i-SPiKE 2023

INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION

"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
3rdInternational Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023)

EVABRAINIAC : THE BEST DESTINATION FOR YOUR INTELLIGENCE

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ABSTRACT

It is very convenient to have a smart dictionary that can be taken everywhere we go. A regular dictionary contains numerous words, making it difficult to use in the traditional way, as it takes a lotof time to search for just one word. By having a specific application that helps students find unfamiliar terms, a significant amount of their time can be saved. As for BEVA students, they encounter many unfamiliar terms. The idea behind creating the EVABrainiac application was to alleviate the students' burden, allowing them more time to study. We selected 35 respondents from theBEVA program to answer the survey for data collection. The survey asked the students whether they understood the terms they were learning. Multiple-choice questions were given to the respondents to gather data on the most effective ways to understand unfamiliar terms easily. Three sets of answers were provided for the respondents to choose from: agree, disagree, or have mixed feelings about the development of this application to enhance their understanding. The results showed that 20 out of 35 respondents did not understand the terms taught by the lecturer. The most effective way reported by the students to understand the terms was through visual illustrations. Additionally, 32 respondents agreed that the development of the application would further their understanding. The creation of this application will greatly assist BEVA students in comprehending the terms they have learned in class.

Keywords: Smart dictionary, application, unfamiliar terms, survey.

INTRODUCTION

A three-year degree, known as the Bachelor of Environmental Administration (Honours) or BEVA (Hons), is designed to equip graduates for work in both the public and commercial sectors. The curriculum creatively and uniquely combines the knowledge and skills required to succeed in these industries. The program is supported by seminars on international environmental governance, sustainable development tactics, and environmental quality. It provides students with a balanced combination of knowledge necessary for employment in the new millennium, with an interdisciplinary focus and a global orientation. By selecting from a variety of electives that align with their interests and professional aspirations, students can enhance their knowledge and develop their abilities

Issue

There are numerous subjects that BEVA students must learn. Upon completing these subjects, students have identified that there are many unfamiliar terms used in certain subject codes. This has become a major problem for BEVA students, as they struggle to understand these terms, which ultimately affects their learning.

This issue needs to be addressed promptly, as it can result in a loss of motivation for studying. Additionally, a lack of understanding leads to students losing focus during class, further complicating the situation and hindering their ability to grasp what the lecturer is teaching.

Recommended Solution

We formed a group of students to come up with an innovative idea: creating an application that can help students understand unfamiliar terms in the subject codes they are learning. We conducted a survey to collect data on how our innovation can assist with their studies.

DATA COLLECTION

We selected 35 BEVA students to answer our online questionnaire regarding the problems they experience during lectures of certain subjects, how this application can assist them, and the features they desire when using the application.

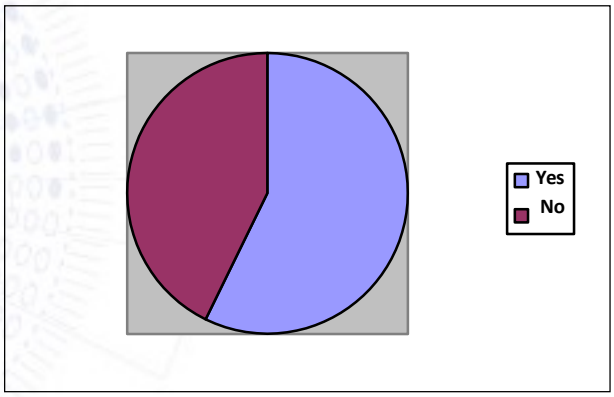

Figure 1. Do students have any problems understanding the term in the AM226 programme code?

The data in **Figure 1** shows that a majority of respondent which is 20 out of 30 pick "Yes" as their choice for the survey answer because they did not understand the term that they had learn in class.

Table 1. How does the student understand the term through the various learning methods?

Learning method	Percentage (%)	Number of Students
Infographic	74.3	26
Audio	20	7
Illustration	77.1	27
Video	71.4	71
Audiovisual	40	14

The **Table 1** shows that, a majority of students can understand more about the term through the visualization of the illustration by 74.3% with a total of 26 out of 35 students. The term can be understood through audio have the least percentage which is 20%, equal to 7 students.

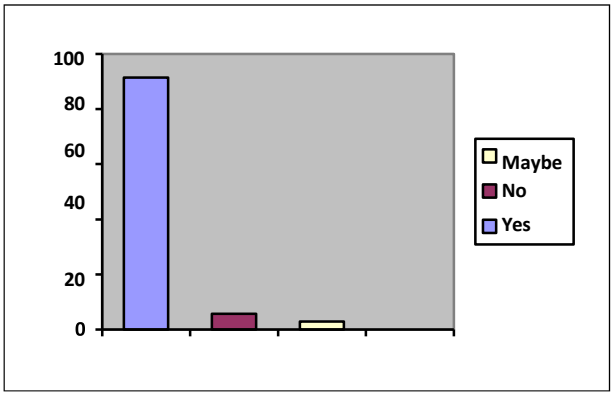

Figure 2. Does the student agree that the application that we make will help them understand the term better?

The data in **Figure 2** shows that a majority of students agree with the idea of making an application that can help them to understand the term that they have learn. Other than that, there are only 5.7 percent of student that thinks that the application will not ease them to understand the term.

Features of Evabrainiac and How to Continuously Improve It

To improve the innovation of the EVABrainiac application and make it more effective for BEVA students, here are some suggestions:

i. Expand the word database: Ensure that the application includes a comprehensive collection of words and terms relevant to the BEVA program and other related fields. This will help students find definitions for a wide range of unfamiliar terms they encounter.

ii. Provide detailed definitions: Instead of just providing brief explanations, aim to offer comprehensive and accurate definitions for each term. Include contextual information, examples, and related concepts to enhance understanding.

iii. Include multimedia content: In addition to textual definitions, incorporate multimedia elements such as images, diagrams, and videos to provide visual representations of terms. This visual aid can greatly assist students in grasping complex concepts.

iv. Incorporate audio pronunciation: Many students may struggle with pronouncing unfamiliar terms correctly. Include an audio feature that allows users to listen to the correct pronunciation of each word. This will enhance their verbal understanding and communication skills.

v. Include example sentences: Provide example sentences that demonstrate how the term is used in context. This will help students understand how to apply the term correctly and reinforce their comprehension.

vi. Offer search filters and categories: Implement search filters and categories to allow students to quickly navigate through the vast database. They should be able to search by subject, topic, alphabetical order, or any other relevant criteria to find specific terms they are looking for.

vii. Offline functionality: Ensure that the application can be used without an internet connection. This will allow students to access the dictionary anytime, anywhere, even in areas with limited or no internet access.

viii. Personalization features: Allow users to customize their learning experience. They could create word lists, bookmark favorite terms, or track their progress in mastering certain concepts. Personalization enhances engagement and motivation.

ix. Integration with other tools: Explore the possibility of integrating the EVABrainiac application with other educational tools or platforms commonly used by BEVA students. For example, it could integrate with note-taking apps or learningmanagement systems to provide a seamless learning experience.

x. User feedback and updates: Encourage students to provide feedback on the application's usability and effectiveness. Continuously update and improve the application based on user suggestions and emerging educational needs.

ACKNOWLEDGEMENT

We would like to express our gratitude to the Faculty of Administrative Science and Policy Studies (FSPPP) UiTM Seremban Campus for the support and funding and to the survey participants.

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