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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)

TIKTELLIGENCE: MAKING LEARNING TRENDY, MEMORABLE, AND FUN!

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ABSTRACT

Nowadays, a new way of learning is indeed a need in education. Supplementary tools such as Tiktok can be used for educational purposes to promote active learning and overcome limitations of traditional ways of learning and create more effective and engaging educational experiences for students. Traditional learning methods lead to passive learning among students and a lack of interactivity. The students' opportunities for interactive learning are limited and the students are reluctant to ask questions, engage in discussions or collaborate with their peers. This eventually hinders their understanding and critical thinking skills. Moreover, traditional methods of learning lacking on access and up-to-date technology and digital resources that can enhance learning experiences and will make the students lacking in terms of exposure to innovative tools and resources. Therefore, Tiktelligence aims to harness the power of digital learning using Tiktok, a social media platform to revolutionize the way students learn by making learning trendy, memorable, and fun. Blending education and entertainment, Tiktelligence offers a fresh approach to making learning trendy, memorable, and enjoyable for students. The objectives of this Tiktelligence are to deliver bite-sized educational video content in a visually captivating and creative manner. To encourage students to actively participate by creating their own educational Tiktok videos and sharing them with their peers and community. Moreover, this Tiktelligence will allow the students to learn on the go by providing quick bursts of information in easily digestible formats. The study used a quantitative method which is the questionnaire survey distributed among Semester 4 undergraduate students. Tiktelligence, will also foster peer-to-peer learning, allowing students to exchange knowledge, ideas, and insights, ultimately enhancing their understanding and retention of the subject matter. Moreover, it will offer a dynamic and engaging learning experience that resonates with the digital-native generation, ultimately enhancing their knowledge acquisition and fostering a lifelong love for learning.

Keywords: Tiktok, Tiktelligence, Teaching, Learning, Fun

INTRODUCTION

Teaching and learning in these modern days need to revolutionize in line with the current phenomenon. Sustainable Development Goals (SDGs) in Goal 4 have also highlighted the importance of providing quality education to society to achieve sustainable and inclusive development by 2030. Nowadays, the important aspect that needs to be considered by educators is to find the most effective teaching methods to ensure that the students get a better understanding and captivate their attention in class.

Revolutionizing the way of learning among undergraduate students is important to ensure their continuous willingness to study. The post-pandemic really affected students in terms of the learning transition from online to face-to-face. According to Celik et al. (2002), to overcome the COVID-19 post-pandemic challenges, emerging technological advancements can play a vital role in higher education. Shifting from the rapid transition from face-to-face and online has steered many challenges to institutions, educators, and learners (Chetty et al., 2020). Both educators and learners struggle in providing the best solutions and pedagogical support for online teaching and learning. After the pandemic, the institutions are ready to embark on face-to-face learning again which create more challenges for the students to adapt to new environment and situation. However, despite these challenges, educators and students can learn and experience both face-to-face and online learning, and these situations show that emerging technological advancements can play a vital role in overcoming challenges caused by the pandemic (Richter, 2020).

Dwivedi et al. (2020) and Sein (2020) highlighted that the pandemic situation creates an opportunity to better understand the effect of technological solutions in teaching and learning. The current trends in higher education revolve around education procedures, innovative learning, and graduate employability (Epure, 2017). It is important for higher education institutions to produce students that enable them in acquiring skills and capabilities that will prepare the students for their future working life and enhance their employability (Martín-García et al., 2020). Moreover, it is important for educators to cater to the learning needs of the students and how to make them understand better the subjects during the teaching-learning sessions.

LITERATURE REVIEW

The traditional learning method which is face-to-face learning creates passive learning where it involves lectures and rote memorization (Miller and Rebelein, 2012), and the effect of this situation will make the students disengaged and struggle to retain information without active participation. Moreover, Ferri et al. (2020) mentioned that traditional learning lead to a lack of interactivity and limited opportunities for interactive learning. This will cause the hindrance of students from asking questions, engaging in discussions, or collaborating with their peers and impede their understanding and critical thinking skills in class. Revere and Kovach (2011) explained that one of the disadvantages of traditional learning will affect students is the lack of access to up-to-date technology and digital resources that can enhance learning experiences. Nevertheless, nowadays, there are various ways of innovative ways of teaching and learning such as gamification, project-based learning, mind mapping and visual learning, experiential learning, and the use of technology. It is important for educators to find ways to ensure that the student's learning experience changed towards more interactive, fun, and innovative. This study aims to harness the power of technology Tiktok as a supplementary learning platform to

revolutionize the ways students learn. Tiktelligence is derived from the words Tiktok and intelligence. According to Mekler (2021), Tiktok is a popular social media platform create for people of many different ages to use and this app attracted many college students who are in the stage of emerging adulthood. Tiktok allows the user to create any videos and post them for the community to watch and this can captivate everyone who used this app can cause addiction whereby the users keep swiping and wanting to see more videos that are available on the app. According to Iqbal (2021), Tiktok had 1.2 billion monthly active users in Q4 2021 and is expected to reach 1.8 billion by the end of 2022. Focusing on the Tiktok current users in Malaysia, Andon and Annuar (2023) stated that there are 6.9 million in 2022 compared to 2021 with 5.8 million users. This shows that this app really attracts the users in providing media content and these can be benefited by the students as well in delivering bite-sized educational videos to be shared with Tiktok's community. This is one of the creative approaches to delivering educational content and enhancing the learning experience for students. The Tiktelligence will provide bite-sized educational content and provide the students with an accessible, interactive, and visually captivating platform for microlearning and collaborative knowledge-sharing.

METHODOLOGY

This study conducted a quantitative research approach and open and close-ended questionnaire was conducted as the main data collection and was distributed to the sample population of undergraduate students in their Semester 4 Degree in Quantity Surveyors, Universiti Teknologi MARA, Cawangan Sarawak. The total population of the students is 88 students and 82 responded questionnaire survey received. As for quantitative research, the purpose of sampling is to draw inferences about the group from the sample that has been selected.

FINDINGS AND DISCUSSION

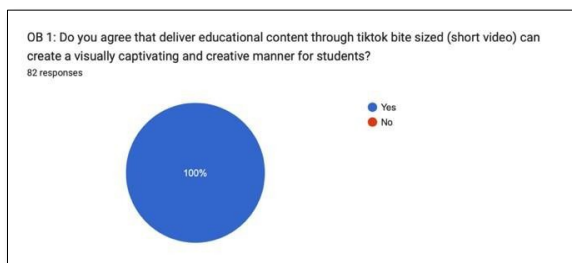


Figure 1. Tiktok can create visually captivating and creative video

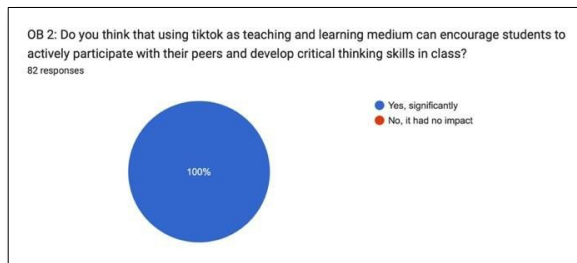


Figure 2. Tiktok can encourage to actively participate with their peers

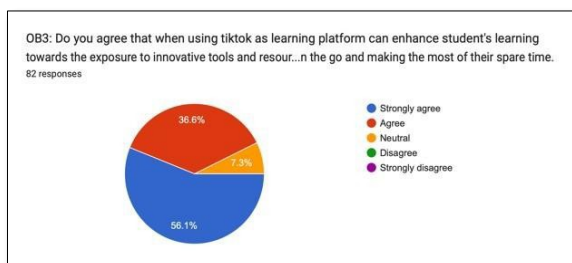


Figure 3. Tiktok can enhance student's learning

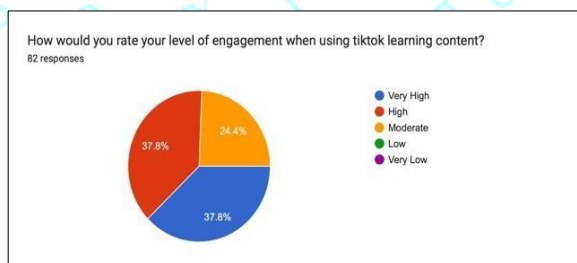


Figure 4. Students engagement using Tiktok as learning content

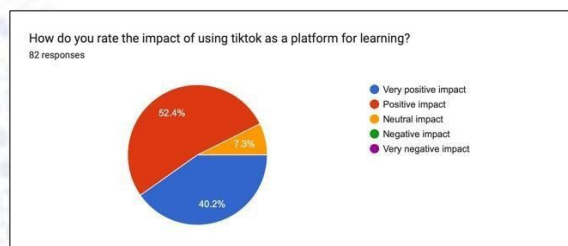


Figure 5. Impact of using Tiktok as a Platform for Learning

From the findings in Figure 1, it shows that the students agreed that delivering educational content through Tiktok, in bite-sized (short video) format can create a visually captivating and creative manner for students. The educational content can be presented in a format that aligns with the subject topics. Students can create various types of educational content they wanted to and ensure that the information given is correct and reliable. The term bite-sized indicates that the educational content will be concise and to the point whereby keep it short to gain the attention span of the students. Presenting captivating and creative manner educational content involved visually appealing videos, creative editing skills, and the use of attractive music and special effects to engage with the viewers. By leveraging these elements in the videos, both educators and students can potentially make the learning experience more enjoyable and memorable. The effectiveness of using Tiktok as an education platform is one of the supplementary tools that can help in learning. The effectiveness may vary depending on the subject topic and learning objectives. Not all topics are suitable to be developed via video format and educators and students need to be careful in delivering educational content in this platform. Figure 2 indicated that the students agreed that Tiktok can encourage the student to actively participate with their peers and collaborate in developing critical thinking skills in producing educational video content. According to Figure 3, 56.1% of the students strongly agreed that this platform can enhance students' learning towards exposure to innovative tools and resources. In terms of student engagement using Tiktok as providing learning content in it, 37.8% rate very high and high engagement followed by 24.4% agreeing that the engagement is moderate. Figure 5 explained the impact of using Tiktok as a platform for learning, 52.4% of students agreed that this platform can give a positive impact on them while 40.2% agreed that it give a very positive impact and only 7.3% give a neutral impact on students. The impact of using Tiktok as a supplementary tool for learning might vary according to the educators and students. It is essential to ensure that the focus is to remain on achieving the actual learning outcomes. Although creativity and engagement are valuable and important, it is crucial for educators to serve the purpose of enhancing teaching and learning.

CONCLUSION

We believed that the help of Tiktok as one of the learning platforms for the students can make learning more memorable and fun. Instead of tiktokers, we can create Tiktelligence (Tiktok Intelligence) among our students. This creative approach to delivering educational content through bite-sized format is one of the strategies and initiatives that both educators and students can be utilized in teaching and learning. However, it is crucial for educators to evaluate and validate the suitability of educational content to be posted on Tiktok. Additionally, it is also important for educators in prioritizing learning outcomes while leveraging the available Tiktok features to enhance the learning experience. Moreover, it will offer a dynamic and engaging learning experience that resonates with the digital-native generation, ultimately enhancing their knowledge acquisition and fostering a lifelong love for learning.

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