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"Empowerment of Special Meeds through Invention & Innovation"

EXTENDED ABSTRACT

MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024

"EMPOWEREMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION"

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MiiEX'2024

MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION 2024 "EMPOWEREMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION"

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INNOVATION, INVENTION, AND DESIGN

FOREWORD BY THE RECTOR OF UITM CAWANGAN MELAKA



Professor Ts. Dr. Mohd Rasdi bin Zaidi Rector, Universiti Teknologi MARA (UiTM) Cawangan Melaka

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honour for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

2024 is a special year where MIIEX 2024 emphasizes the development of special needs. As we know, special needs indicate a limitation in a person's ability to engage in and benefit from various aspects, such as daily activities and education. Hence, with the theme "Empowering Special Needs Through Invention and Innovation," it is a platform for industries, professionals, academicians, students, and communities to share their innovative ideas and products to increase accessibility for those with special needs.

The successful implementation of MIIEX '24 is our joint success. This event was supported by the Melaka state government through YB Datuk Fairul Nizam bin Roslan, the EXCO of Science, Technology, Innovation, and Digital Communication. I also want to express my

gratitude to Universitas Negeri Padang, Indonesia, Universitas Muhammadiyah, Makassar, Indonesia, the International Association of Economic and Businesses (IAEB), Universiti Sains Islam Malaysia, Ibnu Ummi Maktum Research Center (UMMI), USIM, and The Southeast Asia Minister of Education Organization Regional Centre for Special Educational Needs (SEAMEO SEN) as our co-collaborators for MIIEX 2024.

The collaboration from various parties in MIIEX '24 is a platform that will improve cooperation and interweaving among industries, professionals, academicians, students, and communities in shaping their potential in developing innovation products. This exposition also serves as a platform to cultivate and uphold the nation's innovation culture by presenting new ideas and research by young people, especially from academia and universities. Indirectly, MIIEX '24 will encourage all inventors towards empowering Science, Technology, Engineering, and Mathematics (STEM), especially in primary and secondary schools.

The new digital landscape also inspires more innovation and new ideas that contribute to various activities, such as business and industries. As a university that encourages "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

FOREWORD BY THE DEPUTY RECTOR (RESEARCH & INDUSTRIAL LINKAGES)



Associate Professor. Dr. Nur Hayati binti Abd Rahman

Deputy Rector (Research & Industrial Linkages), Universiti Teknologi MARA (UiTM) Cawangan Melaka

With much passion and privilege, let me warmly welcome all of you to the Melaka International Innovation Exhibition (MIIEX), UiTM Cawangan Melaka's flagship event. I firmly believe that events such as these demonstrate the gradual evolution of this platform in terms of its significance and its governing principles within the sphere of learning and the broader scholarly society.

The theme for this year, "Empowering Special Needs Through Invention and Innovation," strongly connects to our mission of using research and technology to make a positive impact on the world we live in. Besides enforcing the message of diversity, this theme also reaffirms our focus on creating products to improve the lives of people with disabilities (PWDs). Such innovations are vital as only through focused constructive changes can society become more sensitive to the needs of all members.

MIIEX allows researchers, students, and industry professionals to come together, share their innovative research, and develop viable research partnerships. It has been great to see the enthusiasm of the participants and the efforts they put into their projects, which can offer various social and economic benefits. This is why one can state that MIIEX is a great

opportunity for creating connections between the academic environment and industry, facilitating the implementation of innovative and promising projects.

Finally, I would like to express my sincere appreciation to all the members and supporters of the organizing committee, all the participants, sponsors, and everyone involved in preparing this event. I want to express my gratitude for your commitment and involvement, as the success of MIIEX and the development of an active culture of innovation in our university and beyond is partly owed to your support.

Thank you

FOREWORD BY THE PROJECT DIRECTOR



Dr Zulkefli bin Muhamad Hanapiyah Senior Lecturer

Assalamualaikum and Warmest Greetings,

It gives me a great pleasure, on behalf of the organizing committee, to welcome all participants and speakers to the Melaka International Intellectual Exposition 2024 (MIIEX '24) with the theme "Empowering Special Needs Through Invention and Innovation." We are honoured and pleased to welcome all participants to this biennial event.

MIIEX '24 is a platform that gathers experts from local and international industries, academia, scientists, researchers, and the community to contribute to the advancement of scientific and technological knowledge. This knowledge helps develop disruptive innovation products that improve daily activities for businesses and the community, especially those with special needs.

MIIEX '24 provides an atmosphere for inventors of all levels to gain new exposure and collaborate. Indirectly, this promotes a collaborative and innovative culture that focuses on cutting-edge technologies and new standards in technology and creativity.

MIIEX '24 is anticipated to serve as an arena for participants to acquire and disseminate revolutionary information on ideas and innovation. It is intended that the competition will expose the contestants' minds to the latest technologies and designs, aligning with the government's goal of encouraging innovation in Malaysia.

Finally, I want to compliment my fellow committee members on their amazing efforts, which were vital to the event's success. In addition, I want to thank our co-organizers, event sponsors, and participants. Optimistically, we hope that all new knowledge discovered, invented, or innovated will lead us toward future sustainability.

Thank you.

FOREWORD BY MELAKA STATE EXCO OF SCIENCE, TECHNOLOGY, INNOVATION AND DIGITAL COMMUNICATIONS



YB Datuk Fairul Nizam bin Roslan

Melaka State Exco of Science, Technology, Innovation and Digital Communications

Welcome to the Melaka International Intellectual Exposition 2024 (MIIEX '24). It is an honor for me, on behalf of UiTM Cawangan Melaka, to thank all of you for joining MIIEX '24. We are proud to inform you that this is the 13th consecutive year that UiTM Cawangan Melaka is organizing this exposition. Since 2009, UiTM Cawangan Melaka has successfully hosted this innovation exposition. Not only have we succeeded in organizing the exposition, but we have also successfully embarked on commercialized products.

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The new digital landscape also inspires more innovation and new ideas that contribute to various activities, such as business and industries. As a university that encourages "Research and Innovation," we aim to foster more innovative products that benefit scholars, industries, and communities, addressing issues to improve our present and future life.

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams, who are the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition. We hope that this collaboration never ends here.

Thank you.

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ABOUT MIIEX'24

MIIEX'24 is an innovation competition annually organised by UiTM Melaka with the intention to bring together ideas and inspiration that could fit in for commercialization needs. This event creates a platform for researchers to establish networking, partnership and opportunities to collaborate with industries.

OBJECTIVES

- 1. Encourage and instil passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
- 2. Highlight distinguished talents of skilful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
- Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
- 4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;

5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

THEME

'EMPOWERMENT OF SPECIAL NEEDS THROUGH INVENTION AND INNOVATION'

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Digital ChopBoard

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Abstract

The chopping board with an integrated scale offers a multitude of advantages and potential uses that elevate its status as a must-have kitchen gadget. Beyond its obvious convenience in accurately measuring ingredients while chopping, this innovative tool enhances the cooking experience in numerous ways. Firstly, it promotes efficiency by eliminating the need to constantly switch between a chopping board and a separate scale, saving time and reducing the risk of errors. This feature would be especially beneficial for vendors at the market, as they can easily and accurately measure the weight of their goods while cutting or preparing products for sale, thus increasing efficiency in the preparation process and maintaining consistency in product sizes offered to customers. Secondly, it encourages healthier cooking habits by allowing users to easily monitor portion sizes and ingredients, empowering them to make informed dietary choices. Additionally, its versatility extends beyond traditional cooking applications; the integrated scale can also be utilized for tasks such as portioning snacks. Moreover, its compact and lightweight design makes it portable and ideal for use in small kitchens, outdoor picnics, or camping trips. Furthermore, the chopping board with a scale promotes sustainability by reducing food waste through precise portion control. Overall, this multifunctional kitchen accessory not only simplifies meal preparation but also enhances culinary creativity and promotes a healthier, more sustainable lifestyle for users, including market vendors looking to improve their operations and enhance customer satisfaction.

Keywords: Chopping board, Sustainability, Efficiency, Health, Multifunctional

1. INTRODUCTION

This revolutionary kitchen gadget seamlessly combines the functionality of a traditional chopping board with the precision of a scale, offering a multitude of benefits to home cooks and culinary enthusiasts alike. With its intuitive design, users can effortlessly measure ingredients while chopping, eliminating the need for multiple tools and streamlining the cooking process. However, the versatility of this product extends far beyond the kitchen, making it an invaluable tool for market vendors seeking efficiency and accuracy in preparing and selling their goods.

2. OBJECTIVE

Assess the accuracy of the integrated scale in measuring various ingredients commonly used in cooking. By combining the chopping board and precision scale into a single, cohesive unit, users can streamline the cooking process, minimize clutter, and optimize space utilization in the kitchen. An innovation such as a chopping board with an integrated scale offers the convenience of measuring ingredients directly on the surface where they are prepared, eliminating the need for separate tools and reducing the number of steps required for meal preparation.

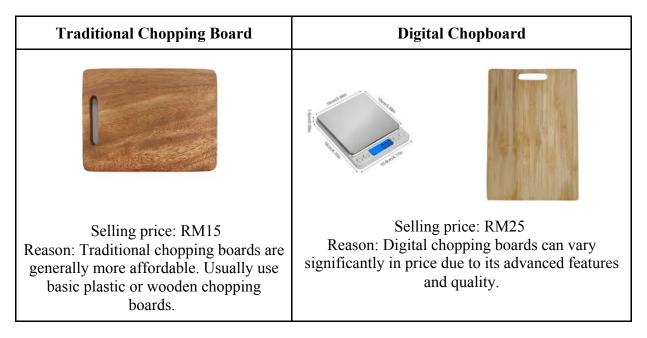
3. NOVELTY & INVENTIVENESS

The novelty of a chopping board with an integrated scale lies in its innovative merging of two crucial kitchen tools. This dual functionality not only saves time and minimizes errors but also benefits market vendors by ensuring precise measurements and product uniformity. Additionally, its adaptability promotes healthy cooking practices and facilitates easy portability for various settings, showcasing its versatility and practicality.

4. PRACTICALITY & USEFULNESS

The integrated scale in the chopping board reduces time spent switching between tools, improving efficiency and reducing errors. Its versatility extends beyond cutting, aiding in portioning and promoting healthy eating choices. This innovation also enhances food safety by minimizing cross-contamination risks and maintaining clean kitchen surfaces.

5. COMPARISON PRICE



6. TARGET MARKET

The digital chopping board with an integrated scale is targeted towards home cooks, busy professionals, health-conscious individuals, market vendors, small businesses, tech fans, and outdoor enthusiasts. It appeals to home cooks and culinary enthusiasts by offering precision, efficiency, and convenience in meal preparation. Busy professionals benefit from its ability to streamline cooking processes and reduce the need for multiple tools. Health-conscious consumers appreciate its aid in portion control and nutritional tracking. Market vendors and small businesses value its precise measurements and consistency in product sizes. Tech enthusiasts are drawn to its smart kitchen features, while outdoor enthusiasts find it portable and versatile for outdoor cooking.

7. MARKETING STRATEGY (4Ps)

The marketing strategy for the digital chopboard encompasses emphasizing its innovative features, convenience, and versatility to engage potential customers effectively. Messaging will highlight its value proposition, affordability, and seamless integration in kitchens, enabling accurate ingredient measurement, effortless recipe following, and streamlined cooking. The digital chopboard will be made readily available through physical retail stores, online platforms, and direct sales channels, ensuring accessibility to consumers. Promotional efforts will leverage social media, influencer partnerships, and special offers to boost visibility and foster customer trust through educational content and active communication, ultimately driving sales and loyalty.

8. CONCLUSION

The original design and multi-purpose features of the chopping board with an integrated scale are highlighted in the essay. This versatile tool makes healthy cooking easier, faster, and easier by integrating a chopping board with a scale. Home chefs, food lovers, and market vendors all need it for its adaptability outside of conventional cooking. In short, a chopping board with a built-in scale makes the user's life easier, encourages healthier and more environmentally friendly eating habits, and increases their culinary creativity.

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