless integration without interfering with the capsule's layout or visual design. With a non-slip surface, lightweight material, and easy installation, Gripmate improves the overall guest

experience by making vertical access in capsule hotels more comfortable and secure.



Figure 1.1 The picture of observation in Capsule Hotel area

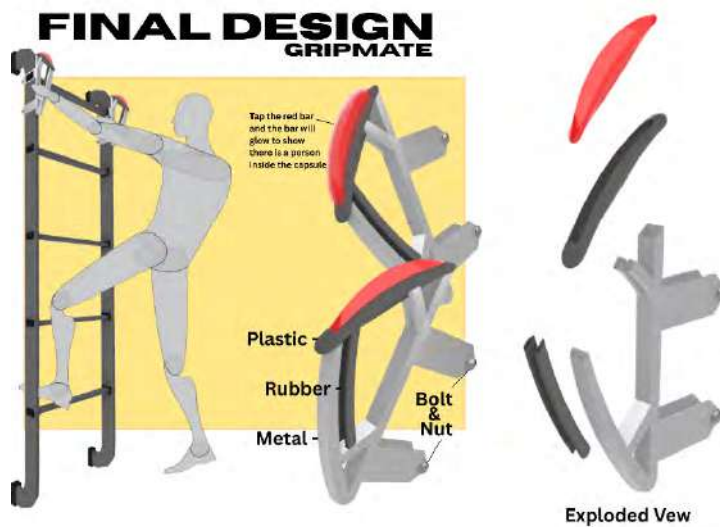


Figure 1.2 The picture of the product final design (Gripmate)

MATERIAL AND METHODS

The Gripmate hand grip support is engineered using a combination of PLA plastic, rubber, and stainless steel, selected for their unique functional and structural properties to meet the demands of capsule hotel environments.

- PLA Plastic (Polylactic Acid)

PLA is used as the primary body material for Gripmate due to its lightweight,



biodegradable, and easy-to-mould nature. It allows for precise shaping and smooth surface finishes, which are ideal for producing an ergonomic and user-friendly grip structure. PLA is also cost-effective for prototyping and short-run production.

- Rubber

A non-slip rubber coating is applied to the gripping areas to enhance tactile comfort and user safety. This material provides a soft yet firm touch, ensuring a stable hold even with sweaty or wet hands. The rubber also serves to absorb minor shocks and prevent slipping during use.

- Stainless Steel

Stainless steel components are used for internal reinforcement and mounting brackets, offering durability, load-bearing strength, and corrosion resistance. This ensures the Gripmate remains secure and structurally sound even after extended use in humid or high-traffic environments.

ASSEMBLY & INTEGRATION

All components are designed for easy assembly and modular installation on capsule ladders, allowing hotel operators to retrofit existing units with minimal tools. The combination of materials ensures a balance between strength, comfort, and aesthetics, making Gripmate a practical and reliable support solution in compact vertical spaces.



Figure 1.3 PLA Plastic



Figure 1.4 Rubber



Figure 1.5 Stainless Steel

RESULTS AND DISCUSSION VIEW

The testing and evaluation of Gripmate demonstrated a clear improvement in user experience when using capsule hotel ladders. Users reported enhanced stability and grip confidence while climbing or descending, particularly those with mobility challenges or shorter stature. The combination of PLA plastic, rubber, and stainless steel provided an effective balance of lightweight structure, non-slip comfort, and strong support. The product's ergonomic design and simple installation made it adaptable to various capsule configurations without interfering with aesthetics. While overall feedback was positive, suggestions for future enhancements included adjustable angles and added functionality like integrated lighting. These findings affirm Gripmate's value as a practical solution for improving ladder safety and accessibility in compact hospitality environments.



Figure 1.6 The picture of the musafir climb the ladder using the product



Figure 1.7 The picture of product environment

CONCLUSION AND RECOMMENDATION

In conclusion, Gripmate provides a practical and effective solution to improve ladder safety and accessibility within capsule hotel environments. Its design responds directly to the challenges of navigating tight, vertical spaces by offering additional support and comfort for users when climbing into or out of upper capsules. By enhancing user confidence, reducing the risk of slips or falls and maintaining a



compact form that blends seamlessly with capsule interiors, Gripmate contributes to a more user-friendly and inclusive guest experience. It is recommended that capsule hotel operators adopt Gripmate to improve overall safety standards and guest satisfaction. Further development could explore features such as custom height adjustment, detachable units, or visual markers for nighttime use to meet the diverse needs of modern musafir

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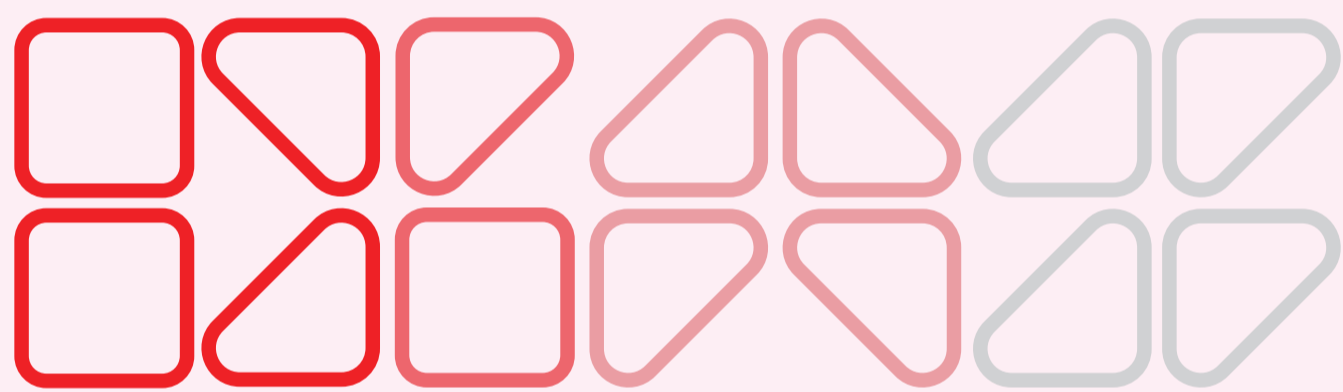
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