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## KVPD E-LEARNING SYSTEM

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# KVPD E-LEARNING SYSTEM

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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Project Background**

Learning can be defined as the process of acquiring knowledge, skills, behaviors, or understanding through study, experience, or teaching (Inachainge, 2023). It involves the modification of an individual's existing knowledge or behavior based on new information, experiences, or interactions with the environment (Hinchliffe, Sounders & Wong). The way we currently teach could be more satisfying to people. Far more is expected from education by people now than what is often provided in textbooks and lectures, especially in the digital age when so much information is readily accessible online and on mobile devices (Zambito, 2022). The online learning system, sometimes known as an e-learning system, is a distance learning training system that makes use of cutting-edge Internet technology to motivate the instructor to instruct interested pupils. Just logging into their system gives them enough incentive to do so, and the classes can even be taken online using smartphones and tablets if students want to learn on the road.

Sekolah Menengah Teknik Port Dickson was renamed Sekolah Menengah Vokasional Port Dickson in 2012 (Admin, 2020). This suggests a change in focus towards vocational education. In 2013, it was further upgraded to Kolej Vokasional Port Dickson, indicating a more comprehensive vocational education institution. The first intake of students at KVPD in 2013 consisted of 296 students and the college began offering nine courses. This implies that KVPD has expanded its course offerings to provide students with a wider range of vocational training options. KVPD is administered by a director, who is likely responsible for overseeing the college's overall operations and strategic direction.

Additionally, there are two deputy directors, one for the academy and another for academy support. These positions may have specific responsibilities related to academic

programs and support services. The transition from a technical high school to a vocational college like KVPD reflects efforts to provide students with a more specialized and practical education, aligning with the demands of the workforce and industry. This allows students to gain relevant skills and knowledge for their chosen career paths.

Thus, the current process for the KVPD learning system is that teachers often prioritize delivering content quickly to cover the curriculum, leaving some students behind. Due to time constraints, they may need more time to elaborate on complex topics or provide additional support to struggling students. This can lead to limited elaboration and teacher focus. Next, students and teachers are still using textbooks, and additional tutoring is needed because the rising costs of educational materials can limit access to essential resources. Students face financial burdens related to textbooks and extracurricular activities like tuition that can lead to high costs and resource accessibility. Traditional methods of distributing learning materials from teachers to students have overall face-to-face challenges due to technological limitations, increasing student enrollment, and the expansion of educational departments. This can lead to challenges in distributing learning materials. Lastly, the teacher must find and sort the assessment's student with a different level of Sijil Kemahiran Malaysia (SKM) to determine if the student is at a different level of SKM. The challenge of tracking and addressing students' SKM levels in KVPD is hindered by factors such as class size, a lack of standardized assessment tools, and the pressure to cover curriculum content efficiently, which can lead to difficulty related to the SKM level.

## **1.2 Problem Statement**

Problem statement of this project is:

### **(i) Limited Elaboration and Teacher Focus**

Teachers often prioritize delivering content quickly to cover the curriculum, leaving some students behind. Due to time constraints, they may not have the opportunity to elaborate on complex topics or provide additional support to struggling students. This approach can lead to disparities in student understanding and performance. Students who cannot keep up with the pace may become disengaged and frustrated, hindering their learning progress.

### **(ii) High Costs and Resource Accessibility**

Students face financial burdens related to textbooks and extracurricular activities like tuition. The rising costs of educational materials can limit access to essential resources. These financial constraints can affect a student's ability to fully engage in their studies. Those who cannot afford textbooks or additional tutoring may miss out on crucial learning opportunities, potentially affecting their academic success.

### **(iii) Challenges in Distributing Learning Materials**

Traditional methods of distributing learning materials from teachers to students face challenges due to technological limitations, increasing student enrolment, and the expansion of educational departments. The inefficient distribution of materials can result in delays and difficulties accessing essential resources. This can hinder the learning process and create frustration among both teachers and students.

(iv) Difficulty related to SKM Level

The teacher must find and sort manually assessment's student with different level of SKM which to determine the student is in a different level of SKM. The challenge of tracking and addressing students' SKM levels in KVPD is hindered by factors such as class size, lack of standardized assessment tools, and the pressure to cover curriculum content efficiently. Addressing this difficulty is crucial for tailoring education to meet the unique needs of each student and ensuring their academic success.



### **1.3 Objective**

The objective of this project is to

- (i) Analyse and design the E-Learning system for KVPD using object-oriented.
- (ii) Develop the web-based E-Learning system for KVPD.
- (iii) Conduct acceptance testing with the stakeholders.

## 1.4 Scope

In this project KVPD E-Learning System involves three kinds of users, which is teacher (lecturer in KVPD), KVPD students and Administrator. There is a module and functions that are involved in this project to encounter the problem statement.

Table 1.1: Module and function of scope

Module	Function	User Involve
Login	<ul style="list-style-type: none"> <li>Users should be able to enter specific active student ID or teacher ID as their username and be able to enter the password.</li> <li>Allow user to reset or recovery password</li> </ul>	Teacher, Administrator and Student
Register Account	<ul style="list-style-type: none"> <li>Allow students to register their new account by student enter their name, email, student ID and password.</li> <li>Active Student ID will be traced to register the new account.</li> </ul>	Student
Manage User	<ul style="list-style-type: none"> <li>Be able to edit and update user profile.</li> <li>Upload profile picture.</li> </ul>	Teacher and Student
Assign Course and Class	<ul style="list-style-type: none"> <li>Register courses for each student (10 courses)</li> <li>Assigned lecturer for each course for specific class.</li> <li>Assigned student for each class. Focus to form 5 classes (3 classes)</li> <li>Assigned teacher for class.</li> </ul>	Administrator
Manage Course	<ul style="list-style-type: none"> <li>Allow students to browse and search for their semester course. View a list of enrolled courses.</li> <li>Teacher be able to edit and update the course and that be enrolled for their student.</li> </ul>	Teacher and Student
Manage Learning Material	<ul style="list-style-type: none"> <li>Allow students to access lectures notes, or other education resources like teaching video.</li> <li>Allow teacher to manage the learning resource.</li> </ul>	Teacher and Student
Manage Assessment and Assignment Module	<ul style="list-style-type: none"> <li>Allow students to access the online assignment, quiz, test and submit individually or in a group.</li> <li>Teacher be able to manage the online assignment, quiz, and the due date of the assignment.</li> <li>Allow teacher to track student assignment progress.</li> <li>Classify and filter the assessment based on SKM level.</li> </ul>	Teacher and Student
Record Grade	<ul style="list-style-type: none"> <li>Allow students to view their grade of their assignment and course.</li> <li>Teacher be able to manage the grading of their course, assignment, quiz, and test.</li> <li>Show student list and give the achievement badge based on achieve of SKM level.</li> </ul>	Teacher and Student
Track SKM Level	<ul style="list-style-type: none"> <li>Teacher approves for each submission for each SKM Level</li> </ul>	Teacher and Student

	<ul style="list-style-type: none"> <li>• Student view SKM Level progress</li> </ul>	
Generate Report	<ul style="list-style-type: none"> <li>• Submission Report</li> <li>• The teacher can print out the list of the students by achievement badge.</li> <li>• Grading Marks Report</li> </ul>	Teacher and Student
Manage Feedback	<ul style="list-style-type: none"> <li>• Allow student to give feedback on learning resource.</li> </ul>	Teacher and Student

## **1.5 Expected Result**

The E-Learning website system for College Vocational Port Dickson would depend on the specific goals and objectives of the institution, as well as the needs of its students and faculty. However, here are some general expected results and outcomes that such a system could aim to achieve the Improved access to education, Enhanced learning experience, Flexibility and convenience, Cost saving, Personalized learning, Assessment and analytics, Integration and compatibility and Feedback and continuous improvement. Ultimately, the success of an E-Learning website system for College Vocational Port Dickson will be measured by its ability to meet the specific goals and objectives of the institution, improve the educational experience for students, and adapt to the evolving needs of the college community.

## **1.6 Project Significance**

The significance of this project is the E-learning system will provide students with a more engaging and flexible learning experience, aligning with modern educational expectations. That will enhance learning experiences for all students and teachers. This project aligns KV Port Dickson with the changing demands of the workforce and industry by offering more specialized and practical vocational education which will align with industry needed. This project also provides efficiency an E-Learning Management System streamlines the educational process, making it more efficient for both instructors and students. Other else, cost effective also a significant in this project which E-Learning system reduces costs associated with physical infrastructure, travel, accommodation, and printed materials. This makes education more affordable and accessible, which is especially important in reducing the digital divide. Students only need internet to access all learning material. Next for time efficient, Student can fit learning around their own schedules. Students can focus on specific areas, cover topics they are confident about and potentially use the time usually spent on extra learning. And since E-Learning materials are always available, students can quickly address individual difficulties by revisiting certain content rather than needing to complete an entire module or course again. Other things, some students nowadays can't adapt to traditional learning. So, E- Learning brings education to remote students who can't afford to pursue traditional KVPD routes. All students with access to the internet can gain education, knowledge, and skills. This project also provides the significance of analytics and assessment which E-Learning platforms provide detailed analytics and assessment tools that help teachers track their student progress and make data-driven decisions for improvement.

## **1.7 Chapter Summary**

Chapter 1 serves as a comprehensive introduction to the "E-Learning System for KV Port Dickson" project, highlighting its importance and objectives. It highlights the existing challenges within traditional educational methods, including issues like limited teacher focus, high expenses, and difficulties in material distribution. The proposed solution involves the development of an E-Learning platform to tackle these problems and elevate the educational experience for students. The chapter outlines specific project goals, its scope, and expected outcomes, which encompass benefits such as enhanced accessibility, cost-efficiency, and improved analytics. Moreover, it focuses on the significance of E-Learning, offering a flexible, budget-friendly, and time-efficient approach to education while reaching a wider audience and encouraging ongoing improvement through feedback and assessment.

## **1.8 Report Organization**

For report organization, there are six chapters that have been classified in this project report. Several topics are covered in the first chapter, including the project background, problem statement, objective, scope, expected result and project significance. Then for the second chapter will discussing about literature review, that the content is related concepts to your system, study of the current process of the title domain, study of the existing related system, name of each system and comparison with the existing system with is several systems are explained and compared in this chapter. For the third chapter was mentioned about methodology, which is the content included is planning phase, analysis phase, design phase, implementation phase, testing phase and system development workflow. In this chapter the methods including collecting and gathering data, utilizing the data, and writing the data are carried out. Next the fourth chapter covers the analysis and design phase of the project including system architecture, Unified Modelling Language (UML) diagrams, database design, and user interface design. For the fifth chapter concludes the report, summarizing the project and its finding, limitations, and reflecting on its overall success and contributions.

## REFERENCE

- Inchainge, I. (2023, January 19). *Learning: What is it?*. Inchainge.  
<https://inchainge.com/knowledge/learning/>
- Hinchliffe, L. J., Saunders, L., & Wong, M. A. (2020, August 1). Learning theories: Understanding how people learn. Illinois Open Publishing Network.  
<https://iopn.library.illinois.edu/pressbooks/instructioninlibraries/chapter/learning-theories-understanding-how-people-learn/>
- Zambito, V. (2022, January 27). How to use cutting edge video to enhance online learning and training. eLearning Industry. <https://elearningindustry.com/how-to-use-cutting-edge-video-to-enhance-online-learning-and-training>
- Admin, R. (2020, December 28). SM Teknik Port Dickson, Sekolah Menengah Teknik in Port Dickson. , Sekolah Menengah Teknik in Port Dickson.  
<https://www.lookp.com/sm-teknik-port-dickson>