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“Optimizing Innovation in Knowledge, Education and Design”

EXTENDED ABSTRACT



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Assalamualaikum warahmatullahi wabarakatuh,



First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality. I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services. By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality. I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH



WELCOME MESSAGE (i-SPIKE 2023 CHAIR)



We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPIKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPIKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail

Chair

3rd International Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPIKE 2023)

ECOBLOOM

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ABSTRACT

Travelling may be difficult, particularly when it comes to packing. The difficulty of packing personal care items, including shampoo, lotions, or fragrances, which typically contain liquids, without leaks or spills is a problem that affects many travelers. Personal care products in large bottles and containers can be inconvenient to travel, take up a lot of room, and leak easily. Moreover, carrying all necessary personal care products might be challenging due to limitations on the number of liquids that can be packed in carry-on luggage, especially for longer journeys. In addition, travelers have to be mindful of the potential damage caused by leakage or spills, not only to their belongings but also to other passengers' items and safety. Airlines also might face huge costs as a result of the leaky baggage issue as they attempt to handle and clean up the impacted bags. Aside from the practical issues, there is rising concern about the environmental impact of traditional personal care products. These products contain chemicals that, when used and disposed of normally, can be discharged into the environment and contaminate soil and water sources. Plastic microbeads found in facial cleansers, shower gels, and toothpaste have been demonstrated to endanger marine life and habitats. Microplastic exposure has even been linked to negative impacts on fish metabolism, emphasizing the critical need for more sustainable options. To deal with this issue, we came up with a product called Ecobloom. It is a 3 in 1 travel-friendly and environmentally friendly personal care product to ease the tourists and at the same time protect the environment with organic ingredients.

Keywords: Personal care products, Baggage leakage, Environmentally harmful, Travel-friendly, Organic ingredients.

INTRODUCTION

Carrying large bottles and containers, limited luggage space, and restrictions on the number of liquids allowed in carry-on bags can make packing personal care goods a difficult process, especially for longer travels. Additionally, any damage caused by leaks or spills not only affects the traveler's goods but can also endanger other passengers' safety and result in large expenditures for airlines.

Furthermore, many consumers are concerned about the environmental effects of microplastics found in personal care items (Gunes-Durak, 2021). Personal care and cosmetic products (PCCPs) such as facial cleanser, shower gel, and toothpaste frequently contain plastic microbeads as a cleaning agent (Leslie, 2014). It has been proposed that exposure to microplastics altered the metabolic profiles of fish liver. These findings add to their understanding of the harmful effects of microplastics on fish (Lu, Deng, Jiang, Zhao, Geng, Ding & Ren, 2016).

To solve such challenges and give a solution that meets both the demands of travelers and the environment, we created EcoBloom, a breakthrough product. EcoBloom is a travel-friendly and ecologically conscious personal care line that strives to reduce travelers' troubles while ensuring sustainable and responsible practices.

EcoBloom provides a selection of 3 in 1 organic personal care products for shampoo, cleanser, and body soap that are not only small and spill-proof, but also devoid of dangerous chemicals and microplastics. Our compositions are meticulously formulated to provide effective outcomes while having the least possible impact on the environment. EcoBloom presents a realistic alternative for travelers seeking convenience without compromising their environmental commitment by utilizing organic ingredients and ecological packaging materials.

ABOUT ECOBLOOM

EcoBloom is a 3 in 1 personal care paper-like strip that dissolves when it comes into contact with water. It serves as a shampoo and soap alternative when traveling. It is made from organic ingredients to ensure it will suit every skin type. The product will come with a sturdy biodegradable packaging to reduce any plastic waste. This product is convenient for tourist who want to travel in an environmentally friendly way.

OBJECTIVE

Main objective of EcoBloom is to be an ideal choice for eco-friendly tourists due to its portability, absence of harmful chemicals, positive impact on local economies, biodegradability, space-saving properties, and leak-proof packaging. These small and lightweight personal care goods are easy to carry, making them convenient for travelers who want to minimize their environmental footprint. They are made without toxic chemicals, aligning with sustainable travel practices and the preservation of water ecosystems. EcoBloom supports local economies by utilizing locally sourced ingredients and creating job

opportunities. Moreover, these products are biodegradable, breaking down naturally and leaving no harmful impact on the environment. Their compact size allows travelers to maximize storage space, while leak-proof packaging ensures hassle-free journeys. Overall, EcoBloom promotes responsible and sustainable tourism, enabling travelers to protect the environment while taking care of their personal hygiene needs.

NOVELTIES

Ecobloom is a portable and convenient non-liquid personal care option, such as soap or shampoo and cleanser, that offers ease and simplicity while on the go. Its compact size and lightweight nature make it easy to carry around, perfect for travel or outdoor activities. Ecobloom can be rehydrated with hot or cold water, providing a quick and convenient solution for showers or when time is limited. Additionally, its biodegradable and recyclable packaging aligns with eco-friendly practices, reducing environmental impact. Overall, Ecobloom combines convenience, portability, and sustainability for individuals seeking practical and hassle-free personal care products.

METHOD OF USING ECOBLOOM

Table 1. Method of using Ecobloom

	• Unpackaging: Open the packaging of the personal care paper, which can come in the form of sheets or strips. • Unfold: Separate one strip for use.
	• Activation: You may need to activate the personal care paper by adding water or applying pressure. Follow the instructions provided by the manufacturer to ensure proper activation. • Application: Once activated, use the personal care paper according to its intended purpose.
	• Cleanse: Use the personal care paper to cleanse the targeted area, whether it's your face, body, or any other part requiring care. Rub or wipe gently to remove dirt, oil, or impurities. • Rinse : Depending on the product and its instructions, you may need to rinse off the residue after use. If so, rinse the area with water or use a damp cloth to remove any remaining product.



- And you're done! Let it rest on skin and don't let water into contact for better results.

PRODUCT COMMERCIALIZATION

To effectively commercialize Ecobloom, first of all, we will define our target market, develop a marketing strategy with social media campaigns like TikTok, FaceBook and many more with influencer partnerships, create compelling product visuals, establish an online presence, leverage social media platforms, collaborate with influencers, seek media coverage, offer promotions and incentives, gather customer feedback, and continuously innovate and adapt. We also prioritize strategic marketing, strong branding, engaging content, and customer satisfaction for a successful commercialization process for this product, EcoBloom.

IMPACTS

Ecobloom has significant economic, environmental, and social impacts. Economically, it creates job opportunities by opening up markets for small businesses and drug stores to sell their organic product. The production and manufacturing process involve sourcing raw ingredients and hiring marketing and sales specialists, contributing to business growth. Environmentally, Ecobloom reduces plastic waste by offering biodegradable packaging and soap strips that dissolve in water. This eco-friendly approach helps combat the billions of rigid plastic personal care products produced annually. Socially, Ecobloom benefits everyone by being affordable, accessible, and convenient. It provides a practical solution for hand hygiene while traveling, camping, or in situations where traditional soap and water are unavailable, encouraging good hygiene practices for all.

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