UNIVERSITI TEKNOLOGI MARA

EXTENDED ABSTRACT

DESIGN INNOVATION ACADEMIC SHOW 2025

InVICCAID 2025
1ST INTERNATIONAL VIRTUAL COMPETITION OF CREATIVE ARTS & INNOVATIVE DESIGN IN TEACHING & LEARNING

MONDARIKA

NIAT
NORTHERN INNOVATION ACADEMIC TOUR

Organized by

Faculty of Art & Design
#perubahanluarbiasa
#ADpilihanpertama

UNIVERSITI TEKNOLOGI MARA
Fakulti Seni Lukis & Seni Reka
Cawangan Kedah

UiTM di hatiku

Collaboration with

PUSAT SAINS NEGARA WILAYAH UTARA

KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

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

Mohamat Najib Mat Noor
Head of Faculty
Faculty of Arts & Design
UiTM Kedah Branch

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.

Industrial Design (Diploma)

MINIWAVE | MANUAL BABY CLOTHES WASHER

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ABSTRACT

This innovative manual baby clothes washer is designed with both safety and efficiency in mind. Crafted from BPA-free polypropylene and other non-toxic materials, it ensures that your little one's clothes are cleaned without any harmful chemicals. The washer is lightweight and portable, making it perfect for parents on the go or those living in smaller spaces. Its user-friendly design allows for easy operation, requiring no electricity—just a simple hand-crank mechanism that provides a thorough wash while being gentle on delicate fabrics. The compact size means it can fit in any laundry area, and its eco-friendly nature helps reduce water usage compared to traditional washing machines. Parents can feel confident knowing that their baby's clothes are not only clean but also free from any harmful substances. This manual washer is an ideal solution for eco-conscious families who want to ensure their baby's safety while also being mindful of the environment. With its durable construction and thoughtful design, this baby clothes washer is a must-have for any parent looking to simplify laundry day while keeping their child's clothing safe and clean.

Keywords: Manual, baby-safe, portable, eco-friendly, washer.

INTRODUCTION

Miniwave is a manual baby clothes washer that makes laundry a breeze for parents. With its easy-to-use hand-crank system and made from BPA-free, baby-safe materials, Miniwave provides a safe, electricity-free way to wash those delicate infant outfits. Its lightweight and portable design is perfect for tight spaces or when you're on the go, and the gentle washing action ensures that sensitive fabrics are well taken care of. Miniwave beautifully blends practicality with eco-friendly features, making it

a must-have for today's environmentally aware families. The design and development of the manual baby clothes washer really prioritized safety, simplicity, and being kind to the environment. Made from BPA-free polypropylene and other non-toxic materials, this washer ensures that all surfaces touching your baby's delicate clothing are completely safe. Its compact and ergonomic shape is perfect for small living spaces, and it's designed to be portable for parents who need to wash baby clothes on the go. The hand-crank mechanism was chosen for its user-friendliness, allowing you to wash without electricity while still providing gentle agitation to protect those fragile fabrics. Throughout the development, we focused on using minimal water and ensuring the washer is durable enough for regular use. The final design strikes a great balance between functionality and ease of use, making it a practical and eco-friendly solution for your everyday baby laundry needs.

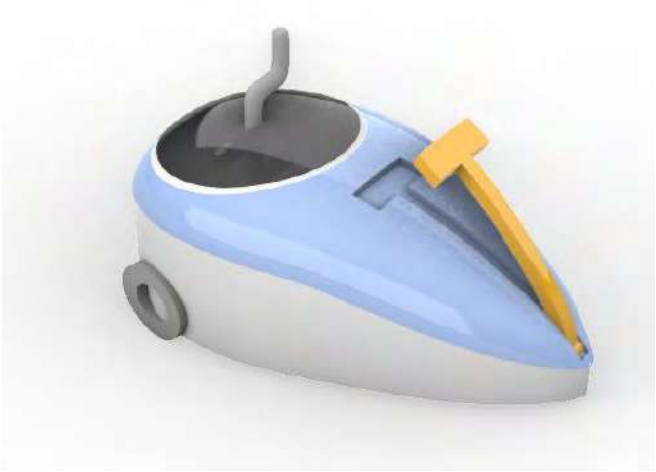

Figure 1 Miniwave

MATERIALS AND METHOD

Miniwave is a manual baby clothes washer that emerged from an industrial design project aimed at creating a safe, user-friendly, and eco-friendly solution for washing infant clothes. This product prioritizes material safety, ergonomic handling, and environmental responsibility. The design journey focused on choosing BPA-free polypropylene and other certified baby-safe materials, ensuring that every part that touches water and clothing is non-toxic and hygienic. Polypropylene was selected not just for its safety but also for its durability, lightweight nature, and ease of manufacturing, making it perfect for mass production. Miniwave features a hand-crank mechanism, which means it doesn't require any electrical power, promoting sustainable use in various settings, whether in rural areas or while traveling. The manual

operation allows for easy control and provides gentle agitation, perfect for delicate baby fabrics. Its design and proportions were crafted to enhance portability and save space, catering to parents who live in small homes or are always on the go.

RESEARCH AND FINDINGS

The results from the Miniwave project really showcase its success in achieving important goals like safety, functionality, and sustainability. After thorough material testing, we found that BPA-free polypropylene is a fantastic choice, providing both strength and safety for baby use. Ergonomic studies showed that the hand-crank mechanism is easy to use, allowing for gentle yet effective washing without harming delicate fabrics. Prototyping and feedback from users indicated that its compact size and lightweight design make it super portable and convenient, especially for parents living in smaller spaces or on the go. Water usage tests revealed that Miniwave significantly cuts down on water consumption compared to traditional washing methods, backing up its eco-friendly claims. All in all, the project has successfully created a manual washer that is practical, safe, and environmentally friendly, perfectly catering to the needs of modern, health-conscious families.

CONCLUSION & RECOMMENDATIONS

The Miniwave project has successfully reached its goal of creating a safe, eco-friendly, and user-friendly manual baby clothes washer. Made from BPA-free polypropylene and other baby-safe materials, this product ensures the safety of infants while also being durable and easy to use. Its compact design, paired with a straightforward hand-crank mechanism, offers a practical solution for parents who need a portable and efficient washer, particularly in small living spaces or off-grid settings. Plus, Miniwave champions sustainable living by cutting down on both water and energy usage. To make it even better, it would be great to refine the ergonomic design of the handle for added comfort during longer washing sessions. Introducing optional features like a draining system or a collapsible design could really boost convenience and make storage a breeze. Future developments might also look into using biodegradable or recycled materials to further lessen the environmental footprint. Finally, conducting more extensive user testing with a diverse group of

parents would provide valuable feedback for ongoing product enhancements.

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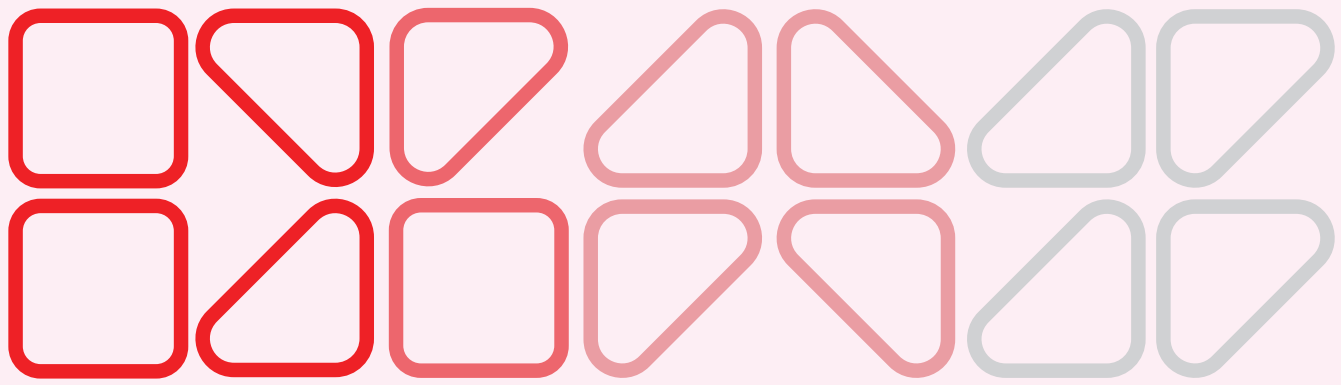

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