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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)

MYABILITYASSIST

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ABSTRACT

Nowadays, various venues have dedicated facilities for disabled people to ensure equal access. However, finding such facilities while traveling remains a challenge for disabled people because the locations of the facilities are not barrier-free and user-friendly. To address this issue, MyAbilityAssist, a user-friendly application designed for disabled people, has been invented to become a personal helper specifically for them. The application aims to improve the lives of disabled people by assisting them in locating accessible facilities such as parking, toilets, wheelchairs, and many more. MyAbilityAssist is focused mainly in Malaysia to address the limited availability of such facilities in the country and can be used by the locals as well as the tourists that come to visit Malaysia. MyAbilityAssist has a few steps in using it that only require the minimum effort from the users. It utilises location-based services to deliver updated information about the facilities and enables users to plan their journeys while considering accessibility. The Forum Room section allows the users to interact, share stories, seek guidance, and more among the disabled community. It also provides accurate reviews of all of the facilities provided in every location and maintains user safety every time they use the application. With all these features, this app will help disabled people find nearby facilities when they travel in Malaysia. This application will provide equal benefits and value to disabled people and ordinary people. MyAbilityAssist will be commercialised through social media and influencers. We believe that by using these methods, it will be able to grab more attention from society and raise awareness about the positive impact of this application.

Keywords: User-friendly apps, disabled people, facilities, helper, travel

INTRODUCTION

According to Berg (2020), a physical disability is a long-term condition that significantly impairs a person's physical functioning, mobility, stamina, or dexterity. It limits their ability to perform body movements effectively or sometimes completely. According to the Department of Social Welfare (JKM), 2023, as of 31 January 2023, Malaysia recorded 637,537 disabled people which is approximately 1.9% of Malaysia's population. In Malaysia, it is difficult to find the facilities for disabled people due to their small populace. That is when the existence of the MyAbilityAssist application plays an important role. MyAbilityAssist is created for the disabled people since they do not have proper access to public facilities compared to ordinary people. This application provides centralized information about facilities that are accessible to people with physical disabilities in particular areas which enables the users to monitor every destination that they go within Malaysia to find facilities that are specially built for them, such as parking spots, toilets, wheelchairs, and others. MyAbilityAssist is a free and easy-to-use application that can be used by everyone, including disabled people in Malaysia and disabled tourists that travel to Malaysia. This application will provide equal benefits and value between disabled people and ordinary people.



Figure 1. MYAbilityAssist Logo

OBJECTIVES

- To provide a personal helper for the disabled people to find any facilities available around them.
- To provide centralized information about facilities that are accessible to people with physical disabilities in particular areas.
- To provide social connectivity and support for users with disabilities by allowing them to connect, share experiences, and exchange information about accessible facilities.

NOVELTY AND UNIQUENESS

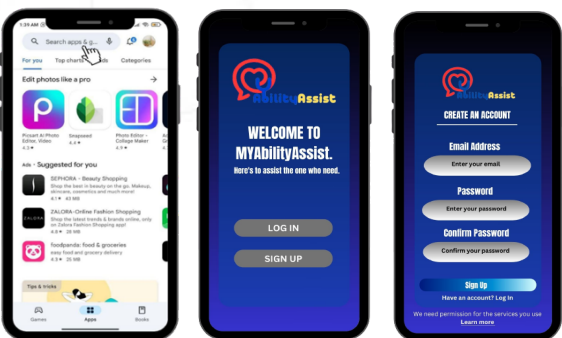
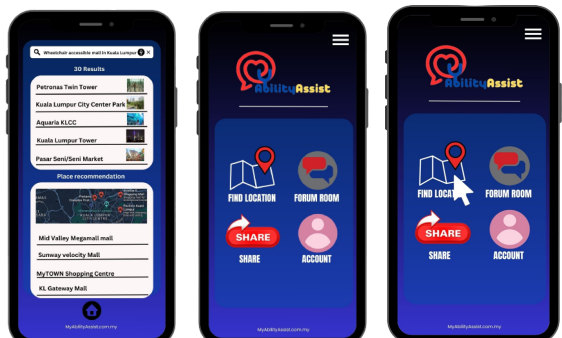
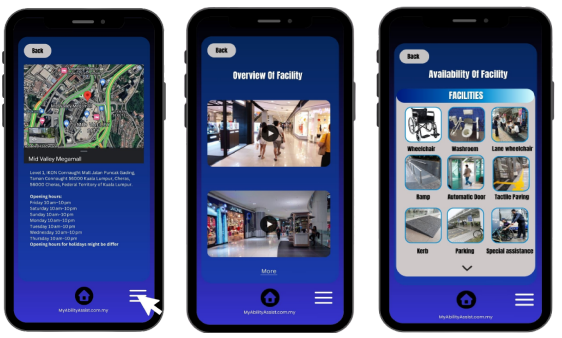
MyAbilityAssist is intended for people with disabilities who frequently require the facilities when visiting Malaysia. Disabled facilities are amenities and resources provided by relevant authorities in accordance with the Malaysian Standard Code of Practice for Access of Disabled Persons. Tan (2007) stated that he had encouraged society and government to be more alert on the advocacy for independent living of Person with Disabilities (PwDs) by providing information support services, personal assistance, in raising awareness towards the rights of PwDs. According to research done by Bashiti & Rahim (2016), one of the physical barriers occurring is inaccurate signages to accessible toilets, emergency exits and others. This includes basic provisions such as tactile paving, barrier-free toilets, access ramps, handrails, and tactile lift buttons. This research highlights the importance and benefit of

implementing MyAbilityAssist application in order to overcome such problems. The nearly all-in-one application is designed to help people with disabilities find nearby facilities. The application has the capability to provide inclusive information regarding the amenities that are accessible to people with disabilities in the shopping complex. The previously mentioned facilities, namely, restrooms that are easily reachable, signage that is legible through touch, pavement that is tactile, areas for seating, and counters that are specifically designated for service, afford users the opportunity to efficiently plan their visit.

METHODS TO USE MyAbilityAssist

Table 1.0 provides a detailed explanation of how to use the application.

Table 1. Process of using the MyAbilityAssist apps

Step	Description
	<ol style="list-style-type: none"> 1. Download and install MyAbilityAssist on Google Playstore or Apple App Store. 2. Sign Up to create a new account or Log In to your existing account. Fill in all the information and agree to all of the terms and conditions of the application before signing up.
	<ol style="list-style-type: none"> 3. Entering the home page, there are 4 sections: Find Location, Forum Room, Share, and Account. The bar icon is on the upper right side, enabling users to modify the languages, notifications, FAQs, and others. 4. Select the Find Location section to initiate a search for the desired destination. 5. Search for a location at the search bar and results will show nearby places that have accessible amenities available. Place recommendations will also be given. Choose your location.
	<ol style="list-style-type: none"> 6. To learn about the facilities, click the bar icon, and the overview of facilities and facilities review are available in every location chosen. 7. The bar icon also provided a list of facilities. Select desired facilities and book through the Book section.

IMPACT & USEFULNESS

This application allows users to choose from a range of facilities, including personal care items like wheelchairs, ramps, toilets, and lifts, as well as disabled-friendly facilities. This application will also help disabled people find facilities by providing location search tutorial videos with directions to ease their journey. This application provides the user with updated information from the community about the condition of facilities in the forum room. By enlightening tourists with a variety of information about the disabled facilities of the nation they are visiting, the application indirectly encourages disability awareness among travelers.

PRODUCT COMMERCIALIZATION

We commercialize MyAbilityAssist through social media. Social media is one of the largest marketing platforms and the fastest eWOM (electronic Word-of-Mouth). Social media include Instagram, Facebook, and Twitter. The team is confident that by utilizing social media platforms, MyAbilityAssist will be able to attract a sizable audience all over Malaysia. Through social media, everyone will be made aware of the existence and the functionalities of the application. Next, the team will commercialize MyAbilityAssist to increase the visibility of our application by collaborating with famous influencers to promote our app. Influencers for commercialization are an effective way to promote our products or services and reach a wider audience. According to Glucksman (2017), social media influencers create content promoting specific brands on platforms such as Instagram, YouTube, Twitter, and Facebook in order to gain a following and recognition for their products.

CONCLUSION

This application seeks to provide the best assistance and personal helper for users, especially the physically disabled. Furthermore, MyAbilityAssist provides centralized information about facilities to users in order for them to access the facilities in an easy manner. The team also provides social connectivity and support by adding a forum room in the application. When using the application, users will be able to rely on accessibility of the app to get to their destinations and utilize the provided facilities. As a guide, this application will benefit the people of Malaysia alongside tourists who are in need of special assistance.

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