



Faculty of Computer Science and Information Technology

***STUDENT AFFAIRS MANAGEMENT SYSTEM FOR SJK CHUNG
HUA NO.5***

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Abstract

This project aims to introduce an online student affairs management system at SJK CHUNG HUA NO.5, a Chinese primary school in Kuching, Sarawak. The current system of using paperwork is time-consuming and the school aims to use technology to improve the efficiency and organization of the tasks. Therefore, the system will assist teachers in managing various aspects of student affairs, including discipline, class cleanliness, student's health status, textbook distribution, and counseling. The proposed student affairs management system will help teachers to manage records, generate reports, and present information in a more comprehensive way as it can store, sort, analyze, and present the information for teachers to make better-informed decisions. The use of technology in education is seen as beneficial for the school and the teachers. With the integration of technology, education process can be utilized to assist educators perform things more effectively than they did previously. The introduction of the student affairs management system will not only improve the efficiency of the school but also enhance the overall teachers and students experience, contributing to the ongoing efforts of the school to transform and modernize the education system. In conclusion, this project aims to develop an online student affairs management system that will assist teachers at SJK CHUNG HUA NO.5 in managing the future works of student affairs online in a more efficient and organized manner.

Abstrak

Projek ini bertujuan untuk memperkenalkan sistem pengurusan hal ehwal murid dalam talian di SJK CHUNG HUA NO.5, sebuah sekolah rendah Cina di Kuching, Sarawak. Sistem ini akan membantu guru untuk menguruskan pelbagai aspek hal ehwal murid, termasuk disiplin, kebersihan, status kesihatan, pengagihan buku teks, dan kaunseling. Sistem semasa yang masih menggunakan kertas kerja sangat memakan masa. Oleh itu, sekolah bertujuan untuk menggunakan teknologi bagi meningkatkan kecekapan dan organisasi tugas-tugas ini. Sistem pengurusan hal ehwal murid yang dicadangkan akan membantu guru mengurus rekod, menjana laporan dan menyampaikan maklumat dengan lebih menyeluruh. Tambahan pula, sistem akan menyimpan, menyusun, menganalisis dan membentangkan maklumat dengan cara yang teratur dan bermakna, membolehkan guru membuat keputusan yang lebih bermaklumat. Penggunaan teknologi dalam pendidikan dilihat memberi manfaat kepada pihak sekolah dan guru. Dengan integrasi teknologi, pendidikan atau latihan boleh digunakan untuk membantu pendidik melaksanakan perkara secara berbeza dan efektif daripada yang mereka lakukan sebelum ini. Pengenalan sistem pengurusan hal ehwal pelajar bukan sahaja akan meningkatkan kecekapan sekolah tetapi juga meningkatkan keseluruhan pengalaman pendidikan guru dan pembelajaran pelajar, menyumbang kepada usaha sekolah untuk mengubah dan memodenkan sistem pendidikan. Kesimpulannya, projek ini bertujuan untuk membangunkan sistem pengurusan hal ehwal murid dalam talian yang akan membantu guru-guru di SJK CHUNG HUA NO.5 dalam menguruskan kerja-kerja hal ehwal murid pada masa hadapan dengan lebih cekap dan tersusun.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Student affairs has a role in engaging students in active learning and developing consistent values and ethical standards (Torres & Madiba, 2021). Study is not the only thing that students do in the school, their well-being, identity, and their services are also considered, relating to the environment of education called student affairs (Long, 2012). SJK CHUNG HUA NO.5 is one of the Chinese primary schools in Kuching, Sarawak, practising student affairs system. The Class Cleanliness, Discipline, Health Status, Textbook Distribution, and Counselling aspects are being guided in the school. Therefore, an online system for student affairs management will be introduced and developed to assist the teachers of SJK CHUNG HUA NO.5.

There are 36 classes of Primary 1 to Primary 6 in the school. Currently, teachers in SJK CHUNG HUA NO.5 are using paperwork to record the students' discipline records and cleanliness of every class manually. They need to re-organize and calculate the records monthly to create the reports. Then, students' health status, textbook distribution, and counselling are all the aspects that require a lot of reports and documentations regularly. Therefore, the school tends to transform along with the use of technology as technology has revolutionized the field of education (Raja & Nagasubramani, 2018). With technology, education or training is utilised to assist educators perform things differently than they did previously (Raja & Nagasubramani, 2018). For instance, they are equipping new web management systems at the school.

The student affairs management system helps teachers to manage the student affairs records and generate reports accordingly. In addition, the information can be stored, sorted, analysed, and presented in a more comprehensive way.

Overall, a student affairs management system that will manage the tasks by keeping records, sorting, analysing, presenting the information, and generating reports is introduced in this project to advantage the use of technology in education system.

1.2 Problem Statement

Based on the feedbacks from the teachers of SJK CHUNG HUA NO.5, they record the student affairs aspects such as the Class Cleanliness, Students' Discipline Record, Health Status, Textbook Distribution, etc., manually in hardcopy.

The issues arise when teachers need to generate reports for the results and performance as they must sort and calculate the records manually. It is also troublesome when the records are in hard copy because when the number of students increases every year. The piled-up reports are hard to store, difficult to find and carry forward to the other years and they might also get lost.

The paperwork method now for records is ineffective and time consuming. Therefore, the system is proposed and designed to save the teachers' time, improve efficiency and productivity of the school.

In short, the student affairs management system will help to solve the problems that teachers face by utilising web-based system and to increase the educator's engagement with technology at SJK CHUNG HUA NO.5 primary school.

1.3 Scope

The scope of this project includes:

- Study and analysis of current student affairs management process.
- Development of a web-based system for managing school affairs, which enables teachers to insert records, generate reports and sorting results in the system.

- Development of a web-based system that is accessible from any location and at any time when there is internet connection.

1.4 Objectives

The objective of this project is to develop an online system to assist the teachers of SJK CHUNG HUA NO.5 managing the student affairs management. The sub-objectives are:

- i. Design and implement a student affairs management system.
- ii. Evaluate the performance of the proposed student affairs management system.

1.5 Brief Methodology

Different development techniques have traditionally shaped the process of developing computer software and information systems (Kumar & Dubey, 2013). In this project, Software Development Life Cycle waterfall model is chosen as the methodology. The waterfall model is also referred as linear-sequential life cycle modal, where each phase must be finished completely before the next phase begins (Kumar & Dubey, 2013). The waterfall model is suitable for the student affairs management system because the system requirements and scope are already known clearly. There are five phases in waterfall model, which include analysis, design, implementation, testing, and maintenance (Aroral, 2021).

Phase 1: Analysis

Firstly, analysis is required when a visit to SJK CHUNG HUA NO.5 is needed to understand the situation and the problems. The requirements are gathered and documented to define the objectives, scope, and functions. Analysis phase is important

to develop the system deliverables so that the entire student affairs management system development can be controlled and scheduled using the Waterfall Model.

Phase 2: Design

At this phase, design of the system is focused including the data structures, interface representation, and coding procedures (Sri Herawati et al., 2021). The phase translates the requirements collected from the analysis stage so that they may subsequently be implemented into the system proposed (Sri Herawati et al., 2021). Therefore, the language of the system is determined, and the overall flows and functions are designed according to the scope. The system is designed to be user friendly, easy to use so that the educators can adapt and utilise it, fulfilling the objectives of this student affairs management system.

Phase 3: Implementation

The actual development of the system takes place at this stage. It is important to check the requirements when writing the code to avoid deviations from the original scope. The design in the previous stage is converted into the solid execution system through programming at this stage, where all the database and files can be created, and make sure the functions work well.

Phase 4: Testing

The solid student affairs management system that has been developed is subjected to quality and functional testing. Most importantly, it is tested to ensure the outcome meets the requirements. Other than that, it aids debugging along the testing phase, reducing technical issues of the system.

Phase 5: Maintenance

Finally, feedbacks are collected continuously from the teachers after the delivery and deployment of the student affairs management system. The process of modifying is continued to order to improve quality and reliability of the system.

1.6 Significance of Project

The significance of the project is to help the teachers to save their time by replacing paperwork to online system. It improves efficiency when teachers do not have to record and calculate manually for a big number of students and classes. In addition, the system is significant when the records can be kept properly, with the functions of sorting and presenting the data properly. In short, it assists teachers by saving time and effort on repetitive tasks.

1.7 Project Schedule

The Student Affairs Management System project is planned and scheduled as shown in Gantt Chart in APPENDIX A.

1.8 Expected Outcome

The expected outcome of this project is to have a fully functioning Student Affairs Management Web-Based System. Teachers of SJK CHUNG HUA NO.5 can manage the records based on the student affairs management aspects. They can store and update the records in the system. Then, the analysis and sorting of the records can be done by the system. Finally, the teacher can manage and generate the reports anywhere with internet access by using the Student Affairs Management System.

1.9 Project Outline

The development of the Student Affairs Management Systems for SJK CHUNG HUA NO.5 will be described in the following Chapters.

1.9.1 Chapter 2: Literature Review

Chapter 2 reviews the survey of the existing systems that are similar to the expected outcomes of this project. Resources are obtained from a variety of journals, publications, and articles. The comparison between resources discovered including the project's advantages, disadvantages, limitations, programming languages and tools will be evaluated in this chapter.

1.9.2 Chapter 3: Requirement Analysis and Design

Chapter 3 includes the requirements analysis to define the user and system requirements. A few diagrams such as Context Diagram, Data Flow Diagram (DFD), Entity Relationship Diagram (ERD), and User Interface Designs will be included in this chapter.

1.9.3 Chapter 4: Implementation and Testing

In this chapter, the implementation of the proposed system is documented. Testing will be carried out and test cases are recorded. Technical descriptions of the implemented system will also be included in this chapter.

1.9.4 Chapter 5: Conclusion and Future Work

This final chapter concludes the development of the project with accomplishments, constraints, and future works.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

In this chapter, three existing systems that are similar to the expected outcomes of Student Affairs Management System will be reviewed. The features and functionalities of the existing systems discovered will be further evaluated in the following Section 2.2. In addition, the comparison between the resources discovered, programming languages, tools used for the purposed system and a review summary will be included.

2.2 Existing Resource Management System

In this section, the existing systems that have similar functionalities with the proposed Student Affairs Management System will be evaluated and reviewed. The current method used in SJK CHUNG HUA NO.5 (Paperwork), “Aplikasi Pangkalan Data Murid” and “Sistem Pengurusan Buku Teks” are the existing systems that will be discussed. Their functions and important aspects are highlighted and discussed in the following subsections.

2.2.1 Current Method in SJK CHUNG HUA NO.5: Paperwork

Currently, teachers in SJK CHUNG HUA NO.5 are doing paperwork to record the students’ discipline records, counselling records, health status records, textbook distribution and cleanliness of every class manually. Therefore, most of the student affairs aspects are managed through paperwork in SJK CHUNG HUA NO.5. For