



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)***





AXION | EXERCISE BENCH

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ABSTRACT

The Axion Exercise Outdoor Bench is a versatile piece of public furniture that beautifully merges seating with low-impact exercise options, promoting healthy and active lifestyles in urban spaces like KLCC Park. With its sleek, minimalist design and ergonomic layout, Axion is all about inclusivity inviting users of all ages, from seniors to those looking for gentle physical activity. The integrated metal bars and perforated components make it perfect for a range of bodyweight exercises, including push-ups, step-ups, dips, and stretching, all without the hassle of complicated gym gear. Made from sturdy materials like Chengal wood and both perforated and solid metal bars, this bench is designed to endure outdoor conditions while still looking great. Chengal wood brings natural durability and warmth, while the metal parts add structural strength and ventilation. The blend of natural and industrial materials strikes a perfect balance between functionality and stylish design. Axion's modular setup allows for flexible arrangements in public parks, campuses, and recreational areas, fostering community interaction, wellness, and urban engagement. Its modern aesthetic fits right in with contemporary landscape designs, while its purpose encourages daily movement and inclusive fitness habits. In essence, Axion acts as both a public amenity and a health-promoting feature, contributing to the vision of more livable, active, and socially connected urban environments.

Keywords: Outdoor, Fitness, Inclusive, Durable, Ergonomic

INTRODUCTION

The AXION Exercise Outdoor Bench is a versatile piece of urban furniture that



emerged from a design exploration aimed at enhancing health, accessibility, and material innovation in public spaces. This design addresses the increasing demand for inclusive and low-key fitness options that blend seamlessly into our daily environments, particularly in bustling urban spots like KLCC Park. It reimagines the typical public bench by combining traditional seating with gentle exercise features, promoting casual movement and physical well-being for people of all ages. Built on the foundations of user-centered and sustainable design, AXION uses robust materials like Chengal wood, perforated metal bars, and stainless steel, all treated with weather-resistant finishes to ensure they stand the test of time outdoors. Its ergonomic design and minimalist look not only boost functionality but also create a pleasing visual experience in urban settings. The bench's modular design and adaptability make it suitable for various public spaces, from parks to university campuses, encouraging social interaction and personal wellness. This project showcases how industrial design can effectively link public health awareness with thoughtful product development. Through thorough research, creative brainstorming, material testing, and a focus on user needs, AXION demonstrates how simple changes in public furniture can enhance community life and encourage an active lifestyle in urban areas.

MATERIALS AND METHOD

The AXION Exercise Outdoor Bench is designed to encourage inclusive, low-impact workouts while standing up to the challenges of urban environments. The main bench platform is made from Chengal wood planks, a tough tropical hardwood known for its impressive weather resistance, strength, and durability. To enhance its longevity and provide a smooth, splinter-free experience, the wood is treated with a UV-resistant, weatherproof finish. To accommodate a variety of exercises like step-ups, push-ups, stretching, and crunches, the bench features a set of integrated metal exercise bars and angled frame structures crafted from powder-coated stainless steel. These bars are expertly shaped and installed using precision welding and CNC-bending techniques, ensuring stability and consistency. The powder coating not only protects against rust and scratches but also helps the bench withstand the elements for years to come. In certain areas, a perforated metal plate is included to improve traction and ventilation, which is especially beneficial for exercises that involve foot placement or body contact. These perforations also help reduce heat buildup and



allow for water drainage after rain. Each handlebar is secured with a circular base plate, providing a strong attachment and ensuring user safety during workouts. To make it accessible for everyone, the entire frame has smooth, rounded edges and thoughtfully designed proportions to accommodate users of different heights and strengths. The structure is built for easy assembly, making transportation, installation, and maintenance a breeze. Every material used is chosen to support a low-maintenance, high-performance outcome, all while aligning with the product's mission of promoting wellness and inclusivity.

RESEARCH AND FINDINGS

The development and evaluation of the AXION Exercise Outdoor Bench have shown that it's not just a piece of urban furniture; it's a game-changer for both relaxation and low-impact workouts. Through user interaction studies and design reviews, we found that features like the integrated handlebars, perforated metal surface, and modular design really encourage people to get moving think push-ups, step-ups, stretches, and crunches all without needing complicated instructions or fancy gym gear. Plus, the use of Chengal wood means it holds up beautifully outdoors, staying sturdy and looking great with very little upkeep. The powder-coated metal parts are tough against rust and wear, proving they can stand the test of time in public spaces. With its ergonomic height and rounded edges, the bench is designed for comfort and safety, making it a great option for both kids and seniors. And let's not forget the modular design, which makes it adaptable to various site layouts and easy to put together or maintain. In short, the AXION bench hits the mark on its goal: to foster inclusive fitness and enhance social well-being through a solid, stylish, and functional piece of urban furniture. These results really show how smart material choices and multifunctionality can boost public engagement and promote healthier, more active communities.

CONCLUSION & RECOMMENDATIONS

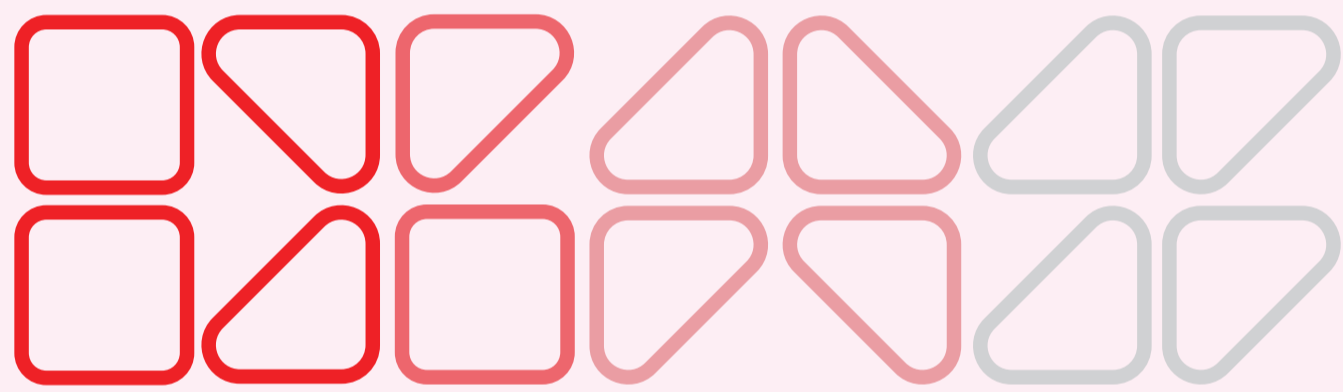
The AXION Exercise Outdoor Bench is a fantastic example of how industrial design can breathe new life into traditional public furniture, turning it into multifunctional tools that encourage wellness, accessibility, and community



interaction. By combining exercise features with sturdy materials like Chengal wood, perforated metal, and powder-coated metal bars, this bench successfully promotes casual physical activity in everyday public spaces. Its sleek, ergonomic, and modular design caters to a diverse range of users, including seniors and those looking for low-impact workouts, all while adding a touch of beauty to parks, campuses, and recreational areas. Looking ahead, it would be great to see future versions incorporate extra features like instructional graphics or QR codes for guided workouts, which would be especially helpful for first-time users. Exploring materials like recycled composites or treated bamboo could also help lessen the environmental footprint. Additionally, conducting long-term tests in various weather conditions and high-traffic areas would be wise to further enhance the bench's durability and user experience. Partnering with urban planners and local councils could also ensure that AXION is adaptable for widespread public use in different settings. All in all, AXION showcases a progressive approach to inclusive design, community health, and sustainable urban living.

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