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PROCEEDINGS OF JOHOR INTERNATIONAL INNOVATION INVENTION COMPETITION AND SYMPOSIUM 2024 (JIIICaS 2024)



*"Flourish and Nurturing Sustainable
Innovation for a Prosperous Nation"*

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e ISBN: 978-967-0033-25-9



**Published in Malaysia by
Universiti Teknologi MARA Cawangan Johor
Kampus Pasir Gudang
81750 Masai**



Preface

In the name of Allah, the Almighty who gives us the enlightenment, the truth, the knowledge and with regards to Prophet Muhammad (peace be upon him) for guiding us to the straight path. We thank to Allah for giving us guidance and strength to write this e-book.

This e-book compiles the extended abstracts that submitted to Johor International Innovation Invention Competition and Symposium 2024 (JIIICaS2024), where JIIICaS2024 is a virtual platform for all creative minds to share and present their invention and innovation. Each abstract gives a brief background on the innovation or project.

We hope that this e-book will help the readers to get to know the innovation done by the students and get some ideas to develop future innovation products.

Foreword Rector



Assalamualaikum warahmatullahi Wabarakatuh,
Salam Sejahtera, Salam Malaysia MADANI and
Salam UiTM Dihatiku.

In the name of Allah, the Most Gracious, the Most
Merciful.

It is a great honor to welcome you to the Johor
International Innovation, Invention, Competition, and
Symposium 2024 (JIIICaS 2024). This event

connects various disciplines, focusing on education and engaging educators,
students, researchers, and innovators from all walks of life.

Innovation is not just about ideas; it demands perseverance, creativity, and
determination to turn those ideas into reality. The remarkable projects
showcased today highlight the dedication and spirit of all participants.
Initiatives like this not only explore new technologies but also cultivate skills
and leadership among our youth. At Universiti Teknologi MARA (UiTM) Johor
Branch, we are fully committed to fostering a dynamic culture of innovation,
promoting the commercialization of new products, and encouraging
meaningful collaborations with industry and society.

As we celebrate this event, I would like to extend my heartfelt gratitude to all
sponsors, judges, the College of Computing, Informatics and Mathematics,
UiTM Pasir Gudang Campus as the event organizer, as well as to the
researchers and participants for their hard work in making this event a
success. Let us continue striving for innovation and excellence. May the
ideas presented today inspire us and lay the groundwork for future
achievements.

Thank you.

Associate Professor Dr. Saunah Zainon
Rector
Universiti Teknologi MARA (UiTM)
Johor Branch

(A-SS007) FUSION SLIDE

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ABSTRACT

Fusion Slide is a revolutionary slipper design concept that seamlessly merges flip flops and sliders, providing wearers with the convenience of slip-on easiness while preserving the stability of a slider design. This groundbreaking fusion improves comfort and versatility, avoiding the need to carry two types of slippers for those who prefer the two distinct styles. Fusion Slide's ergonomic design and flexible fit options make it suited for people of all ages, while also improving foot health and alignment. This unique product promises to enhance comfort and daily living, marking an important development in slipper design and user happiness. Fusion Slide seeks to be innovative in style and design, as well as increase comfort and foot care. It is made of synthetic rubber, breathable fabric, a slushy section, hyper foam, a carbon fiber plate, soft rubber, and a rubber outsole to provide long-lasting comfort. The breathable fabric drains away drip and odors, while the hyper foam absorbs shocks and delivers a comfortable ride. The slushy part cushions the feet, the carbon fiber plate adds stability, and the soft rubber parts provide comfort. The influence of Fusion Slide can be observed in the positive comments of customers, who like its 2-in-1 design, which allows them to modify their footwear, making it a popular choice among consumers. Finally, Fusion Slide is a game-changing innovation that provides a versatile and comfortable footwear choice, transforming the slipper market and becoming a vital part of footwear collections around the world.

Keywords: Fusion Slide, slipper, design, comfort, innovation

1.0 INTRODUCTION

Fusion Slide is a breakthrough slipper design concept that seamlessly combines flip flops and sliders, giving wearers the ease of slip-on simplicity while maintaining the stability of a slider design. This revolutionary fusion provides greater comfort and adaptability, removing the trouble of carrying two types of slippers for individuals who love both styles. Fusion Slide's ergonomic design and adjustable fit options are suitable for people of all ages, enhancing foot health and alignment. Fusion Slide's new materials and industry knowledge provide great income prospects across a wide range of customer classes. This innovative invention promises to improve comfort and daily life, representing a big step forward in slipper design and user well-being. (Sri Widyastuti & Muhammad Said, 2017)

2.0 OBJECTIVE

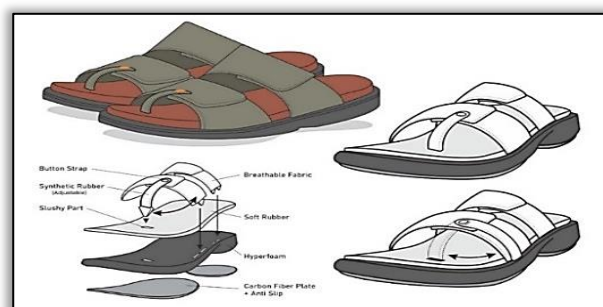
Hence, the innovation of the Fusion Slide intended:

- 1) To create style and design innovation. Add innovative design components to Fusion Slide, such as fashionable aesthetics, adaptable colour schemes (Man, 2013), and elegant profiles, to appeal to a range of customer tastes. (Linda O, 1996)
- 2) To enhance functionality. The Fusion Slide design offers many uses, including both indoor and outdoor adaptability, movable straps for a specific fit, and solid outsoles for stability and traction.
- 3) To comfort enhancement. Fusion Slide was designed with comfort in mentality. Its features, which include breathable materials, arch support, and plush cushioning, ensure that users will be comfortable for extended periods of time (Malki, J. Verkerke, Dekker, & M. Hijmans, Use, effectiveness, usability, appearance and prescription process of TF, 2023).
- 4) To improve foot health. Include orthopaedics elements in Fusion Slide, like shock-absorbing midsoles, arch support, and contoured footbeds, to encourage good foot alignment and lower the chance of common foot conditions.

3.0 METHODOLOGY

Fusion Slides are an adaptable footwear option that combine sliders and flip flops for durable and long-lasting support. Its construction (Price, 2014) guarantees prolonged comfort with synthetic rubber (Qianwen, 2017), breathable fabric, hyper foam, carbon fibre plate, soft rubber, and a rubber outsole. In addition to improving shock absorption for a smooth ride, the breathable fabric (Mukhopadhyay & Midha, 2008) keeps moisture out which lessens odour and discomfort. While the carbon fibre plate increases movement efficiency and stability, the slushy portion offers support and cushioning. Reliable traction is provided by the rubber outsole and soft rubber sections absorb shocks (N.J.MILLS, 2003). To keep feet cool and dry, Fusion Slide offers free orthopaedic support (Malki, J. Verkerke, Dekker, & M. Hijmans, Factors influencing the use of therapeutic footwear in persons with diabetes mellitus and loss of protective sensation, 2023). Waterproofing technology and anti-slip soles offer confidence (Mukhopadhyay & Midha, 2008) and protection in any weather while adjustable straps guarantee a personalised fit. Fusion Slide revolutionizes slipper design offering a comfortable and versatile footwear option for all. (Owen N.Beck, Pawel R. Golyski, & Gregory S.Sawicki, 2020)

Figure 1: Fusion Slide detailing for each compartment



4.0 RESULTS

The survey's results reveal that 45.3% of respondents choose flip-flops, 37.7% prefer slides, 9.4% prefer sandals, and 7.5% prefer Crocs. These statistics show a strong preference for flip flops and slides, slip-on models stated for their ease of use. The majority of these closure types indicates that respondents appreciate convenience and simplicity in their footwear selections. Sandals and Crocs, while less popular, yet remain an uncommon appeal, maybe due to their unique design elements and capabilities.

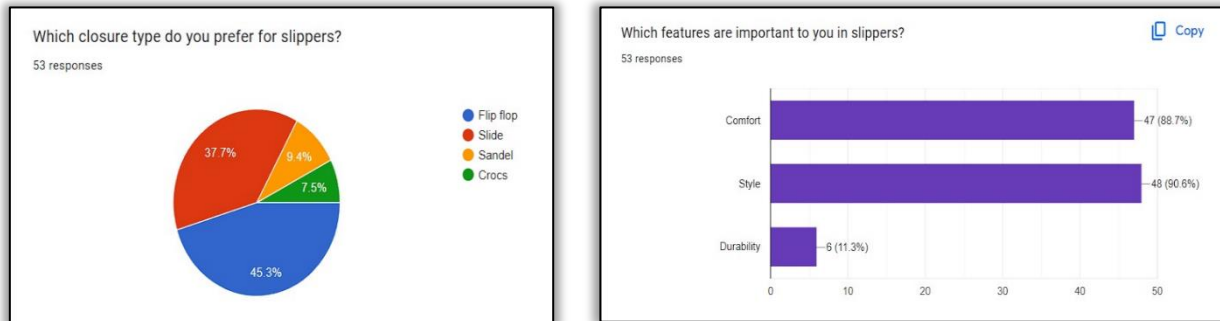


Figure 2 and 3: Survey of people interested in the type of slipper closure and Survey of people's needs in slippers features

Based on the survey, 88.7% of respondents prioritize comfort when choosing slippers, followed by 90.6% for style and 11.3% for durability. Comfort is highlighted since it gives a comfortable and supportive fit, and style is viewed as a means to match personal style. The decreased emphasis on durability implies that consumers value immediate comfort and style above long-term durability, emphasizing the significance of comfort and style in slipper selection.

5.0 CONCLUSION

In a nutshell, the Fusion Slide is a game-changing breakthrough in slipper design, providing a versatile 2-in-1 solution that combines the top qualities of flip flops and slides. This unique design not only gives customers a choice in footwear style, but it also improves comfort and improves foot health. The survey results show the Fusion Slide's capacity to satisfy modern consumers' needs and preferences with a particular focus on comfort and style. With its unique combination of style, comfort, and utility, the Fusion Slide has the power to completely transform the slipper industry and become a key component in footwear collections all over the world.

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