

**EDUCATION INFORMATION SYSTEM**

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# DECLARATION

I declare that this research proposal is my original work except for quotations and citations that have been herein duly acknowledged and it has not been previously and is not concurrently being submitted for other degree at Meru University of Science and Technology or any other university or institution.

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# CHAPTER ONE

## 1.0 INTRODUCTION

This chapter covers background of the study, problem statement, proposed solutions, objectives of the Study, justification of the study, project scope and limitations of the study.

## 1.1 Background of Study

 It is a system of people, technology, models, methods, processes, procedures, rules and regulations that function together to provide education leaders, decision-makers and managers at all levels with a comprehensive, integrated set of relevant, reliable, unambiguous and timely data and information to support them in completion of their responsibilities’ (Bhatti & Adnan, 2010)

Information systems enable countries to be cost‐efficient and effective in their education planning. When institutions and guided by a clear vision and strategic planning, an Education Management Information System (EMIS) helps policy makers manage an education system to produce quality outputs .

Every institution requires the passage of information from one person/department to another person/department. However, how the communication takes place varies from one person to another. For instance ,in the education sector, Lecturers communicate to students by sending assignments and notes through emails to the class representative who then sends the assignments to students. The lecturer may still use social media as another way to connect to students. for instance using the so called ‘whatsup’ .This however is not a formal way for the interaction between the two parties.

## 1.2 Problem Statement

Students sometimes may want to consult the lecturer on a certain task/assignment for guidance or seek further understanding of the notes sent by the lecturer. The best the student can do is a phone call, or text the lecturer on the same which comes with challenges such as not having enough credit for a call. Even if there was, it’s not a guarantee to find the him/her on the phone.

The fact that communication happens in that way is an issue to lecturers in the sense that different lecturers will have to acquire the emails of all the class representatives or their phone numbers in different departments in the school in order to get to the other students.

It is also an issue to students in the sense that students may want to consult or ask questions for clarity to the lecturer but he/she is not available at the point the assignment/notes reaches the students.

Assignments are done by the students and it’s the work of the class representatives to collect all the assignments for submission; one of the problem that exists in doing that is that the class representatives may not be available or may delay with the submission because of themselves not doing the assignments on time or issues with the students tracing the class representative’s location.

## 1.3 Proposed Solution

The system should be able to allow lecturers to post assignments and notes to students.

The system should be able to give duration for the submission of the tasks assigned by the lecturer to the students after which the assignment expires and no submission can be done after the date has passed.

The system should be able to provide a chat platform between the students and the lecturers in respect to the assignments posted by the lecturer and any question regarding the notes that was also posted by the lecturer on the system.

## 1.4 General objectives

The main objective of the proposed system is to create a standard and reliable way in which lecturers will be communicating with students in giving out assignments and notes and provide a platform for the students to consult any issue regarding the assignments and notes posted by the respective lecturers.

## 1.5 Project Objectives

1. To allow posting of assignments/tasks and notes to students by different lecturers in their respective programs.
2. To allow for interaction between students and lecturers in specific departments through the chat platform on issues regarding the tasks and the assignments given.
3. The assignment given should elapse upon due date and no further submission of the assignment by the student.
4. The student should provide prove of work done to the lecturers though the system.

## 1.6 Project Justification

The project will help students in learning more by interacting with their respective lecturers on a platform.

The project will reduce the lecturers need to acquire ways to communicate to a class over an issue since they will be communicating directly to students.

## 1.7 Project Scope

The project system aims to include all the departments of the school and all the specific lecturers assigned to each school.

The project system also aims at solving the different platforms of communicating to students by providing only one platform for communication

## 1.8. Project Limitations

The period of time stipulated for this project might not be enough to include the school management and the role they play in this project system such as evaluating the lecturers services based on the students comments on the type of tasks given .This however will be mitigated through the use of Simulations in case time runs out before testing

# CHAPTER TWO

## 2.0 LITERATURE REVIEW

## 2.1 Introduction

The following chapter comprises of two sections. The first section elaborates similar systems that have been done and examines the work of the specific researcher, previous findings and summarizes information in the same field of study. The second section looks at the gap identified by the researcher that the proposed system is to accomplish

## 2.2 Existing System Review

**2.2.1 Educational Management Information System (EMIS) in Public Elementary School**

(Odinah Landero Cuartero and Mylene Role)

The study was conducted to determine the extent of effectiveness on the implementation of Education Management Information System (EMIS) as part of educational management functions in public elementary schools of Surigao Del Sur Philippines. Descriptive survey method using a researcher-made questionnaire was used. The respondents of the study were nine selected public elementary schools from the three clusters of Surigao Del Sur Division.

Findings revealed that from the eight (8) modules of EMIS, Pupil MIS received the highest mean while Finance MIS obtained the least as to the implementation of EMIS Modules. Planning and monitoring were found to be high as to the level of effectiveness of EMIS in public elementary schools. The study concludes that most of the public schools in Surigao Del Sur Division, regardless with its type, effectively implements EMIS Modules. However, Finance MIS requires further enrichment on planning, implementation, and evaluation. Hence, the study recommends strengthening of EMIS modules particularly on Finance MIS and establishment of sustainable EMIS by sharing the best practices in implementing the EMIS of the different schools.(Enteria & Role, 2018)

## 2.2.1 Meru University student’s and staff’s portal.

The system allows for users to login in to the system and check out for various activities such as financial statements, where students can download and print their fees statements ,register units. get their exam card, do some lecturer evaluation and contains the wireless fidelity (wi-fi) credentials for internet services. The system allows the staff to key in results of students and other activities pertaining the students and the lecturers themselves.

## 2.3 Research Gap

The Meru University student’s and staff’s portal is a good system because it permits students to do most of the educational activities that are needed for a student. However, a section or gap that was left by the system was to bring the lecturers and students together through the use of a platform where students can freely interact with the lecturers on various issues such as assistance on how the work assigned to students by lecturers is to be done. also, a platform where lecturers can upload notes for students and give assignments or various tasks or any form of document that can assist the students education.

The project will reduce the lecturers need to acquire ways to communicate to a class over an issue since they will be communicating directly to students through the system. Also, students will have an easy time to interact with the lecturers in consulting various issues pertaining education.

The study of Educational Management Information System (EMIS) in Public Elementary School was done to examine the effectiveness of the education management information systems and its modules in elementary schools. However the users of the system and the role they play was ignored.

# CHAPTER THREE

## 3.0 RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter presents research methodology for the study. It highlights the research design that will be used in the study, system method implementation, identifies the location and describes the target population of the study,the research instruments and pilot study. The chapter will also explain the data collection techniques of the study

## 3.2 Research design

Notes

Students

Lecturers

comments

Assignments

Lecturers give notes and assignments to students

Students get access to the notes and assignments

Students can air their comments on the assignments and notes for consultation purposes using a chart board system

Students give prove of work done

## 3.3 System method implementation

The system will be developed using the incremental model. Incremental Model is a process of software development where requirements are broken down into multiple standalone modules , designed and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance. The product is defined as finished when it satisfies all of its requirements. This is because the requirements are clear. The product is decomposed into a number of components .each component is designed and built separately.it borrows from the iterative model.(Guru99, 2018)

**Advantages**

1. It is easier to test and debug during the cycle
2. Easy to manage risks because risky pieces are identified and delt with during its iteration.
3. Each problem is handled specifically where it is contained i.e . in its own division/group.

The model will undertake the following steps in the course of its implementation

1. Requirement Phase : Requirement and specification of the software are collected
2. Analyze And Design : Some high-end functions are designed during this stage.
3. Testing : test of software is done during this stage
4. Integration testing: it goes through testing intergrated modules.
5. Implementation : once the system is deployed, it goes into use

### Incremental model.

Implementation

Test

Analysis and design

Build 1

Build 2

Analysis and design

Test

Implementation

Build 3

Analysis and design

Test

Requirements

Implementation

## 3.4 Data collection techniques

The method to be used in data collection will be sampling

## 3.4.1 Secondary Data.

Available data for the system exists and therefore it would be appropriate and more applicable to use secondary data for the project.

## 3.5 Requirement Analysis

Essentially a software systems utility is determined by both its functionality and its non-functional characteristics. 3.5.1 Functional requirements

Functional requirements capture the intended behavior of the system(Malan & Bredemeyer, 2001)

1. **Registration/Signup** – The system should enable one to create an account using his name, email, password and by default registers someone as a student.this is because the students are many than the lecturers.
2. **Login/sign in** – After one has created an account, the application shall enable one to later login in.
3. **Request** –depending on the role, one can send different requests. E.g a student may send a request to view the assignments posted by the lecturer but only lecturers themselves can send requests to give or create the assignments for the students.
4. **Roles** -The Admin plays a role of granting roles to the users of the system to ensure everything runs smoothly. Lectures have their roles as well as students
5. **Feedback: -** The lecturers can get feedback when the students submit their work or lecturers getting feedback after being granted some roles by the admin of the system

## 3.5.2 Non-functional requirements

Nonfunctional requirements describe how a system must behave and establish constraints of its functionality.

1. **Usability:** The interface should be easy and simple for the users to use
2. **Reliability**: One should be able to get data without struggle.
3. **Availability**: This system will only be available if there is an internet connection
4. **Security**: This system will be secure authentication and will be looked upon.

## 3.6 **Logistical and Ethical Considerations**.

There will be observation of good communication skills as well as good code of conduct during the data collection process of the secondary data.

## 3.7 Feasibility Study.

This is an evaluation and analysis of the potential of the proposed system

## 3.7.1 **Technical feasibility.**

The project is a web based application and thus will use web based equipment’s such as html, php, css, and bootstrap. All this will be done in line with a php framework ( laravel) to accomplish the project.

The project is technically feasible since it can be realized with the current resources.

## 3.8 Hardware and Software Tools

## 3.8.1 Hardware tools

1. Minimum RAM 4 GB.
2. Laptop 4gb RAM 500gb HDD
3. Flash disk 4GB. For backup purposes

## 3.8.2 Software tools

1. Operating system: Windows 7/8/10.
2. Web based Application

References

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3. Guru99. (2018). Incremental Model in SDLC: Advantages & Disadvantages. *Guru99.Com*.
4. Malan, R., & Bredemeyer, D. (2001). Functional Requirements and Use Cases. *White Paper*.

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# APPENDIX

Appendix I: Project schedule.

The Gant chart below shows the time frame of all activities to accomplish in the development and implementation of this system.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Concept  Writing and approval |  |  |  |  |  |  |  |  |  |  |  |  |
| Problem  Definition |  |  |  |  |  |  |  |  |  |  |  |  |
| Requirement analysis |  |  |  |  |  |  |  |  |  |  |  |  |
| System Design |  |  |  |  |  |  |  |  |  |  |  |  |
| Build and Testing |  |  |  |  |  |  |  |  |  |  |  |  |
| Implementation and deployment |  |  |  |  |  |  |  |  |  |  |  |  |

Appendix 2: Project Budget.

|  |  |  |  |
| --- | --- | --- | --- |
| No | Resources | Quantity | Cost(Kshs) |
| 1 | Flash disk 4gb | 1 | 400 |
| 2 | Laptop 4gb RAM 500gb HDD | 1 | 25000 |
| 3 | Modem/Network connectivity | 1 | 2500 |
| Total |  |  | 27900 |