

**WEB-BASED LEMERY COLLEGES STUDENT AFFAIRS
AND SERVICES WITH ANDROID SUPPORT**

A Capstone Project
Presented to the Faculty of the
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**In Partial Fulfillment
of the Requirements for the Degree of
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CHAPTER 1

INTRODUCTION

Project Context

The world is filled with technology's advantages, and it is a necessity in everyone's existence. Everything around us changes as time goes on. As a generation, we emerged nearly totally reliant on technology because it has made life more convenient, entertaining, and efficient. It can also organize activities, simplify work and is needed for home and company related activities.

Our world is more advanced and modernized now, and one of the benefits is that labor is more progressive and productive. The device known as "Computer" as a result of modernity is a crucial asset that any organization or institution should own because it offers numerous benefits. At work, school, and home, computers are used for a variety of tasks, including information organization and storage. Almost daily, people use computers in offices and professions to perform a large number of computer related work. Today's technology changed our life into a simple and easy situation without question. As technology is becoming more advanced than ever, most of the products are designed to make our life more convenient. And now for the students that are using this kind of technology it makes them more good and creative to what they are doing in their studies. Most of the action of our generation nowadays is done by computers.

And now the proponents are focused on developing a system for the Office of the Student Affairs. The Office of the Student Affairs (OSA) is a student services office that deals with all student concerns. This office is covered by the Guidance Office and Medical and Dental Office, Discipline Office and Student Organization.

According to Hoyt, J. E. (2021). Student Connections: The Critical Role of Student Affairs and Academic Support Services in Retention Efforts. The connections we establish in college are transformative and redirect our lives to make lasting impacts on others around us and in the world. Student affairs and academic support services can make the difference in whether students drop out, fail academically or succeed in their college and career aspirations and realize a personal vision for their future. The student affairs and academic support services serving critical roles.

The proposed study is intended for Lemery Colleges, this is made because the process in the Office of the Student Affairs and Services are done manually. The staff will distribute forms for the students to fill out regarding student services (like student information sheet, incident report, medical and dental form) which are done using pen and paper. Such as making appointment to the office of student affairs and services is time consuming. Both the students and the officer in charge need to guarantee their schedule in a timely manner. The excessive amount of work in Office of the Student Affairs and Services can cause some problems or errors regarding handling student information. Cases because of bulky records, sometimes there is a messy and missing records of the student, and they also have difficulty in getting their work done.

The proposed system entitled "Web-Based Lemery Colleges Student Affairs and Services with Android Support" will bring such huge significance and convenience for the Office of the Student Affairs and Services. The system makes the manual process computerized for their work to become more manageable and to provide a fast and effective way of monitoring student's information. Updating and organizing student records much faster and easier. The system will also function in a

way that it will engage both the students and the staff for a much better experience in conducting student services in the Office of the Student Affairs and Services.

Purpose and Description

The Lemery Colleges is responsible for the development and implementation of various programs and services that focus on the non-academic aspects of the student's life in the College, such as the acquisition of values and skills for lifelong learning. These student-centered activities and services that compliment academic instruction are anticipated to support holistic student development for active involvement in nation-building. The Student Affairs and Services of the College is composed of student welfare and development programs and services.

But in order to maintain the quality service the school provides comes the hard work and commitment of all the people working in the school. From various sections of the faculty and offices, hours and hours of time and effort are being put everyday to give the best possible service. And one of the busiest and hectic offices in the school and is also its vital part, in which students can interact with various people that will help them to grow and understand themselves more is the Office of Student Affairs and Services, the office handles Guidance and Counseling, Discipline Office, Medical and Dental Office and the Students Organization where an immense amount of work and time is required to properly manage it. It also obtains various forms that contain information of students which are required in order to process the services, and the filling out of forms is done manually using pen and paper by the students. Another thing to consider is the dissemination of information regarding school related activities or appointments are often forgotten by some students or being disregarded.

The proposed system entitled "Web-Based Lemery Colleges Student Affairs and Services with Android Support" will help the officers in facilitating and managing records of student services. On the other hand, students are equipped with the ability to be informed through alerts and notifications and filling out forms efficiently, using android support. The system is capable of lessening the amount of work required in processing documents and forms of the students regarding the services they need. Because of the workload that officers encounter and come across, it is worth noting that the work they do is very time consuming and can cause stress which can affect their health and productivity. Through the help of the system, the officers can avoid much stress which will result in a positive working environment and the process of services much smoother and easier.

Statement of the Problem

The purpose of the study is to develop a system which will improve the process and management of records of services much easier and efficiently for both officers and students of Lemery Colleges using a website and Android application. In addition, this study aims to answer the following questions:

1. What are the common problems encountered by the teachers and students in conducting and processing of school services manually?
2. What are the benefits of the proposed system to the students and teachers in terms of management of records of Student Affairs and Services?
3. How can the developed system be assessed using the ISO 9126 standards in terms of:
 - a. . Efficiency;
 - b. . Accuracy and;

c. . User-Friendliness?

Objectives of the Study

The main objective of the study is to develop a system which will improve the process and management of records of services much easier and efficiently for both the faculty of the Office of Student Affairs and students of Lemery Colleges using a website and Android application.

Specifically, the study aims:

1. To be able to lessen the workload and inconvenience using the manual process. Because the process in student services is done manually (like filling out forms for consultation, appointment) students have to fall in line, get a form and do this using pen and paper which is very time-consuming. Teachers or the faculty in the Office of the Student Affairs manages numerous amount of student's records and sometimes can cause confusion on keeping track of information. The system will effectively help both the teachers and the students in conducting student services.

2. Both the teachers and students can benefit greatly by using the system, it will contribute to better organization and utilization of student's records or information. Processing student services are done in a much easier and convenient manner. For the teachers, managing records using the system will be a great help for the overall service for the Office of Student Affairs and Services. The Android support will be beneficial for the students for the implementation of online consultation, filling out forms and to receive a notification regarding announcements or events in school.

3. Ensuring that the proposed system are capable of lessening the amount of work and time required in managing student's record efficiently and correctly. The system will also provide accurate information for both the staff and the students. Lastly, the system is user-friendly because it will have an interface that would allow users to understand the system effectively.

Scope and Limitation of the Study:

This study mainly focused on the student services of the school such as the Guidance and Counseling, Discipline Office, Medical and Dental Office and the Student Organization. The system has the capability to inform the student if there's an announcement or event in the school through Android support. They can also get some appointments if there are incidents or concerns. The researcher will focus on designing and developing a system that will lessen their time to go to the office.

The system is for school use only. The officers like the President of the org, Teachers, Students, Registrar, and the principal are the one who can use the website. The system is based only on the school services and the other function will not scope this project that is not mentioned above.

Definition of Terms

The following key terms are defined for the readers to better understand this study:

Android - android is an array of software intended for mobile devices that features an operating system, core applications and middleware.

(<https://www.techopedia.com>)

Database - A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS).

(<https://www.oracle.com>)

Framework - A web development framework is a set of resources and tools for software developers to build and manage web applications, web services and websites. (<https://www.google.com/amp/s/www.techtarget.com>)

ISO 9126 - describes a software quality model which categorizes software quality into six characteristics (factors) which are sub-divided into sub-characteristics (criteria). The characteristics are manifested externally when the software is used as a consequence of internal software attributes.

(<http://www.arisa.se>)

Web-based - A web-based application is any program that is accessed over a network connection using HTTP, rather than existing within a device's memory. Web-based applications often run inside a web browser.

(<https://www.techopedia.com>)

Student affairs - Student affairs, student support, or student services is the department or division of services and support for student success at institutions of higher education to enhance student growth and development.

(<https://tophat.com>)

Website - a group of World Wide Web pages usually containing hyperlinks to each other and made available online by an individual, company, educational institution, government, or organization.

(<https://www.merriam-webster.com>)

Operational Definition

Accuracy - It refers the state of being precise.

Efficiency - It refers the extent to which time is well used for the intended task; it is doing a certain task in a shorter period of time.

User-Friendliness - It refers to the quality of being user friendly or it can be easily manipulated by the user.

CHAPTER II

REVIEW OF RELATED LITERATURE AND SYSTEMS

This chapter includes different studies and systems which were conducted by the proponents in order to support the proposed system.

Technical Background

A web-based application is any program that is accessed over a network connection using HTTP, rather than existing within a device's memory. Web-based applications often run inside a web browser. However, web-based applications also may be client-based, where a small part of the program is downloaded to a user's desktop, but processing is done over the internet on an external server. Web-based applications are also known as web apps.

There is a lot of confusion created by the use of terms like web-based, internet-based and cloud-based when referring to applications. Web-based applications actually encompass all the applications that communicate with the user via HTTP. This includes light applications like Flash games, online calculators, calendars and so on, as well as more intensive applications such as web-based word processors and spreadsheet applications.

Web apps have the typical front-end and back-end web development technologies. In theory, web apps are closely related to websites, thus web app development and web development share many characteristics. On the front-end, for instance, web app developers utilize JavaScript, CSS, and HTML. The back-end for web apps might similarly use the same server-side languages developers use to build websites such as Ruby or Python.

The programmers use various application software to create the web-based system. To implement the web-based system, HTML, CSS, PHP, JavaScript, Microsoft Visual Studio, MYSQL, and XAMPP will be used as programming languages. The supporters will use HTML on the system to display the system's interface in a static manner. HTML will serve as the developing system's structure or skeleton. HTML is also used as the system's front end. CSS is used as a framework to make the web page visually appealing, such as in the buttons and images, in order to make it formal while still appealing to the users' eyes. Simply put, CSS enhances the design of HTML. This also improves the system's usability. PHP as a method to make the development framework dynamic and interactive, interactive in the sense that users would be able to use search buttons and edit content on a website etc.

PHP is fundamentally a universal scripting programming language for web application development and web integration of various programming languages. It has also been hired to integrate a variety of open source software applications, including Content Management Systems and others. PHP is a programming language used in web application development that works with a variety of databases and can be customized to meet the needs of the project. Furthermore, the PHP Application is simple to optimize using standard coding methods for efficiently deploying the project.

Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen mobile devices such as smartphones and tablets. Android is developed by a consortium of developers known as the Open Handset Alliance and commercially

sponsored by Google. It was unveiled in November 2007, with the first commercial Android device, the HTC Dream, being launched in September 2008.

Android has been the best-selling OS worldwide on smartphones since 2011 and on tablets since 2013. As of May 2021, it has over three billion monthly active users, the largest installed base of any operating system and as of January 2021, the Google Play Store features over 3 million apps. Android 12, released on October 4, 2021, is the latest version.

Android Studio is one and only official IDE for Android. Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems or as a subscription-based service in 2020. It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development.

Android Studio supports all the same programming languages of IntelliJ (and CLion) e.g. Java, C++, and more with extensions, such as Go; and Android Studio 3.0 or later supports Kotlin and "all Java 7 language features and a subset of Java 8 language features that vary by platform version." External projects backport some Java 9 features. While IntelliJ states that Android Studio supports all released Java versions, and Java 12, it's not clear to what level Android Studio supports Java versions up to Java 12 (the documentation mentions partial Java 8 support). At least some new language features up to Java 12 are usable in Android.

Once an app has been compiled with Android Studio, it can be published on the Google Play Store. The application has to be in line with the Google Play Store developer content policy.

These are the components that will bring the system to operate easily for user interaction. The key fundamentals for the functionality to manage and organize student services and student's record efficiently.

Related Literature

According to Dieguez, Tessly A (2017). Emotional Display Rule Conflict in Student Affairs and Services Administrators - This study examines a proposed model in which display rule conflict occurs when employees' personal emotional display rule goals or values (operationalized as student customer orientation and individual-level power distance) are inconsistent with the emotional display rule goals of their department or culture (operationalized as department-level student customer orientation and country-level power distance, respectively). No significant effects of the interaction between personal and department-level student customer orientation or personal and department-level power distance on display rule commitment were found. Results did show that display rule conflict has a negative effect on display rule commitment.

In accordance with Zhu Runkai, Cen Gang, Ai Yining, Jiang Xingfei (2020). "Design of Student Affairs Management Platform Based on College System" - Student services have become an integral part of higher education. Collegiate system brings a trend of reform to the student services. While it provides vitality and innovation for the administration, it also causes problems. To provide a solution, we developed an intelligent student services administration system. It is based on

modular design, aiming at improving the student service management under the background of the collegiate system at present stage. The system had launched a commissioning and has been well received.

As stated by YU Hui, Zhongqiu ZHANG (2019). Student affairs is one essential component in the whole talents cultivation in universities, it indeed has the enhancement for universities to shape the morality and cultivation as its fundamental task, and the cultivation for the new generations who carrying on the national revitalization. The students affairs in universities of UK has been developed for such a long period, now it has the framework with clear notions, completed system and highly specialized which plays an important role in its cultivation system. In the process of promoting educational power to enhance the national competitiveness, Chinese universities should emancipate the mind, updates their thought, and based on the new scenario of the society to embrace the positive experience from educational developed countries selectively, to help the high-equality development of students affairs in universities from our country, to cultivate socialist constructors and successors of all-round development of morality, intelligence, physique, art.

In accordance with Jamaluddin Jasmi, Azlan Abdul Aziz, et. al. (2021). The university is a place where students are taught to be an independent person, especially in decision-making. All activities carried out at a university are different from the secondary and primary levels because all student activities at the university are carried out by the students themselves under the purview of the Student Affairs Division UiTM Melaka Branch (UiTMCM). There are a few processes and problems that students may experience along the way in proposing their activities. In addition, the COVID -19 pandemic situation is aggravating the approval procedures, as the Malaysian government has so far enforced the Movement Control Order (MCO),

which started on March 18, 2020. During this period, all citizens must stay at home, and practices of social distancing are constantly enforced. Hence, most of the time was spent on the Internet for their work and some other purposes. These problems can be solved if there is a system developed as a proof of concept derived from standard visualization of analysis model using a common development methodology that can supports approval processes, that does not require physical meetings and standardization of the application format, and that can also provide the information about the availability of dates for reservation for the activity, as well as information management for better utilization of the budget.

As reported by Schreiber, B., Luescher, T. M., Perozzii, B., & Moscaritolo, L. B. (2021). Student Affairs and Services during Covid-19 in Africa: Mitigating the Pandemic's Impact on Student Success - The Covid-19 pandemic has highlighted the challenges that present obstacles to equitable learning and development in higher education in various parts of the world. African higher education and Student Affairs and Services (SAS) are faced with a set of challenges that are in part related to the resources within the institutions and in part due the sociocultural context into which the institutions are embedded. It is with this background that this study explores the impact of Covid-19 on SAS in Africa, as part of a wider lens on SAS across the globe.

According to Azlan Abdul Aziz, et. al. (2021) This paper proposes a technological platform that provides a holistic and user-friendly interface for the management of information pertaining to co-curricular activities handled by the student bodies in UniversitiTeknologi MARA Cawangan Melaka (UiTMCM). The handling of any students activities lie in the collective processes of submitting the

proposal, securing the budget, getting the approval, promoting and handling the event, collecting feedbacks, reporting and post-mortem discussion. The management of these activities has been a major concern with the involvement of over 100 student clubs that carry out more than 20 events per week that are vying for a budget. Acquiring the approval for the event proposal, tracking the running of the activities and reporting are some of the factors that created a backlog from the management aspect. These procedures require a physical approach. Therefore, an Interactive Student Activities Management System (iSAMS) was designed and developed through the Waterfall methodology as a one-stop centre to help the UiTMCM Student Affairs Division facilitate the management of the students' activities. This web-based system is able to track, display and store all the activities information from the proposal application stage until the end which includes tracking of attendance, progress of the event, collecting feedback, reporting of completed activities, storing supporting documents and generating reports for administrative purposes. All of these are done and managed via a secure, online interface in the Student Affairs Division website without physical presence of the students and the administrators. Even though iSAMS is yet to be completely implemented, the study has great potential in the form of a holistic management of students' co-curricular activities. Going by that, in the end it is hoped that there is going to be a more efficient management of students' co-curricular activities.

According to Nguyen Trung Luan, & Nguyen Nghi Thanh. (2022). THE IMPACT OF COMPETENCY FACTORS ON JOB PERFORMANCE: A SURVEY OF STUDENT AFFAIRS STAFF IN VIETNAM UNIVERSITIES - The competency of student affairs staff is an important factor for the effectiveness of higher education. The relationship between competence and employee performance has been found in

many previous studies in areas outside of education. To add to the evidence of previous studies on the relationship between competence and work performance, to enrich the research literature, this study tests hypothesis about relationship between competency factors and job performance of student affairs staff in Vietnamese universities. This study was conducted through a cross-sectional survey using a purposive sampling technique (n = 200). Multivariable linear regression analysis technique was applied to prove the proposed hypotheses. Research results show that 6 / 11 research hypotheses are accepted. The factors including budget and fiscal management, student affairs as a profession, career development within student affairs, diversity, communication, management & administration have a positive and significant impact on the task performance of student affairs staff. The results of this study show that universities in Vietnam need to change their policies on capacity building in student affairs in the near future to match their core competencies.

Related Systems

According to Abdulazeez, A. M., Zeebaree, S. R. M., & Sadeeq, M. A. M. (2018). Design and Implementation of Electronic Student Affairs System - This paper produces an efficient proposed student affairs system for Duhok Polytechnic University (DPU) called DPU Electronic Student Affairs System (DPU-ESAS). The proposed system consists of thirteen modules that provide four group of services, which are (student services: registration, ID card, postponement, transfer and waiver, certificate of graduation, Non-failure year and absence), (department services: plan acceptance and minimum limits), and (institution service: decisions approving), and (university service: authentication, decision approving and statistics). The proposed

DPU-ESAS is designed according to the structure of DPU, which contains two different study systems. These systems are four years studying system depended at the colleges, and two years studying system for the institutes. The obtained results recorded and evaluated via special questionnaires form (system usability scale) that checked by students and staff of the same institutions. The evaluation score of the questionnaire is (72.44%) which can be considered as a good percentage.

As stated by Nkholezeni Sidney Netshakhuma (2019). The purpose of this paper is to assess records management components, such as record scheduled, records appraisal, destroyed/disposed, retained, training of staff on the management of the student affairs records (SARs), provided access, the challenges associated with efficient management of SARs and strategies for effective management of SARs, to determine the extent the Student Affairs Department (SAD) complies with the University of Mpumalanga (UMP) records management policy.

As stated by Logan, Lorenz (2021-01-06) - The Indigenization of student affairs and services in Canadian higher education . Many Canadian higher education institutions are actively Indigenizing their college and university campuses, including the delivery of services and programming are for all students, Indigenous and non-Indigenous. Significant milestones such as the findings and calls to action of the Truth and Reconciliation Commission of Canada have renewed focus on the Indigenization in higher education. This focus may require Student Affairs and Services (SAS) professionals to change how they think about and execute their work with students for student services professionals. Through 12 semi-structured interviews with student services employees, this research study aimed to understand how they made sense of Indigenization. Indigenization requires an intentional commitment to change on both a personal and institutional level. It also involves

localization and connection with Indigenous peoples and communities. Participants identified ways they had made sense of Indigenization, including affirming Indigenous knowledge and forming meaning about Indigenization. Secondly, participants provided examples of Indigenization activities within individual university departments, through connections outside the university, and university-wide initiatives. Finally, the study summarized ways participants were learning (unlearning and re-learning) about Indigeneity in Canada. Examples of learning sources included: directly from the department of Indigenous student services, independent learning outside of the university, campus-based activities and events, and learning from Indigenous peoples. The concepts of sensemaking and sense-giving, as well as unlearning, were used to examine the data. The study found that Indigenization at this university campus is an on-going process, and those interviewed were still making sense of Indigenization. This study captures a specific moment at a post-secondary education institution in British Columbia for Indigenous students and Student Affairs and Services professionals.

As reported by Samson O. Adigun, Temitayo Ejidokun, Emmanuel C. Uche-Ihesiulor (2022), "An Executable Model for Student Registration System using Timed coloured Petrinets" - Student Registration System for Universities (SRSU) as a kind of management information system can not only record the information for student registration each term quickly and efficiently, but also do statistics on the students' basic information, registration information, and payment information and give results of the analysis. The background of the subject is analyzed in the paper firstly, and the technologies used in the development are introduced. Then the implementation of the system is given in detail. The upgrade and expansion of the system are prospected at the end of the paper.

According to Cardoza, Reyven F., Serwelas, Emmanuel M., School: Lemery Colleges (2019) - The developed study was entitled “Android-Based Doctor-Patient Appointment System” which aims to help the patient in the clinic when it comes to the process of getting an appointment with the doctor. It also helps the doctor to prevent a long line in waiting for consultation which causes overcrowding inside the clinic. The developed system will also avoid the hard time for accessing and updating the patients’ records on time. The developed system will be running using Android Operating System. The system requires android devices like phones and tablets. The application can display the available appointment dates for the patients to choose their preferred day. The application also accepts information of the patients like the name, birthday and address of the patients. Information of the patients will be saved to the database of the application. Once the patients confirm their appointment based on the available dates, it will update the doctor and staff for them to prepare the clinic for the arrival of the patients. The application can also notify the patient if the appointment was cancelled by the doctor. This is all possible since the application works with internet connection. The system won’t work on java phones or any other mobile device which is not android. The application doesn’t include confidential information like the illness of the patients to make sure that their privacy was taken care of the application. The progress of setting appointment depends on the speed of the internet. The available appointment days vary depending on the availability of the doctor. The patients cannot send private messages to the staff or doctor since the application is ideal for doing appointments only. The system doesn’t have the capability to display the fees associated for the checkup.

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