

**A WEB BASED MANAGEMENT INFORMATION SYSTEM WITH APPLICATION FOR SAN MATEO SENIOR HIGH SCHOOL**

**A Capstone Project**

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**Chapter 1**

**INTRODUCTION**

* 1. **Background of the Study**

One of the primary concerns of the registrar’ office is to monitor the records of students from time to time and every semester. As time goes by, the office struggles with the monitoring and tracking of records since every year the population of the school gets bigger and bigger. It is hard for the registrar’s personnel to monitor the record since the school doesn’t have the system to do it. It includes the name of the student, history of students’ previous school, and their status or standing in the school. The personnel also encounter a hard time of generating a lot of details for their report.

The proponents would like to create a system that will enable the faculty of the school to track the students' records. The proposed system is entitled “Students’ Information System” for San Mateo Senior High School. San Mateo Senior High School is the biggest public senior high school located in San Mateo, Rizal It offers different tracks such as the academic and technological vocational and livelihood. The school has more than a thousand students wherein the teacher-in- charge in the registrar’s office finds difficulty in tracking and monitoring the students’ record at once. In this line, the registrar’s office and all advisers need to track and monitor the student’s records to their respective sections/strands

* 1. **Objectives of the Study**

The researchers conducted a statement that addresses the problems and objectives about the study.

*1.2.1 General Problem*

The school’s registrar’s office and teachers monitor the records of students from time to time and every semester.

*1.2.2 Specific Problem*

The researchers conducted an interview with the school principal and requested to state the specific problem they encounter within the senior high school.

* Monitoring the population of students entering the school and their previous school records.
* The registrar’s office tracking the records of a student.
* Teachers fetch the records from school to home just to record.
* Students get their modules and activities to school and even their report cards.

*1.2.3 General Objective*

The general objective of this study is to enhance the fetching of records and monitoring student’s performance in the school with the use of management information systems.

*1.2.4 Specific Objective*

* To provide an operative and labor-saving recording of student’s performances.
* To let the students notify about their inputs of grades and rankings
* To provide computerized access to the important records in terms of academic management for report cards.
* To provide a system that will help the school to have only one main tool that can be used for managing the academic performances, inputs and records of a student

**1.3 Scope and Limitation of the Study**

Scope and limitations contain what information or subject is being analyzed and the explanation why other subject points were excluded.

**Scope of the Study**

* This study focuses on inputting, getting and monitoring the records of students by the teachers in the Senior High School.
* This study will provide the students viewing their grades as well as printing them and notifying if they are in the honor list.
* This study can provide assistance to the teachers to upload modules, activities and even the events in school and then students viewing, downloading and getting notifications.
* This study also provides the creation of reports processing in the senior high school.

**Limitations of the Study**

* This study is dedicated only to San Mateo Senior High School.
* This study does not include the documents needed from the DepEd.
* This study does not include the registration of the students.
* This study will not be responsible for any unsaved data when having technical issues.
  1. **Significance of the Study**

The significance of the study aims to provide a stress-free and manageable way of recording and collecting student information that will help San Mateo SHS to improve much more in their work.

**The School.** The Web and Android Based management information system will improve the way of recording and collecting the information of students in terms of lessening work time, the number and work of students will be monitored as well that can help the school in providing effective solutions when gaining more students entering the school and students works.

**Teachers.** It will help them to organize and maintain the student information. To avoid missing documents of the student records.

**Students.** Who can use this research as their guide in their upcoming research to let them add more features or upgrades in the existing system and use it in the next generation.

**Researchers.** This study can help the researchers to fulfill the tasks of developing a system or program that will help the teachers with getting done with their work and students with their modules in the most convenient way and to have this study reviewed for future reference.

**Future Researchers.** This study would help the future researchers to be aware and knowledgeable of the process in…. It would help them to be a better analyst and it can be used as a future reference for more studies in the future. This study can serve as their guide in reaching their goals.

**Operational Definition of Terms**

***Management Information System*** it's an easy and quick way for teachers and students to save the documents they need to print and publish and make them available on the web. This system collects data from multiple online systems, analyzes the information, reports the data, and helps management make decisions.

***MySQL*** is a relational database management system that is free and open-source (RDBMS). "My" is the name of co-founder Michael Widenius's daughter, and "SQL" is the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables where data types can be associated to one another, allowing the data to be structured.

***V-Model*** It is an example of the broader V-model and shows a development process that can be considered an extension of the waterfall paradigm. After the coding phase, the process steps are twisted upwards to form the traditional V shape, rather than continuing down in a linear manner.

***Agile Methodology*** Adaptive planning, evolutionary development, early delivery, continual improvement, and flexible responses to changes in requirements, capacity, and understanding of the problems to be solved are among the practices that include requirements discovery and solution improvement through the collaborative effort of self-organizing and cross-functional teams with their customers or user(s), adaptive planning, evolutionary development, early delivery, continual improvement, and flexible responses to changes in requirements, capacity, and understanding of the problems to be solved.

**CONCEPTUAL FRAMEWORK**

This chapter contains the conceptual framework diagram of the study and some of the related literature, local and foreign where this defines the relationship of the proposed study with the existing study.

The conceptual framework of the study displays the input – process – output of the system. The input shows the knowledge and software requirements needed for the development of the system, the process shows the models or methods used in transforming the inputs into outputs.

Input Process Output

**Knowledge Requirements:**

Records

Viewing

Input and Output of Data

Releasing of Records

Achievements

School Forms

**Software Requirements:**

a. Microsoft Windows 10 OS

b. Python

c. XAMPP

d. MySQL Server

**Hardware Requirements:**

a. Processor: Intel i3 and above

b. Minimum of 2GB RAM

C. Must be at least 25GB HDD

**System Planning:**

a. Data Gathering

- Interview

-Survey Questionnaire

**SDLC Agile Method**

1. Requirements

2. Design

3. Development

4. Testing

5. Deployment

6. Review

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Feedback

***Figure 1.*** Conceptual Framework of the System

This figure above consists of knowledge, software, and hardware requirements needed to be able to develop a system. Also, it includes the software development life cycle which will serve as a guide to have a convenient and quality system.

# **Chapter II**

**Local Related Literature**

According to Benzar, G. (2021) state that “Designing and Implementing e-School Systems: An Information Systems Approach to School Management of a Community College in Northern Mindanao, Philippines” (2021). Colleges and Universities have been established to provide educational services to the people. Like any other organization, the school has processes and procedures similar to business or industry that involve admissions, processing of data, and generation of reports. Those processes are made possible through a centralized system in storing, processing, and retrieval of data and information. The absence of a computer system and the complexity of the transactions of the college which makes the personnel be loaded with paper works in storing and keeping student records and information is the motivating factor why the School Management Information System has been designed and developed for a community college in the northern part of Mindanao. This paper discusses the Major Functionalities and Modules of the system through its implementation methodology which is the Agile Model and its impact on the delivery of services and procedures in the overall operation of the college. The project has been evaluated based on ISO 25010, a quality model used for product/software quality evaluation systems. Based on the results of the evaluation, SMIS has been Functional, Usable, and Reliable with an average for every criterion above 4.04 indicating very good performance based on a Likert scale descriptive interpretation. Based on the preceding findings of the study, the respondents agreed that the developed e-school system was functional and lifted the transaction process of the school. The overall quality and performance of the system was very good in terms of functionality, usability, and reliability. It is recommended that future development such as the smartphone and tablet-based attendance monitoring should be integrated, a kiosk for grades and schedule viewing should also be placed inside the campus that is connected to the database server.

According to Kirsten, B. (2020) As per research in “Proposed Student Information System for Academia De Le Carre Inc.” (2020). Student information system (SIS) is a software for education that manages students and keeps all the data of a student. The proponents proposed a system to Academia De Le Carre that has a current problem in terms of keeping the all-student data in a secure and organized file. The proposed system has a huge help to the admin, academic personnel, students, and parents in updating, retrieving, and generating the student’s data. The system can also effectively acquire, store, and retrieve the information of a student. The proponents used the systems development life cycle. First, they planned to know the process and the problem. The proponents created a questionnaire and interviewed the client to have an effective and efficient system. Second, analysis was conducted when the developer gathered the information to know the process and discuss the client system. The proponents started to analyze how the system will work according to the client’s requirements. Third, the developer created the functions of a system according to their chosen client. The developer will make a progress to the system step by step. Fourth, testing and implementation ensure that the developer will test the client’s system first if the system has a problem and need to construct from a time. After testing the system, the developer will discuss and conduct a seminar with the client or user to know how to use the system properly. Lastly, in terms of maintenance, there will be an agreement between the client and developer, which involves making changes and upgrading the stated system. The researchers developed the following deliverable: (1) Log-in Form, (2) Create Account, (3) Main menu, (5) Search Student, (6) Admin Form, (7) Manage Account, (8) Reports Builder, and (9) Drop List Form. All these deliverables can help the establishment in properly managing the student data, thereby resulting in categorized, organized, and secured information. In this project, the system focusing on keeping the information of a student in a secure way, organized, and have a soft copy of the information. The system can store and save student data. The system can also easy to locate the information needed by the student and provide a hard copy for the student.

According to Lacdao (2019) As stated in “Student Information System Bulacan: Administrative Management (Visitor Management, Facilities Reservation Management, Legal Management, Document Management, Point of Sale)” (2019). A business develops in course of time with complexities. With increasing complexities managing the business has become a difficult tasks. The need of existence of management has increased tremendously. Management is essential not only for business concerns but also for banks, schools, colleges, hospital, hotels, religious bodies, charitable trust etc. Every business unit has some objectives of its own. The modules itself is sub grouped into learning units which aid in giving the students an in depth understanding of the subject at hand. Organizational and administrative methods of management occupy an important place in the overall system of scientific management tools. The essence of these methods is implementation by the subject of management of practical measures aimed at ensuring the coordinated behavior of individual elements of the control object in order to achieve the optimal result.The process of accepting and preparing for presentation at an academic conference is administrative. The process consists of either invited or proffered submissions of the Administrative or summary of work. The Administrative typically states the hypothesis, tools used in research or investigation, data collected, and a summary or interpretation of the data. These information system are exist certain defects, also need education administrator, administrative management system of current for further improvement, effectively combined with the actual development and quality control measures and other content. Identifying errors and correcting them will result in a more efficient methodology which will waste less time and often fewer resources as well, which will guarantee better results. The good administrative management brings a company various benefits. Below, we’ll address some of the most important modules that have the greatest impact on everyday business operations. The proponent to prepare a proposal for organization of school’s administrative operations. The proponent is to work in parallel and to coordinate its work with the group for the academic organizational structure.

The relation of this study to ours is that management system of current for further improvement, effectively combined with the actual development and quality control measures and other content for prepare a proposal for organization of school’s administrative operations.According to A, Eulin (2019) the “Student Information System Bulacan: Core Human Transaction 3 (Guidance, Library, Medical, Safety and Security, Student Organization)” (2019). Core Human Transaction typically means to engage, improve and preserve significant information record of the student’s, to implement the activities essential to achieve organization aims. It focuses towards learning and continuous improvement that fosters an equal opportunity and fairness in all aspects of student’s. Briefly if summarizes the objectives, goals, and background of the project and the system development. The methods the proponents used in the development of the project and the project planning was discussed. The quality of each project that the core human transaction department finishes guarantee every single human being that it is reliable fail safe and has been done with pure effort and hard work. Student Record System maintain records of student information. The courses and modules on which they registered and the outcome of their studies. The system maintains personal information for each student record at the Bestlink College of the Philippines –Bulacan. . This information consists of the student’s registration number known as “Student Number Forename, sure name, gender, home address, term time of address, and date of birth there are two distinct categories of student with the school. Under graduate students and Post Graduate students. The student information system is required to provide a useable and well managed interface for student, academic and administrator users to view and manipulate the data for each which it is responsible. Agile Scrum Methodology has five phases to using in our system it is composed initiating, planning, executing, monitoring and controlling and release. These implemented in our system that an organized and build the main goal. The group was going to set and designing per sub-module, were going to research and get some information to others specially were conduct interview to give a simply way that system has been to work flow and give a solution. Improving and analyzing in system to organized the process, and were looking out what lacking in our system to give an opinion to each other. This Process of the Core Human Transaction 3. That view all the records of students in transaction between the Guidance, Library, Medical, Safety and Security, and Student Organization. All the information of student are handle by the data information which corresponding by this sub-module to manage and to update the information of the student to manage the current information between the records of the student and student information that collaborate to fulfill.

**Local Related Studies**

According to Ben, A. (2022) Stated by the researchers in “Quality Evaluation of an Adviser's Management System (AMS) in Selected Secondary Schools in Eastern Samar, Philippines” (2022). Record management is a vital function of any institution to ensure the quality of learners’ performance most especially in the schools' division of Eastern Samar. Hence, sequential explanatory research was conducted to assess the level of acceptability of a researcher-made Adviser’s Management System via ISO/IEC 25010:2011 standards. This two-phase study includes the assessment of the AMS via a 5-point Likert scale questionnaire which was followed by a focus group discussion among selected 45 senior high school teachers in three districts in the said locale from November 2020-2021. The collected data were analyzed using weighted mean and Kruskal Wallis-H test for phase 1 while Collaizi’s qualitative analysis approach for phase 2. Findings revealed that the Adviser’s Management System (AMS) is very highly acceptable in terms of the ISO/IEC 25010:2011 Standards. The lack of significant difference in the overall level of acceptability of the AMS showed that it can be utilized by any teachers handling senior

highschool classes in the country, irrespective of their class sizes. Finally, the participants faced time constraints and technological inefficacy which pushed them to suggest the inclusion of one-click –derived all features of the AMS as well as the giving of FAQ-based handbook. Hence, it is suggested to redesign the AMS to include classes of junior high and elementary classes, and to upload the system online via a complex program or android-based application According to Nephi, R. (2022) As said by Mr. Romano and Mr. Castro in “Multivariate Analysis: Investigating the Adoption of Customer Relation Management System among the Business Establishments in Butuan City, Philippines” (2022). The descriptive information about CRM system acceptance using technology organization-environment framework, most of the business establishments responses are verbally interpreted as “acceptable”, while the features of CRM system such as compatibility, relative advantage, and complexity are verbally interpreted as “high” and the possibility of adopting CRM system is verbally interpreted as “influential” indicating that the factors included in technology adoption models are effective in projecting the intended results while most of the organizations agreed that CRM system can help them in improving their business performance while providing better customer service and customer relationship management. The purpose of this study was to determine the usefulness of different types of multivariate analyses in predicting CRM system adoption among selected commercial establishments in Butuan City, Philippines. The researchers employed the Technology Acceptance Model (TAM), and the Technology-Organization Environment (TOE) were used as independent variables, the Diffusion of Innovation (DOI) was used as a mediating variable, and respondents' profile was used as a moderating variable. The researchers generated empirical data for both descriptive and correlational analyses by utilizing the Multiple Regression Analysis (MRA) model, Hierarchical Regression Analysis (HRA) moderation, Hierarchical Regression Analysis (HRA) mediation analysis, and Analysis of Variance (ANOVA) techniques. The researchers were able to collect 148 responses out of 1,765 registered business establishment in Butuan City, and data were treated with different type of statistical tools. The results of ANOVA test showed that there are no significant differences on the assessment of the features of CRM system indicating that most of the respondents agreed that CRM system can have value in their business once it is implemented in their respective organization. The overall likelihood of CRM adoption among the business establishments showing Rsquared of .863 indicating that the MRA model predicted 86 percent of the variance in technology adoption core contexts model that can explain factors influencing business establishments in Butuan City to implement CRM system as part of their marketing strategy. The HRA moderation model showed that the respondent’ profile cannot moderate the relationship between the level of technology adoption contexts and the possibility of CRM system adoption showing new finding. The mediation analyses revealed that perceived features of the CRM system have no significant effect to the relationship between the level of technology adoption contexts and the possibility of CRM system adoption the finding contradict to the previous study where in the CRM system features can influence to adoption. The findings have practical implications for business owners considering CRM adoption as part of their marketing strategy. Though the researchers believed that this study has contributed a lot to the body of knowledge of CRM system adoption both in local and international context and were able to expand the TAM and TOE frameworks through adding constructs that are relevant to the study, the results of interpretations and analyses are still not enough because of limited sample size, limited coverage on target population, and some factors in technology acceptance models are not included in this study.

According to Nicolas, E. (2020), As researched in “Proposed Library Borrowing and Returning System for Kalayaan National High School” (2020). A library borrowing and returning books system are helpful to Kalayaan National High School (KNHS) because the school still uses a manual process in recording borrowing and returning of books. Many pieces of paper are required to fill up the requirements to borrow a book. Thus, this system tends to replace “paperless” transactions and will make any transaction easier and faster. The offline library borrowing and returning books system do not need an Internet connection; hence, it will help KNHS to secure all the books to be returned. This will help them also to have an organized borrowing and returning process that they need to apply in their library. This chapter will discuss the research methods available for the study and what should be used in response to the statement problem in chapter 1, which is directed toward the ability of the borrowing and returning books system to motivate the students to return the books to the library by using a high-quality process. In the planning stage, the researchers gathered information, determined the needs for the system, identified the risk of the project. In the implementation stage, the proponents started coding according to the client’s needs. In the testing stage, the researchers started to search for an error in the system. In the documentation stage, the proponents documented the improvement of the system. In the deployment, the proponents deployed the system after it has been approved for release. Lastly, in the maintenance, the researchers maintained the system if any issue comes up and needs to be fixed or any enhancement should be done. The researchers developed the following deliverables : (1) log-in form, which is for the administrator who controls the overall system; (2) borrowing form, which is the form that users should fill up to borrow a book; (3) returning form, which is the form that should be filled in when returning a book; and (4) history/records form, where the admin sees all the records of all borrowers. The library borrowing and returning books system will help the school to have a proper and formal set in using the library system. The Librarian will recognize the students when the books were not returned yet. In this system, the students will have a formal log-in when they borrow books, which means less hustle when returning them. Upgrading and innovating are the key factor that is for an efficient and convenient system.

According Lacificar (2019) to As research in “Smartphone Usage and Academic Performance of College Students” (2019).There are varied views about smartphones weighed benefits and deemed disadvantages to academic performance. The researcher would like to break in the barrier between this prevalent yet still perplexing matter. This study described the relationship of smartphone usage and academic performance of college students in a faith-based institution. A descriptive correlational design was used to purposively sampled 75 students. Of the 75, 51% have high grade point average and 47% were using smartphone for an average of 5-8 hours per day. Students claimed they need smartphones in classroom primarily to provide additional resources for research work. However, they only use smartphone moderately to support their classroom learning. This study ascertained that most of the teachers were distracted when students use smartphones in the classroom. Nevertheless, the use of smartphone in the classroom has neither negative nor positive impact to student’s learning. The study revealed no significant relationship between extent of smartphone use to support classroom learning and academic performance, between classroom learning and academic performance and between impact of smartphone use in classroom to learning and academic performance. However, this study showed a moderate, negative, significant relationship between hours spent in using smartphone per day and academic performance. This implies that the more time is spent in using smartphone, the lower the academic performance. Therefore, there is a need to regulate if not totally prohibit the use of smartphone in the classroom. Nonetheless, students must be encouraged to minimize the total number of hours spent in smartphone use per day.

According to Hazel B., Absence is the state of being away from a place or a person. Reducing absences is important in uplifting the students’ academic performances, which include attending school every school day. Being physically present in school can help the students to be successful. There are some strategies on how to avoid students’ absenteeism, and these strategies maintain their good attendance record to have a good performance in their work. The reason why we chose this kind of topic is that we want to help the students to maintain their good attendance records. We also want to know the reasons behind their absenteeism for us to help them resolve these kinds of problems. This study used a descriptive research design. The researchers used a survey method to easily gather the necessary information. The respondents of this study were 50 students that were selected from Grade 12 Accountancy, Business, and Management Strand. Based on the study, the following are the factors that affect the absenteeism of the students: (1) Financial –There is a negative effect to the students regarding their absences, especially for students who do not have enough budget and management skills on handling their money. Parents’ insufficient income to support educational expenses may also affect the absenteeism of the students. (2) Family –It has also a negative effect on the students in terms of absences because when the family members are having problems such as disagreement, there will be a lack of communication and time with each other to get together. (3) Poor nutrition affects the students during class discussions. The researchers recommended that students should know how to manage their allowances. The family should support the students in all aspects of their studies by providing guidance and having quality time with the students. Parents and teachers should reward the student’s small or large achievements in school for the students to continuously be motivated in their academic classes. They should also give proper counseling with the help of a school guidance counselor when they commit consecutive absences for them to resolve the problem immediately, thereby affecting the academic performances of the students.

**Foreign Related Literature**

According to Ms. Vivienne V. Forrester in the literature “School Management Information Systems: Challenge to Educational Decision – Making in the Big Era” (2019). Despite the benefits of school management information systems (SMIS), the concept of data-driven school culture failed to materialize for many educational institutions. Challenges posed by the quality of data in the big data era have prevented many schools from realizing the real potential of the SMIS. The paper analyses the uses, features, and inhibiting factors of SMIS. The paper proposes a five-phase conceptual model that assist administrators with making timely, quality decisions. The paper enriches the theoretical landscape of SMIS usage in the era of big data and lays a foundation for the future by establishing an educational decision-making model.

Based on Mr. Yohannes Kurniawan and Mr. Albertus Andika “Development Of Web Based School Management Information System (A Case Study Approach)” (2019). The Objective of this research is to analysis and design web-based school management information systems that will provide leverage for school whom need the application to support the efficiency and effectivity of learning, teaching, and administration purposes. Analysis methods composed from two methods, which is current system analysis and recommended system planning. Current system data collection method included direct survey to school, interview, and research from literature. System design and recommendation method based on OOAD (Object Oriented Analysis and Design). We created the model of information system to provide solution and guideline to school when they want to develop management information system. Summary of this research is provided model of analysis and design to leverage school whom need the application to support the efficiency and effectivity of learning, teaching, and administration purposes.

As stated in “Use Of Website-Based School Management Information Systems In Improving The Quality Of Education Services” (2021). In this study, researchers used Research and Development (R&D). The problems in this research are 1. How to change the mindset and lifestyle of the community? Many conveniences and functions of the use of digital media, encourage educators and education staff to provide service, strive to be able to use and utilize information and communication technology in the use of digital media in every educational service activity. 2. How the function of using digital media includes: the process of education services and the division of tasks for educators and education staff in improving the quality of educational services. This research uses a descriptive qualitative-quantitative method. The use of a website-based school management information system in improving the quality of education services, in MTs. Miftahul Huda Tegalwaru, Karawang. The feasibility test for the use of a website-based school management information system in the form of application content design aspects and information data presentation, with a percentage of 87.85 % having "very feasible" criteria for field trials. The quality of education services with a percentage of 15.5%, is less than satisfactory, due to the limited time the practical material presented by the presenters is deemed inadequate. The tendency to behave actively with a percentage of 18.43% and an increase in final behavior with a percentage of 22.71%, an increase of 4.28%.

According to Apriyani (2022) Schools as one of the education industries must be able to keep up with the speed of information. Quality schools can be seen from the results of the results. School programs are able to run well and achieve the goals that have been set by the school. This is certainly the implication of the application of management information systems in the framework of decision making by school management. This research is qualitative research or research. In general, qualitative research has two main characteristics, namely:  First, data is not in the form of numbers, more in the form of

narratives, stories, written documents and unwritten. Second, qualitative research has no absolute formulas or rules for processing and analyzing data. In the world of education, qualitative research aims to describe a process of educational activities that is based on the process of educational activities that is based on what happens on the ground as a study material to find its weaknesses and shortcomings so that it can be determined improvement efforts. In the face of globalization, the indonesian education world must immediately improve itself in improving information systems to support the competitiveness of human resources produced by these educational institutions.  The information system that will be created must be balanced between the available technological infrastructure and its human resource capabilities so that there is no very far-reaching inequality and information systems cannot be significantly realized in supporting the quantity and quality of education fundamentally.  In addition, information systems are increasingly needed by educational institutions, especially in improving the smooth flow of information in educational institutions, quality control and creating cooperation with other parties that can increase the value of educational institutions.

As indicated in “Educational practices and management information system in managing driving school on website-based gtc” (2021). Course institutions are indispensable to support people’s education by taking courses that can explore their potential. Global Training Centre (GTC) is a driving school in Sragen. However, the current registration system still uses manual means, and data management has not been computerized, so that the performance is less effective and efficient. This research aims to design a web-based management information system in managing the driving school at GTC. The software development method uses the waterfall method by utilizing UML (Unified Modelling Language) consisting of ERD, case diagram, activity diagram, and wireframe. The results of website development research are to provide ease of participants in registering to the course and facilitate GTC in managing course institutions to produce more optimal services.

**Foreign Related Studies**

According to Brenda S. As said in “Learning Management System-Based Evaluation to Determine Academic Efficiency Performance” (2020). At present, supporting e-learning with interactive virtual campuses is a future goal in education. Models that measure the levels of acceptance, performance, and academic efficiency have been recently developed. In light of the above, we carried out a study to evaluate a model for which architecture design, configuration, metadata, and statistical coefficients were obtained using four Learning Management Systems (LMSs). That allowed us to determine reliability, accuracy, and correlation, using and integrating the factors that other researchers have previously used, only using isolated models, such as Anxiety–Innovation (AI), Utility and Use (UU), Tools Learning (TL), System Factors (SF), Access Strategies (AS), Virtual Library (VL), and Mobile Use (MU). The research was conducted over one year in nine groups. The results from an LMS Classroom, architecturally and configuration-wise, had the highest level of performance, with an average of 73% when evaluated using statistical coefficients. The LMS Classroom had a good acceptance and a greater impact: SF, 82%, AI, 80%, and VL, 43%, while out of the seven factors, those with the most significant impact on academic efficiency were TL, 80%, VL, 82%, and MU, 85%.

According to Sangeeta (2021), As indicated in “Moderating effects of academic involvement in web-based learning management system success: A multigroup analysis” (2021). While several educational institutions in India, in accordance to global practices, have adopted Web-Based [Learning Management Systems](https://www.sciencedirect.com/topics/computer-science/learning-management-system" \o "Learn more about Learning Management Systems from ScienceDirect's AI-generated Topic Pages) (WLMS) to supplement classroom courses, it is largely seen that these WLMSs fail in their objectives, leading to little or no [return on investments](https://www.sciencedirect.com/topics/computer-science/return-on-investment" \o "Learn more about return on investments from ScienceDirect's AI-generated Topic Pages). The study aims to define the factors that affect students’ acceptance of a web-based learning management system and test the moderating effect of their academic involvement in the success of a WLMS. 477 valid questionnaires were collected from university/college students to empirically test the research model using the [structural equation modelling](https://www.sciencedirect.com/topics/nursing-and-health-professions/structural-equation-modeling" \o "Learn more about structural equation modelling from ScienceDirect's AI-generated Topic Pages) approach. The results concludes that indirect and direct effects account for 49% of the variation in the intention to use, which is explained by technical system quality, information quality, educational quality, service quality of the technical support team and user satisfaction. High academic involvement moderates the impact of different service qualities of the WLMS on user satisfaction, intention to use the system, and success of the WLMS. Based on the findings, theoretical and managerial implications are discussed.

According to Ghaliya A. (2020) As said in “A Study of Learning Management System with E-Learning” (2020). E-Learning field growing dramatically in this generation. Today generation is the technology time that uses technology universally. It is making learning easier and flexibility in taking materials. The management of the learning system is the core issue to develop the skills of learning and improving the students’ performance of learning. The students face problems in learning using the traditional methods and regular activities and that reveals to their level of the study. We conduct a survey on the e-learning system and discuss the method used. The finding was recommended for some e-learning system than the other based on the result of students' skills. This reveals of using the e-learning system reflected its result in educational instructional significantly in the high level of the study of the students and student's performance.

According to Johanna N.(2020)As stated in “Investigating synchronous and asynchronous class attendance as predictors of academic success in online education” (2020). Learning is facilitated by participation and interaction and can be synchronously or asynchronously in online education. This study investigated the relationship between students’ academic success and online interaction and participation and explored their class attendance (synchronous virtual classes and/or watching the recorded virtual classes) in the online study mode of an enabling program at Southern Cross University in Australia. The Preparing for Success at SCU Program equips students with study skills for success at university. The data were retrieved from usage information data provided by the Blackboard Learn learning management system. The results show that it is important for students to attend class, but it does not necessarily make a difference whether students attend synchronous virtual classes or watch the recordings of the virtual classes. A significant relationship was found between academic success and the number of hours students participated in and interacted with the online learning system. Academic success may be increased by providing various options for students to participate and interact online, and to attend classes synchronously or asynchronously. The flexibility of online education can enable students to be successful in their studies. The inclusion of varied activities is therefore recommended to increase academic success in online education.

According to Abdulaziz A.(2019), As says in “Utilization of Learning Management Systems (LMSs) in higher education system: A case review for Saudi Arabia” (2019). There is a strong global trend toward utilising Learning Management Systems (LMSs) in academic institutions as a part of their educational management system to improve the teaching and learning experience in higher education system. Most of the universities in US, UK, Canada and Australia including 28 universities of Saudi Arabia are using different LMS systems for their academic activities. All LMS systems fully depended on the existing information and communication technology (ICT) infrastructure and using computer technology to use the system. This paper reviews different features of commercially available and mostly utilized modern LMS systems including a comparative analysis. A case study focused on the universities of Saudi Arabia was also carried out.