



International Teaching Aid
Competition 2023

Reconnoitering Innovative Ideas in Postnormal Times

iTAC

2023

iTAC 2023
INTERNATIONAL TEACHING AID COMPETITION
E-PROCEEDINGS

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- | | | |
|------|---|------------|
| 116. | <p>SPENDING TRACKER VIA ONLINE BANKING (SAVE4U)
 <i>Nor Shahrina Mohd Rafien , Karlmeen Nabila Binti Sahrin, Nur Syahirah Binti Mohd Ajhi , Nur Shahirah Aina Binti Farris, Nur E'zzaty Syamimi Binti Suhaily</i></p> | 754 |
| 117. | <p>ROAMING RANGERS: A TRAVEL WEBSITE FOR ALL TYPES OF TRAVELLER
 <i>Shazmelyn Diana Syed Said, Syahirah Suraya Binti Omar , Nur Irsalina Binti Zainal, Muhammad Zahir Rashdan Bin Mohd Rashid, Mazlina Mahdzar</i></p> | 760 |
| 118. | <p>JUSTICE TENSES-CARD GAME
 <i>Nur Anisa Amran</i></p> | 764 |
| 119. | <p>INNOVATION OF SECONDARY PACKAGING “NASI AYAM”
 <i>Muhammad Saifuddin Bin Muhammad Zainuddin , Mastura Omar , Shalida Mohd Rosnan, Andrialis Abdul Rahman, Ellyana Mohd Muslim Tan</i></p> | 776 |
| 120. | <p>THE INNOVATION OF STINGLESS BEE PACKAGING
 <i>Muhammad Firdaus Al-amin Bin Abdullah ,Mastura Omar, Shalida Rosnan Aezzaddin Aisyah Zainuddin, Nik Atilla Atasha Shamsuddin</i></p> | 782 |
| 121. | <p>MUAMALAT PLAYING CARD: INOVASI DALAM PENGAJARAN DAN PEMBELAJARAN DI ERA PASCANORMAL
 <i>Hainnuraqma Rahim, Mohd Khairy Kamarudin, Nur Izzati Mohamad Norzilan, Nornajihah Nadia Hasbullah, Nor Arseha Karimon</i></p> | 787 |
| 122. | <p>SMART WALLET
 <i>Azira Amira binti Shahaarudin , Aina Nabilah binti Azarudin, Khairunnisa binti Yussof, Siti Ayu Suraya Baharudin binti Abdul Hafiz</i></p> | 793 |
| 123. | <p>ESL SPEAK AND SMILE: E-KIT VERSION 2.0
 <i>Raja Nur Hidayah binti Raja Yacob, Mohd Azizi bin Ab Ghani, Mimi Mazlina binti Mohamad, Salwani binti Mohd Salleh, Nur Amalina binti Awang</i></p> | 799 |
| 124. | <p>VIVACITY: IGNITING CAMPUS SPIRIT THROUGH DYNAMIC STUDENT RECREATION
 <i>Juliza Mohamad, Nik Nurul Hana Hanafi, Nor Hafizah Anuar, Ahmad Humaizi Hasim, Nur Zulaika Mat Pakurudin. Syed Muhamad Naufal Syed Nadzri</i></p> | 808 |

PREFACE

iTAC or International Teaching Aid Competition 2023 was a venue for academicians, researchers, industries, junior and young inventors to showcase their innovative ideas not only in the teaching and learning sphere but also in other numerous disciplines of study. This competition was organised by the Special Interest Group, Public Interest Centre of Excellence (SIG PICE) UiTM Kedah Branch, Malaysia. Its main aim was to promote the production of innovative ideas among academicians, students and also the public at large.

In accordance with the theme "Reconnoitering Innovative Ideas in Post-normal Times", the development of novel ideas from the perspectives of interdisciplinary innovations is more compelling today, especially in the post-covid 19 times. Post-pandemic initiatives are the most relevant in the current world to adapt to new ways of doing things and all these surely require networking and collaboration. Rising to the occasion, iTAC 2023 has managed to attract more than 267 participations for all categories. The staggering number of submissions has proven the relevance of this competition to the academic world and beyond in urging the culture of innovating ideas.

iTAC 2023 committee would like to thank all creative participants for showcasing their innovative ideas with us. As expected in any competition, there will be those who win and those who lose. Congratulations to all the award recipients (Diamond, Gold, Silver and Bronze) for their winning entries. Those who did not make the cut this year can always improve and join us again later.

It is hoped that iTAC 2023 has been a worthy platform for all participating innovators who have shown ingenious efforts in their products and ideas. This compilation of extended abstracts published as iTAC 2023 E-Proceedings contains insights into what current researchers, both experienced and novice, find important and relevant in the post-normal times.

Best regards,

iTAC 2023 Committee
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SMART WALLET

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ABSTRACT

Our lives are profoundly different than they were in the past because of our increasingly modern way of life. The smart wallet is an innovation created in lieu of the traditional wallet. As we all know, life is becoming increasingly complicated, and many people are acclimated to making online purchases with a credit card or an e-wallet. Users may lose or have their wallets stolen, as well as data theft using card skimmers. We can see how smart devices could potentially solve these issues. Smart wallets are distinguished from conventional wallets by their ability to be tracked in the event of loss or theft, RFID protection, fast-card access, key holders, and high-performance materials. This product will develop in response to the consumer demands and wallet-related issues. Our prospective clients are between 25 and 45 years old and are employed. Due to its function, this product will receive a great deal of positive feedback, and in the future, it will be well-known and have many consumers.

Keywords: wallet, innovation, complex, technology, protection, credit card

BACKGROUND

We now lead radically different lives than we did in the past due to the increasingly modern manner of life. We used to simply need a wallet to carry cash, but today there are many more

methods to do so. We can decide whether we want to have cash on hand in the bank, in an e-wallet on our smartphone, in a smart wallet, or both. If you are curious, this smart wallet differs just slightly from an e-wallet in that it stores money rather than actual cash. Smart wallets are physically different from e-wallets that are only stored in your smartphone. Since there are increasingly more people who enjoy conducting business, working, etc., these people prioritise simplicity and require items that are simple to carry and store. However, the most crucial requirement is that their safety is ensured. This smart wallet is also different from a typical wallet, which is large and only has space for cash and credit cards. This article claims that the physical shape of a smart wallet is tiny, light, and portable. This is because of the smart wallet's straightforward and understated design. As we all know, life is becoming increasingly complex and many people are accustomed to using a credit card or an e-wallet to make purchases online. As a result, this smart wallet was developed to offer greater security than a typical wallet. Because this smart wallet has a variety of cutting-edge technology materials that can protect its users, it is said that smart wallets can offer greater protection. Because as humans we must have valuable items. However, due to our inability to recall details, particularly regarding small but valuable items like wallets, phones, and many others. Therefore, with the help of this smart wallet, issues like these may be resolved successfully.

PROBLEM STATEMENT

There are several problems faced by user when using a traditional wallet. Firstly, data theft by using card skimmer. Carrying a lot of credit and debit cards can be a considerable risk because it is possible for scammers to access the chip on user's card for wireless theft especially if the user is using a traditional wallet without an RFID protection. Besides the fact that it is easy for someone to steal all of the user's money if they find out where the user store it, carrying so much also means having items that might not be used often enough.

Secondly, users may misplace or have their wallets stolen. Having our wallet stolen or lost is a terrifying circumstance, especially if we have no idea where to find it. For example, some people may have difficulty locating their wallets at home and as a result they turn the house upside down just to find it.

Thirdly, users may often forget or lose their keys, especially those who like to walk out with only bring their wallet. Lastly, narrow card pocket. We all have had that mini battle with our wallets every day just to put in and take our cards. Simply put, narrow card pockets on traditional wallet makes it difficult for users to access card.

OBJECTIVES

This innovation must have an objective, just like this smart wallet must have an objective for being created. These aims are presented to clarify the significance or priority of this smart wallet's innovation. Some of the objectives for developing the smart wallet are the first one to make it simpler for user to carry a wallet bag. Second, to guarantee that the money saved is always safe. Three to make it simpler for user to save their cards when they have a lot of them. Four to promote cashless transactions among more individuals. Five to maintain user data security.

NOVELTY

The traditional wallet has not seen a noticeable upgrade in decades, so it was time for technology to step in and provide some much-needed improvements. Smart Wallet is one of the innovations products that has multiple functions. The unique features that distinguish Smart Wallet from normal wallet are the ability to be tracked if user's wallet is lost or stolen, RFID protection, fast-card access, high-performance materials, and more.

1. Tracker

- Smart Wallet is easy to find as it has trackers that helps the user to locate it, it can be connected to the user's smartphone that will keep track of it. It has an option where users can see on the map where their wallet is located.

2. RFID protection

- Smart Wallet is made with technology that blocks RFID. RFID protected wallet have an aluminium or metal fabric layer in the outer walls, which protect the RFID frequencies being intercepted by fraudsters. It can block the 13.56 MHz bank to prevent data theft from RFID scanner.

3. Fast-card access

- Smart Wallet also has additional features like a pop-up card ejection feature. This feature helps users have all the cards in front of them without even unfolding the wallet, and they can pick, use, and slide back the required card with convenience.

4. LED lensor

- This Smart Wallet and the handheld light combination is a practical daily companion for the user's pocket or bag.

5. Phone stand

- Perfect combination of a wallet and phone stand designed for those who love fashion and multifunction wallets.

COMMERCIALIZATION POTENTIALS

Our potential customers are workers around 25 years old to 45 years old. Smart wallets come out with features like a pop-up card, RFID, key holder, LED, and many more which help a person to bring a lot of things like cards, keys, and many more. Other than that, our potential customers are familiar with the technology. This happens because our smart wallet can connect to smartphones.

This product has a high commercialization since it has a targeted market and people nowadays are exposed to the technology and keep up with the trend. Smart wallets can make users satisfied with their function. Other than that, I think this product will receive a lot of positive feedback due to its function that this product has, and in the future, this product will be known and have a lot of users.

BENEFIT TO COMMUNITY

This product was created based on the customers' needs and problems regarding the wallet. All the functions that have in the smart wallet help the users to go through their daily life easily. First, this wallet helps to reduce theft. This wallet is unique compared to other wallets since smart wallets can track if your wallet is lost or stolen. It helps to reduce wallet theft cases. Next, this wallet can connect to another device such as a smartphone, smartwatch, or tablet. This smart wallet can connect to a smartphone where the user can track their smart wallet. In this case, if the user forgets where he put their wallet, he can easily track his wallet. Other than that, this wallet helps their user to keep the card easily. Smart wallets have a feature which is a pop-up card where the user can simply click the button instead of digging through pockets. Lastly, this wallet is easy to bring. This smart wallet is made using metal materials which as aluminium and carbon Fiber. These two materials make smart wallets lightweight and easy to bring.

FEEDBACK FROM COMMUNITY

After studying the feedback on the use of smart wallets, we discovered that most of our respondents were students between the ages of 19 and 25. The next decision-making step for our respondents before they purchase a smart wallet is to consider its function. Given that 69.2% of respondents said that the multifunction of a smart wallet is a characteristic that attracts them to have one, this shows that the function of a smart wallet is important in producing an effective smart wallet. We also discovered through Google Form feedback that up to 61.5% of our respondents were really delighted with the smart wallet solution that we produced. Thirty-eight percent of respondents, or 53.8%, said they were extremely satisfied. In addition, 30.8%

of our respondents said they liked our innovation proposal, with 38.5% saying they liked it a lot. This demonstrates that most of our respondents are quite happy with the concepts we developed for our smart wallet. A quality assessment of our smart wallet's performance was also provided by our responder, ranging from 3 and higher. This demonstrates that our smart wallet's quality meets their requirements. 69.2% of all respondents thought our smart wallet was extremely innovative. Not only that, but if a device like our smart wallet is offered on the market, 46.2% and 38.5% of respondents really want to buy it. 77% of our respondents said they would prefer to switch to a smart wallet from their present product. A total of 84.7% of those surveyed did not dispute the fact that they would likewise tell their family members about this product. 92.3% of respondents reported being extremely satisfied, according to the survey. This indicates that most of our respondents genuinely enjoy using smart wallets.

CONCLUSION AND REFLECTION

In conclusion, wallet is an essential item for everyone as it helps to hold very valuable properties. According to several number of surveys, wallet is one of the most belongings lost, top five properties misplaced and even stolen. Because of this problem, there arise a need to find a way to track a misplaced wallet. To implement this smart wallet, GPS will be installed on the wallet for the real time location track and locate the wallet. For future development, we have plans to further develop the material and integrate all its components into a small form to make it look more minimalist and feel like a normal wallet for the users.

However, both traditional and smart wallets are good options to hold our valuable properties, but for us, the clear winner is our smart wallet. There are too many benefits and security being at the top of the list.

ACKNOWLEDGEMENT

First, we would like to express our gratitude to Allah SWT for providing us with the chance to complete this project in His favour. We had put in all our work and time to complete it according to the instructions. We would like to express our gratitude to our advisor, Madam Khairunnisa binti Yussof, because we would not have been able to finish this assessment effectively without her lecture and guidance. She consistently supports us and is available if we have any questions about the case study that we are working on, simply to ensure that we can provide a wonderful case study conclusion.

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APPENDICES

Picture of the product





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