








Research Article

iMoFE@tree (Instructional Materials for Office Furniture and Equipment @ Linktree)

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Abstract: *In general, instructional materials can motivate students to learn more effectively. With that in mind, the goal of this project is to improve the current learning about office furniture and equipment. With only 4 hours to cover the syllabus, lecturers frequently struggle to cover it. The use of PowerPoint slides is regarded as time-consuming. Students' understanding of this subject is also hampered by the fact that they cannot actually observe office furniture and equipment in class. As a result, iMoFE@tree is recommended to help lecturers and students master the topic. The idea of putting all educational content (infographics, case studies, augmented reality, and data studio) on one page not only demonstrates the project's uniqueness, but it also supports lecturers' engagement and improves students' experience. iMoFE@tree can also help office staff and executives in both public and private organizations who are in charge of managing their office furniture and equipment.*

Keywords: instructional materials; office furniture; equipment.



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1. INTRODUCTION

Based on our 2019 research, we found that in order to promote students' learning, a helpful learning environment is necessary. Students tend to be more intrinsically motivated when they are in positive learning environments. A supportive learning environment can be ensured, for instance, by having well-equipped classrooms, a resource center, and friendly lecturers (Abdullah et al., 2019). In light of the fact that it should facilitate the adoption of Education 4.0, technology integration into teaching and learning is crucial. The introduction of Education 4.0 gives every learner the chance to experience a visual element that successfully strengthens the connection between concepts and information (Halili, 2019). Education 4.0 was created in response to the demands of the Fourth Industrial Revolution, in which teaching techniques have gradually changed to be more technology-based (Rasika et al., 2019). As a result, building a positive learning environment for students depends on having quality instructional resources.

The usefulness of educational materials has been demonstrated in numerous studies in this field. The use of self-directed learning activities that enable students to demonstrate their interests,

attitudes, and skills is encouraged in instructional materials, which will improve students' academic achievement (Victory, 2020). Additionally, students learn more effectively when they are actively engaged in the learning process. According to the saying, "What I hear, I forget, what I see, I remember, what I do, I comprehend," this is in accordance. Learning becomes more fascinating, intriguing, and relevant when students are involved in activities involving the use and utilization of instructional facilities, claim Neji, Ukwetang, and Nja (2014). The instructors must be able to deliver their lessons with the help of cutting-edge technology. The typical lecture is still useful, but other teaching strategies that have a strong visual component would undoubtedly engage students more effectively (Naliza et al., 2017). Therefore, the proper delivery of efficient instructional materials paired with an accurate lecturer's methodology will promote a full understanding of the subject matter.

iMoFE (Instructional Materials for Office Furniture and Equipment) was established in September 2021 with the purpose of facilitating the teaching and learning of Topic 5 (Office Furniture and Equipment) for Bachelor of Office Systems Management students (Hons). iMoFE was created utilizing a cloud-based website builder in the past (WIX). Despite the fact that iMoFE is a completely user-friendly platform that serves the fundamental needs of its current customers, we believe that the product should evolve and provide more user efficiency. We introduced the new iMoFE@tree as the upgraded version of iMoFE after taking into account all user feedback and experience. Now, various new features are being added to iMoFE@tree in order to better meet the needs of its users. This innovative platform may house all essential materials and content on a single landing page. The concept of integrating several links in a single location will ease the teaching and learning process and provide users with a streamlined experience.

2. PROBLEM STATEMENT

The purpose of the project is to enhance the existing teaching and learning for one of the chapters in the Administrative Operation Systems (ASM553) course, offered to the Bachelor of Office Systems Management (BA232) students, which is topic 5: Office Furniture and Equipment. This topic is quite challenging since the allocated time is only 4 hours (1 week), but the coverage is quite substantial. Furthermore, the use of traditional PowerPoint slides is seen as tedious, and synchronous online teaching delivered live usually results in internet connectivity issues among students. Learning the topic from the textbook also creates a problem because it is very heavy and quite difficult to carry around. Students' comprehension of this subject is also hindered by the fact that they cannot really observe the actual office furnishings and equipment during class sessions. Hence, a different strategy is needed to facilitate the learning process.

3. OBJECTIVE

The aim of this project is to develop appealing and engaging teaching materials covering Topic 5 (Office Furniture and Equipment). The concept of compiling all educational content that combines the infographics, case studies, and augmented realities into one comprehensive link and one landing page not only demonstrates the uniqueness of this project but also aids in the actual learning process. The lecturers will be able to explain the coverage of this topic better with the help of suggested instructions which are readily available to them. The students will have access to an easy-to-use platform that allows them to explore the topics at their own convenience. Furthermore, they will be able to comprehend by following the step-by-step instructions, studying infographics, and then assessing their understanding by completing the assigned tasks. Additionally, the platform also includes a Data Studio that facilitates reporting needs and manages student results effectively. iMoFE@tree is the answer to support lecturers' engagement and enhance students' experience in

learning this topic. Office workers and executives in both public and private companies who are in charge of managing their office furniture and equipment can also benefit from iMoFE@tree.

4. METHOD & MATERIAL

This is a descriptive study that has been conducted among 69 students who were in semester 3 of Bachelor in Office Systems Management (BA232) from UiTM Machang Campus, Kelantan Branch and UiTM Jengka Campus, Pahang Branch. The data was collected within 2 weeks using of an online survey (google form). The questionnaire was adapted based on previous studies such as Ogbu (2015), Norazrina (2020) and Nur Salina et al., (2020).

5. FINDINGS

Table 1: Survey Results

Variables	Frequency	Percentage
Challenges that students experienced in ASM 553 during ODL?		
Internet problems (Low internet speed, No Wi-Fi connection)	51	73.9%
Technical problems (No laptop or computer, lack of IT skills)	12	17.4%
Learning references/ Materials	12	17.4%
Worries on online learning	32	46.4%
Miscellaneous problems (Family problems, health issues, non-conducive environment)	23	33.3%
Others	6	8.4%
How do you rate your ODL's experience in terms of limited internet connectivity?		
Never	10	14.5%
A few times a week	22	31.9%
Half of the week	21	30.4%
Almost every day	13	18.8%
Every day	3	4.3%
How do you rate your ODL's experience in terms of low network signal?		
Never	10	14.5%
A few times a week	29	42%
Half of the week	20	29%
Almost every day	8	11.6%
Every day	2	2.9%
How do you rate your ODL's experience in terms of slow speed of internet?		
Never	8	11.6%
A few times a week	29	42%
Half of the week	15	21.7%
Almost every day	15	21.7%
Every day	2	2.9%
Do you prefer your lecture to implement Virtual Reality or Augmented Reality in ASM553's learning process?		
Yes	61	88.4%
No	8	11.6%

Do you prefer your lecturer to implement Simulation in ASM553's learning process?		
Yes	58	84.1%
No	11	15.9%
Do you prefer your lecturer to implement Infographic in ASM553's learning process?		
Yes	65	94.2%
No	4	5.8%
Which method of delivery do you prefer the most in learning Topic 5 (Office Furniture and Equipment)?		
Asynchronous learning	37	53.6%
Synchronous learning	32	46.4%
I prefer my lecturer compile all information about this course in one place only.		
Yes	68	98.6%
No	1	1.4%
I prefer my lecturer compile all information about this course in one consistent link.		
Yes	67	97.1%
No	2	2.9%

Table 1 presents the survey results for this study. The first question discovered the challenges that students experienced in ASM553 during Open and Distance Learning (ODL). The result showed that 73.9% of them claimed that internet problems, such as low internet speed and the lack of a Wi-Fi connection, would become the main challenges experienced by them, followed by worries about online learning with 46.4%. Other challenges faced by students during ODL sessions were miscellaneous problems (family problems, health issues, non-conducive environment) 33.3%, technical problems (no laptop or computer, lack of IT skills) 17.4%, learning references and materials (17.4%), and other challenges (4.3%). In relation to the challenges of internet problems, the majority of the students, 32%, experienced limited internet connectivity a few times a week, then about 42% of them experienced slow internet speed a few times a week, and at the same time, a majority of 42% of them experienced low network coverage a few times a week.

The findings also revealed that the majority of students, with 88% preference, prefer the lecturer to implement Virtual Reality or Augmented Reality, whereas about 84% of the students prefer the lecturer to implement simulation, and a majority of 94% prefer the lecturer to use infographics in ASM553's learning process. Regarding the method of delivery in learning Topic 5 (Office Furniture and Equipment), 54% of the respondents prefer to use asynchronous learning while 46.4% prefer to use synchronous learning. Besides, the findings also showed that 99% of the students prefer the lecturers to compile all the information about this course in one place only. Lastly, 97% of the respondents prefer the lecturer to compile all information about this course into one consistent link.

4. DISCUSSION

Online learning that involves interactions that are mediated through using digital, typically internet-based, technology is pervasive, multi-faceted, and evolving, creating opportunities and challenges for educational settings, especially for university students in the 21st century. The traditional face-to-face learning mode has been switched to online (distance) learning, causing various influences on students' academic performance and physical and psychological well-being (Li & Che, 2022). As

higher education plays a central role in technology innovation and social development, it is of great importance to investigate and improve online learning in the context of the teaching and learning process. Compared to face-to-face learning, online (distance) learning has different characteristics such as physical distance, technology dependency, network requirements (low practicability), high hardware requirements, and lack of teaching experience, which have an immediate and long-term impact on students' physiology, psychology, and lives (Dodd et al., 2021; Jiang, Wu et al., 2021). Besides, an important difference between online learning and face-to-face learning is the difficulty of prompting learning communities that help to enhance teacher-student empathy and social interactions between students (Brouwer et al., 2022).

Based on the results of this study, the main challenges faced by the students during ODL sessions are internet problems, including low internet speed and no Wi-Fi connection. The findings in this study are supported by previous studies. A substantial body of research work highlighted the problems of students during the pandemic in developing countries, especially in Asian developing countries. Basically, traditional methods of teaching are generally used in the universities of developing countries. Thus, students were less likely to be familiar with the e-learning mode before the pandemic. At the onset of pandemic effects, the decision to initiate teaching activities online was dealt with at different levels. The fact is that the situation is quite different between developed and developing countries, which is that most of the developing countries are deficient in technology (Abdullah & Kauser, 2022).

Besides, the majority of the respondents prefer their lecturers to implement simulation and infographics in ASM553's learning process. The results indicate that contemporary teaching aids such as simulations and infographics are important in teaching and learning activities in universities. Technology adaptation has become necessary in higher education to help both educators and students work systematically and efficiently. Information technology brings possibility and the need to change the model of the educational process. Digital technologies can have positive effects on student learning in higher education. The findings from previous studies also proved that when technologies were implemented in class, students felt encouraged to engage in more constructive but also more passive and active activities as compared to when no technologies were used. Wekerle, Daumiller, and Kollar (2012) found that learning outcomes were better when students took part in active, constructive, and interactive activities.

5. CONCLUSION

This is a research-based project designed to help students learn about office furniture and equipment topics. iMoFE@tree impacts both lecturers and students. It can be used by lecturers as part of their teaching aid, which is aligned with the needs of Education 4.0, but at the same time it will encourage the culture of self-learning among the students and promote the development of technology in the classroom into 21st century skills. The various materials developed in iMoFE@tree increase the teaching quality because they enable the lecturer to deliver the topic effortlessly. The instructional materials are effectively designed to stimulate students' understanding due to their interactive and asynchronous features. This platform is written in English, so it is easy for people all over the world to access it online. For the security purpose, the inventors also decided to add password protect link for this platform. When the user access iMoFE@tree, they will be directed to a specific landing page, and they will be prompted for a password.

The idea of integrating the infographics, videos, case studies, self-assessment tasks, augmented reality materials and students' progress report into one platform in teaching this topic reflects the novelty and uniqueness of iMoFE@tree. This project is also important in improving students' understanding and engagement through interactive multimedia features (infographics, augmented

reality materials and fun activities) which promote the concept of quality education (SDG 4). The inventors also included new feature which is the Exit Ticket because it is not only allows the lecturer to assess how well the students comprehend the topic but the students themselves are able to know their own level of understanding. Apart from that, the inventors also utilized the concept of data visualization dashboard (data studio) to generate students' progress reports. This feature enables the lecturer to be able to interpret the data better because the report is professional looking, simple and easy to understand. The students are also able to access this feature, thus it facilitates the process of getting feedback on their progress. This is the solution for busy lecturers or instructors, since all materials have been compiled on one platform, which will ease the teaching process. Furthermore, iMoFE@tree is also a knowledge-sharing platform that helps all instructors in the academic industry across the globe. The platform also benefits office personnel and executives by allowing them to manage office furniture and equipment in their organization. This digital platform supports quality education for society and enables its users to have equal accessibility and foster an engaging learning environment. Based on iMoFE@tree features, we strongly recommend this platform being used as instructional material to support the lecturers in asynchronous interaction and enrich students' learning experiences.

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