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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CONTENTS

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 (Bachelor)

KNEEVA | MOBILITY SCOOTER

[1]Nur 'Aisyah 'Awatif Binti Mohamad 'Ashri,

[2]Dr. Hasnul Azwan Bin Azizan @ Mahdzir, Muhamad Aiman Afiq Bin Mohd Noor

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ABSTRACT

Kneeva Scooter is a thoughtfully designed mobility solution created to assist elderly individuals who experience knee pain and have difficulty walking long distances. Unlike many existing devices that can be uncomfortable or hard to use, especially for those with joint issues, the Kneeva Scooter focuses on ease of use, comfort and safety. It features a cushioned seat with a backrest and armrests for added support, along with a low platform that makes mounting and dismounting easier without putting strain on the knees. Its three-wheel design ensures stability and smooth maneuverability, even in confined spaces. Made from lightweight yet durable materials, the scooter is easy to transport and built to withstand daily use. Simple, user-friendly controls allow seniors to operate it effortlessly, making it a practical and empowering option for everyday mobility. The compact frame also allows for easy storage and navigation in tight indoor environments such as hallways or small apartments. Additionally, the design process was based on research into real user needs, ensuring that every feature provides practical value. From the choice of materials to the shape of the handles, every element aims to reduce physical effort while promoting comfort and balance. Overall, the Kneeva Scooter helps restore independence and confidence by enabling users to move around more comfortably and freely. It serves as a supportive and inclusive mobility aid that enhances the everyday lives of elderly individuals, especially those coping with chronic knee pain.

Keywords: Mobility, Elderly, Comfort, Knee Pain, Independence

INTRODUCTION

Elderly individuals dealing with knee pain often find it tough to move around comfortably, turning simple tasks like shopping or taking a stroll into a real challenge. This struggle can lead to a decline in their independence and self-esteem. Unfortunately, many mobility scooters available today aren't built with the needs of those suffering from joint or knee pain in mind, making them difficult to use and uncomfortable. That is where the Kneeva Scooter comes in an innovative mobility scooter designed specifically for elderly users facing knee issues. It prioritizes comfort, safety and ease of use. With features such as a low step in platform, supportive seating and straightforward controls, the Kneeva Scooter makes getting around a breeze. It aims to empower users, improve pain while moving and enhance their overall quality of life. The Kneeva Scooter is a perfect example of how thoughtful design can truly transform lives.

DESIGN AND DEVELOPMENT

Figure 1.1 The picture of final body structure

The design and development of the Kneeva Scooter focused on solving real problems faced by elderly users with knee pain. Early research involved identifying common issues with existing scooters, such as difficulty getting on, lack of comfort and complicated controls. Based on these findings, several sketches

and digital models were created to explore ideas. The final design includes a low step-in platform, a soft cushioned seat with backrest and armrests, and a simple handlebar system. Lightweight materials were used to make the scooter easy to move and safe to use. The design process focused on comfort, safety and independence.

RESULTS AND DISCUSSION/FINDINGS

The objective of this research was to explore the need for a user-friendly mobility scooter, specifically the Kneeva Scooter, designed for elderly individuals experiencing knee pain. This study collected data from a small group of respondents to understand the frequency and impact of knee pain during walking. Survey results showed that 91% of participants experience knee pain either frequently or occasionally, indicating a strong need for a supportive mobility solution.

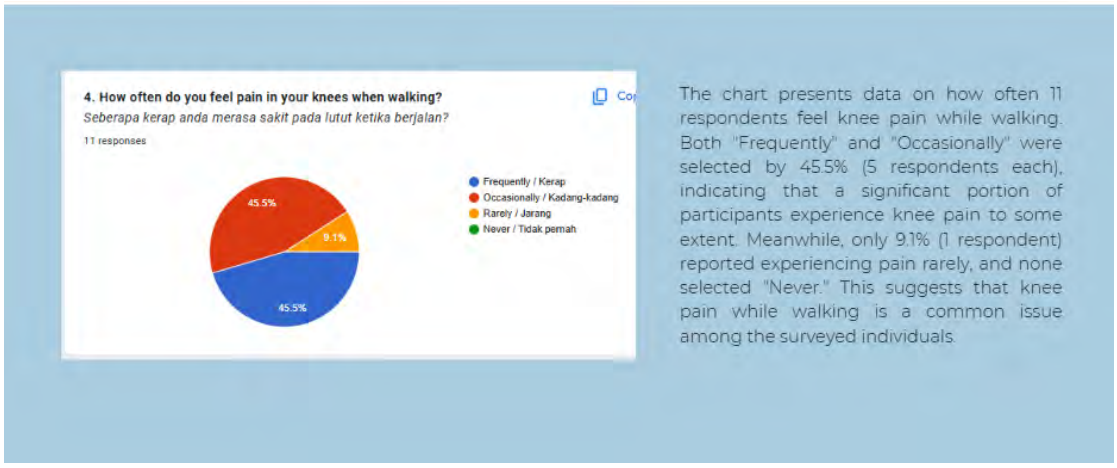

Figure 1.2 Asking respondents how often do you feel pain in your knees when walking.

The chart presents data on how often 11 respondents feel knee pain while walking. Both "Frequently" and "Occasionally" were selected by 45.5% (5 respondents each), indicating that a significant portion of participants experience knee pain to some extent. Meanwhile, only 9.1% (1 respondent) reported experiencing pain

rarely, and none selected "Never." This suggests that knee pain while walking is a common issue among the surveyed individuals.

CONCLUSION & RECOMMENDATION

The Kneeva Scooter is a thoughtfully designed mobility aid that prioritizes comfort, safety and ease of use for seniors dealing with knee pain. Its lightweight yet robust build provides stability and support, while features like the low step-in platform, ergonomic seating, and user-friendly controls make it perfect for everyday use. This scooter is crafted to minimize physical strain and boost independence, tackling the unique challenges that older adults with joint issues often face. With its focus on the user experience and practical features, the Kneeva Scooter comes highly recommended for daily mobility in homes, care facilities, and public areas. It serves as a valuable and empowering tool that fosters confidence, comfort, and freedom of movement ultimately enhancing the quality of life for elderly users.

Figure 1.3 The picture of Environment (Kneeva)

Research / references on problem identification.

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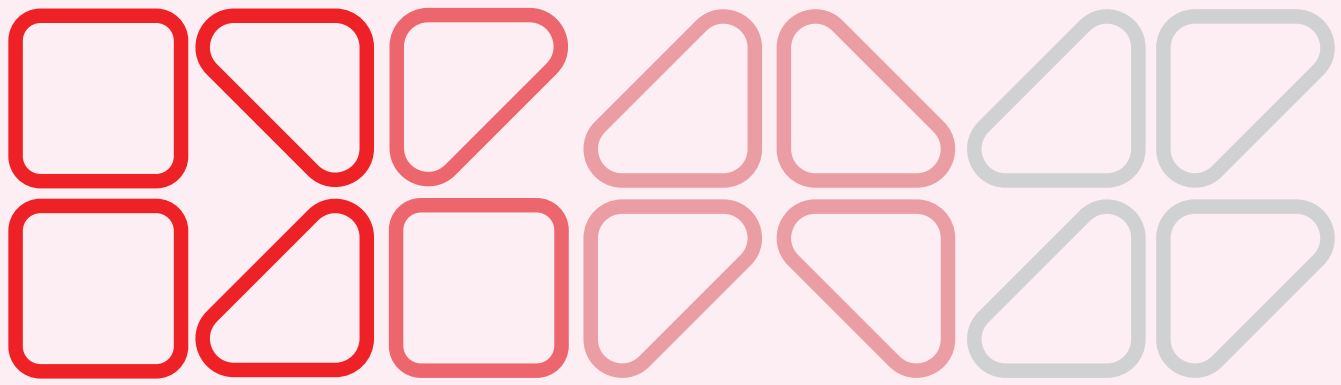

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