



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)***





BAMBINO | DIAPER CHANGER BACKPACK

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ABSTRACT

The Diaper Changer Backpack is a smart and stylish option for parents, blending essential features into a compact design. Crafted from durable, water-resistant materials like polyester or canvas, it's lightweight and easy to clean perfect for everyday baby care. It even comes with a fold-out changing pad that's simple to wipe down, giving you a hygienic spot for diaper changes wherever you are. Inside, you'll find multiple compartments that keep diapers, wipes, bottles, and clothes neatly organized and within reach. With padded shoulder straps and a neutral design, it's comfortable and appealing for everyone. Plus, the strong stitching and sturdy build mean it holds its shape and stands up to daily use without needing plastic or metal supports. All in all, it's a straightforward, reliable solution for keeping diaper changes clean, organized, and portable.

Keywords: Portable, Fabric, Durable, Organized, Comfortable

INTRODUCTION

The Diaper Changer Backpack was designed with a clear goal in mind: to create a product that's not just functional but also user-friendly for parents and caregivers. The journey started with some in-depth user research, including surveys and interviews with parents, to pinpoint the main challenges they face with traditional diaper bags. Key insights revealed the importance of quick access to essentials, comfortable carrying options, and a clean surface for diaper changes, which shaped the design's core features. Through sketching and brainstorming, various forms were explored, ultimately leading to a backpack design that evenly distributes weight and

allows for hands-free convenience. We chose lightweight, durable materials like polyester and oxford cloth for their water resistance, easy cleaning, and affordability. The interior was thoughtfully organized into separate compartments to keep clean and soiled items apart, and a fold-out changing mat was cleverly integrated into the rear panel for added convenience. Iterative prototyping played a crucial role in refining dimensions, testing how materials behaved, and enhancing user interaction with zippers, pockets, and straps. Throughout the development, we focused on ergonomic comfort, a minimalist aesthetic, and efficient manufacturing options. The final design strikes a perfect balance, meeting the everyday needs of parents while embracing modern design principles of simplicity, efficiency, and user-centered innovation.



Figure 1 Diaper Changer Backpack

MATERIALS AND METHOD

The Diaper Changer Backpack was crafted with a thoughtful mix of soft yet durable materials, all chosen to prioritize comfort, practicality, and easy upkeep. The outer layer is made from high-quality polyester or oxford fabric, which is lightweight, water-resistant, and a breeze to clean, perfect for the daily demands of parenting. Inside, we used a smooth polyester fabric to create a hygienic, wipeable surface. To enhance comfort and protection, we added soft polyurethane (PU) sponge padding to the shoulder straps, back panel, and the integrated changing mat. This thoughtful



padding keeps the backpack light while still providing the support and cushioning you need. For easy access and secure storage, we opted for durable plastic zippers and Velcro closures, and we reinforced everything with strong polyester thread for added durability. The design journey started with user research, including surveys to pinpoint their essential needs. We explored initial design ideas through hand sketches and 3D digital mockups. Then, we moved on to physical prototypes, using cardboard, testing multiple versions for comfort, pocket accessibility, and diaper-changing efficiency. Each prototype was carefully assessed and refined to optimize material placement, sponge thickness, and compartment layout.

RESEARCH AND FINDINGS

The journey of designing and developing the Diaper Changer Backpack led to a product that's not only functional and lightweight but also super user-friendly, perfectly catering to the needs of caregivers. Through user testing and feedback, it became clear that the backpack's layout was intuitive, allowing for quick access to essential baby items. This feature really helped ease the stress that often comes with diaper changes, especially in public or outdoor settings. The choice of materials, like polyester paired with soft sponge padding, struck a great balance between structure and comfort without weighing anyone down. Plus, ergonomic touches like padded shoulder straps and a well-balanced weight distribution made it comfortable to wear for long stretches. The final prototype hit all the design goals of simplicity, portability, hygiene, and comfort. While it kept things minimalist by leaving out complex features, it still proved to be incredibly effective for everyday parenting tasks. All in all, this project showcased how thoughtful material choices and a user-centered design approach can create a practical and well-loved solution in the baby care product arena.

CONCLUSION & RECOMMENDATIONS

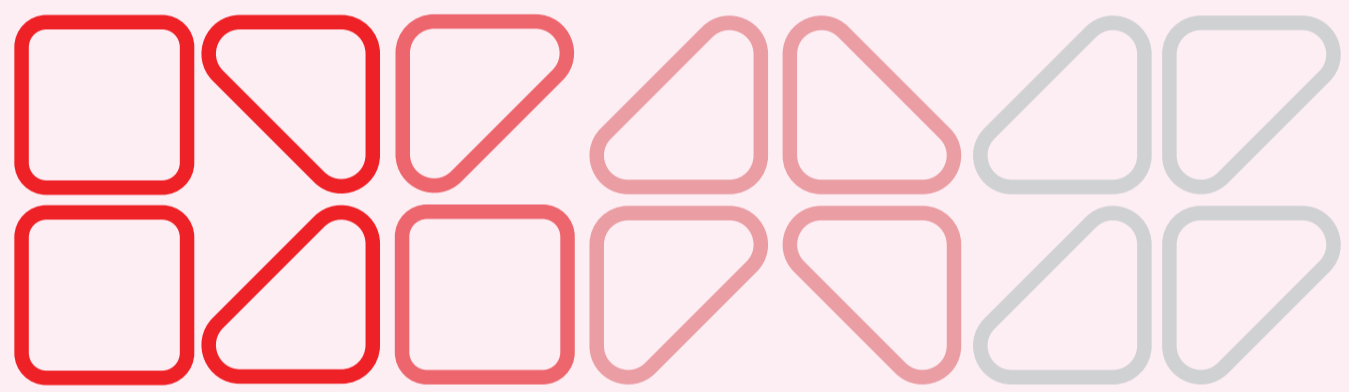
The Diaper Changer Backpack is a fantastic solution for caregivers, providing a lightweight, comfy, and practical way to handle diaper changes while on the move. Crafted from sturdy fabric and cushioned with soft sponge padding, it strikes a great balance between comfort, hygiene, and usability. Users have shared positive



feedback about its practicality and ergonomic design. Looking ahead, it would be beneficial to consider using sustainable materials and to test the product with a broader range of users. Additionally, small tweaks like modular storage options or better padding placement could really enhance its versatility and overall user satisfaction.

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