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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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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-SS032) SIPNCHILL TUMBLER (MULTIFUNCTION TUMBLER)

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ABSTRACT

SipNChill Tumbler is an innovative design that combines a tumbler, portable fan, and a phone holder, enhancing user convenience and comfort. The tumbler serves as both a beverage container and a functional accessory, allowing users to enjoy their favourite drinks while staying cool and connected. The fan operates quietly, ensuring minimal disruption. The tumbler also features an adjustable phone holder, allowing users to securely place their smartphones in portrait or landscape mode. The ergonomic design optimizes the tumbler's shape and grip for comfortable handling. The benefits of the tumbler include portability, energy efficiency, and versatility. The lightweight and compact design allows for easy carrying, perfect for outdoor activities, travel, or daily commutes. The fan operates on low power, extending battery life, and allows users to enjoy a cool breeze without draining their devices. The tumbler adapts to various scenarios, allowing users to sip their favourite beverage, keep their phone within reach, and stay refreshed simultaneously.

Keywords: Tumbler, Portable Fan, Phone Stand, Innovative Design, Favourite.

1.0 INTRODUCTION

Presenting the newest invention, a tumbler with a built-in phone holder and portable fan, created especially to meet the changing needs of students. Students today are expected to be always on the go, balancing various duties while trying to stay connected and motivated in the fast-paced academic atmosphere of today. This innovative tumbler is more than just typical drinkware, it's a multipurpose friend made to improve students' everyday experiences. Besides, tumbler usage can reduce the rate of plastic waste. To-go cups (e.g. coffee) are essentially made of paper, yet they incur a thin coating of plastic or wax which makes the recycling process much more difficult than office paper (Earth911, 2014)(Pluim et al., 2015). Regarding physiology, the role of water in health is generally characterized in terms of deviations from an ideal hydrated state, generally in comparison to dehydration(Popkin et al., 2010). At the same time, students can stay hydrated, comfortable, and connected no matter where they go with this all-in-one solution, whether they are hurrying between classes, studying at the library, or just lounging outside. The detail special qualities and advantages of the innovation product emphasizing how it caters to the requirements and tastes of today's college students.

2.0 OBJECTIVE

The research can be summarized in the objectives, which highlight the significance of efficiency, improving user comfort, fulfilling market demand, ensuring satisfaction to users, and maintaining the go green concept.

- 1) To making life easier for users while they travel, attend outdoor events, and work.
- 2) To provide the buyers with a single product that fulfils various functions, saving them time and space by minimizing the need to carry multiple things.
- 3) To satisfy the increasing demand from customers for items with several functions packed into a small, portable package.
- 4) The phone holder offers hands-free function or entertainment, while the portable fan increases user comfort in hot weather.
- 5) To reduce the amount of waste generated by single-use plastics to help the environment. Disposable plastic bottles take hundreds of years to breakdown and contribute to environmental damage. This may greatly minimize the carbon footprint while contributing to environmental protection by using tumbler bottles.

3.0 METHODOLOGY

The design of a multipurpose tumbler focuses on students who prioritize simplicity, connectivity, and hydration. The product is designed to be effective, easy to use, and reliable, with marketing tactics highlighting its appeal to students. The tumbler can be used for personal cooling and as a phone holder, providing immediate relief from heat and humidity. It also aids in environmental initiatives by reducing the need for single-use fans and disposable plastic bottles. The design eliminates the need to carry multiple items, making it an eco-friendly and refreshing way to stay cool and hydrated while on the go. The product's creative features and practicality enhance customers' daily experiences, making it a valuable addition to their daily routine. The product's success is attributed to its ability to meet the needs of students and contribute to their overall well-being.



Figure 1: Product Innovation Image

4.0 RESULTS

A huge majority of respondents (88%) to the poll which outcomes are shown in the image appear to have never used a product that combines several functions, such as a tumbler, portable fan, and phone holder. The results show that most respondents had not come across a product that combines these attributes, which is presumably what the survey question asked participants if they had ever used. Subsequently, the poll revealed that a significant proportion of participants believed the multipurpose tumbler to be beneficial for both indoor and outdoor activities.

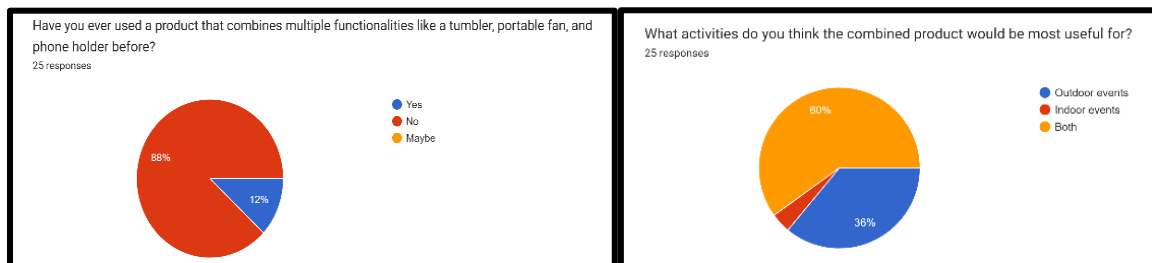


Figure 2 & 3: Respondent's data from survey

Next, the survey's findings reveal that 72% of participants consider price, brand reputation, and functionality when choosing a product. Nevertheless, 12% of respondents said that each aspect alone has an impact on them, indicating that buyers should evaluate products holistically. According to the survey, 56% of participants said that a portable fan and tumbler combination's phone holder feature was extremely significant, demonstrating a strong preference for its practicality and usefulness. The fact that 16% of respondents thought the feature was unimportant and 28% were neutral suggests that respondents had varying needs and preferences.

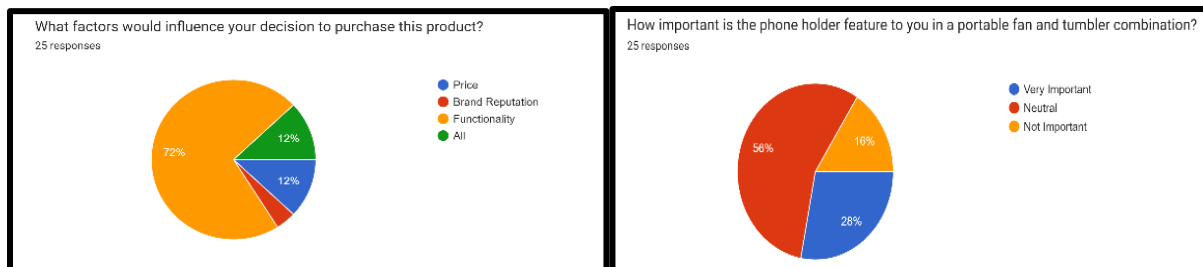


Figure 4 & 5: Respondent's data from survey

5.0 CONCLUSION

The tumbler with a built-in phone holder and portable fan has received positive feedback from students due to its versatility and adaptability. The product is praised for its ability to accommodate students' busy schedules and constant mobility, providing a convenient phone holder, cooling fan, and tumbler for drinks. The tumbler also allows students to easily access their phones for studying, communication, or enjoyment, while freeing up hands for other tasks. Overall, students find the tumbler a useful and easy way to organize their daily schedules, making it a highly desired product in this market due to its adaptability, functionality, and versatility.

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