



**"DEVELOPING AN ENHANCED COMPUTER-BASED PUPIL'S
INFORMATION SYSTEM FOR LUNA COMMUNITY
SCHOOL AT LUNA, BURGOS, ILOCOS SUR"**

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Information system will benefit the school, the teachers of the school, and the students of the school.

Requirement of facilities:

Ilocos Sur Polytechnic State College is an educational institution that provides services to secondary, private, and preparatory levels of education. It has a total population of 230 pupils during School Year 2007-2008. It is located in San Nicolas,

CHAPTER I

INTRODUCTION

Information Technology permeates our society and our entire educational system. IT is information-gathering, information-organizing and problem solving that supports every discipline. People could easily transact, communicate and prepare reports. Records could easily be kept and reproduced any time as needed.

With the combination of technology and people, information systems have evolved. An information technology system, whether automated or manual, is one which comprises people, machines, and methods organized to collect, process, transmits, and disseminate data that represent user information. With an information system, any computer-related equipment on interconnected system or subsystem of equipments is used in the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of voice and/or data. An information system includes software, firmware and hardware.

A pupil's information system is essential to every educational institution by providing meaningful and timely data and information. The computer-based pupil's information system will benefit the school, the teachers of the school, and the pupils and their parents.

Background of the Study

Luna Community School is an educational institution that provides quality services to elementary pupils from Preparatory level to Grade Six. It has a total population of 250 pupils during School Year 2007- 2008. It is located at Luna, Burgos,



Ilocos Sur.

Luna Community School uses a manual paper-based system for the records of their pupils. The release of pupil's record is often delayed due to unavailability of a computer-based system to facilitate the processing of pertinent papers. Some records were also destroyed due to frequent floods or were eaten by termites. Errors in the entry of records were also encountered.

The researchers found out that for the past years, the release of records of pupils was delayed because of the manual operation under the current system. The researchers came up with a study on developing a computer-based pupil's information system for Luna Community School to improve the manual paper-based procedure they are currently using.

Statement of the Objectives

General Objectives

The research aimed to develop a computer-based pupil's information system for Luna Community School

Specific Objectives

- Identify problems in the current system of recording and processing pupil's information at Luna Community School.
 - Gather requirement for the computerized pupil's information system.
 - Design the features of the computerized pupil's information system.
 - Develop a user-friendly pupil's information system.
- Develop an implementation and maintenance plan for the computer-based pupil's information system.



Significance of the Study

A pupil's information system is essential to every educational institution by providing an efficient recording of pupil information and providing meaningful and timely data and information when needed. The faculty of the school can easily generate their reports about pupil's and personal records. Thus, the pupils can secure reports immediately as needed. The Computer-based Pupil's Information System will benefit the school, the teachers of the school, and the pupils and their parents.

Scope and Limitation

The focus of this research is to develop a computer-based pupil's information system for the Luna Community School. The system can generate reports from the stored data through adding, editing and saving pupil's personal information and print out list of registered pupil's information, view the list of pupil's and can search pupils through their names. The system is exclusively for Luna Community School. The system will not cover the subject and exam scheduling, pupil's attitudes, scores in test, class timetable and pupil's academic activities. The implementation of the system will depend upon the approval of the school authorities.

Definition of Terms

Data. These are presentation of facts, concept or instructions in a formalized manner suitable for communication, interpretation or processing by humans or by automatic means.

Database. A comprehensive collection of libraries of data.

Data Flow Diagram (DFD). A figure that illustrates the flow of data with in a system and operations performed on the data.



Data Record. A collection of elements or sequences of records that are treated as a unit.

Documentation. A written manuals, diagrams, narratives, layouts, or drawings that describe how a system functions.

File. A collection of records that can be manipulated by people or machines.

Flowchart. A graphic representation of the steps in the solution of a problem in which symbols are needed to show dataflow, hardware and the system plan.

Information. A meaningful data.

Information System. A collection of procedures, programs, equipment, and methods that process data and make it available to management for decision making.

Pupil. A child enrolled at Luna Community School.

Pupil Information System. A computerized system for the recording, editing/updating, and printing of pupil's information.

Theoretical Framework

As shown in Figure 1, the Theoretical and Conceptual Framework Paradigm describe the flow of research. The Current flow of system of Luna Community School serves as a basis of thorough definition of an appropriate system model. Researchers, then, used the system engineering model to define the data flow of the system and the process is to interview the head teacher of the school, to create a proposal, and to analyze the gathered data in planning, designing and testing so as to come up with a new Computer-based Pupil's Information System for the Luna Community School.



CHAPTER II

REVIEW OF RELATED LITERATURE

This section deals with the selected readings or concepts and studies that were useful to the researchers in the conceptualization of this study.

Our easy-to-use, integrated Elementary administration applications are proven to reduce time spent on administrative tasks to concentrate on raising pupil's achievement. Pupil's Information System has to accept process and generate reports accurately at any point of time. Any user can get the Pupil's Information as he needs it. Pupil's Information System is an integrated software package; it is a data warehouse of student information. Pupil's Information System application has been proven to reduce time spent on administrative task. Pupil's Information System facilitates networking of schools to society, schools to each other, provided they are equipped with this system.

The term information system has the following meanings: 1.) A system, whether automated or manual, that comprises people, machines, and/or methods organized to collect, process, transmit, and disseminate data that represent user information. 2.) Any telecommunications and/or computer related equipment that is used in the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of voice and/or data, and includes software, firmware, and hardware.

The following objectives have been identified in pupil's information system (PIS software):

1. Integration of systems at the data, function and institution level. The objective of Pupil's Information System is to provide quality data in a timely fashion through systems



that are completely integrated. This will provide opportunities for operational efficiency and a base for decision support activities at various levels.

2. Collection of information at the source. The objective of this System is to provide facilities for authorized users to enter information into the system directly, instead of passing the information (usually on paper) to another individual at another location to enter into the system.

3. Balance local and institutional information requirements. The objective of PIS is to address the various administrative and academic objectives of the faculties, as well as, provide the necessary support for the institutional level activities conducted by the Registrar's Office, Graduate Studies Office and Institutional Analysis and Planning.

4. Less paper driven PIS systems. By collecting data at the source and providing wider electronic access (particularly to pupil's and faculty), the intention of PIS system is to reduce the paper driven aspects of the existing systems.

5. Streamline approval procedures. Often approval mechanisms become very routine in nature and may not meet the original approval objective. The intention is to question the existing approval procedures, and where possible develop less cumbersome procedures, perhaps employing exception processing and electronic approval.

6. Better decision support systems. The objective of this system is to provide a well-integrated suite of data and online modeling tools to support various decision-making processes around admissions, course and exam scheduling, degree audit, space planning, grant estimation, etc.

7. Integration of systems with office automation tools:



Pupil's Information System (PIS) Vision:

- Provide better services to pupils, faculty, staff, prospective pupil's, parents, etc.
- Provide meaningful, consistent, and timely data and information to end users.
- Promote vision of senior management to address opportunities for change.
- Update technology infrastructure for more effective and flexible delivery of new systems.
- Promote efficiencies by converting paper processes to electronic form.

Systems Development

From System Analysis Design, 2nd Edition by Kendall & Kendall, when systems analysts attempt to understand the information requirements of users, they must be able to conceptualize how data moves through the organization and the process or transformation that the data undergoes and what the outputs are. Although interviews and investigation of hard data provide a verbal narrative of the system, a visual depiction can crystallize it in a useful way.

Through the use of structured analysis technique called data flow diagrams (DFD), the system analyst is able to put together a graphical representation of data processes through the organization. The data flow approach emphasizes the logic underlying the system. By using combinations of only four symbols, the systems analyst is able to create a pictorial depiction of processes that eventually can provide solid system documentation.

One way of systems analyst can define proper system boundaries is to use an entity-relationship (E-R) model. The elements that make up an organizational system can



be referred to as entities. An entity may be a person, a place, or a thing; such as passenger on an airline, a destination, or plane. Alternatively, an entity may be an event such as the end of the month, a sale, or a machine breakdown. Relationship is the association that describes the interaction between the entities.

The standard formats for drawing an entity-relationship are only two symbols: a rectangle and diamond. The rectangle is used to show the entity while the diamond represents the relationship between the entity and other entities.

System Development Life Cycle (SDLC) is the process of developing information systems through investigation, analysis, implementation, and maintenance. SDLC is also known as Information System Development or Application Development.

SDLC waterfall model was used in making this research. It is one of the earliest models on system development. The model presents a view of what goes on during development. Researchers completed each stage before the next begins. It helps the researchers to monitor the progress of this research. By using this model, the researchers come up with a computerized system through the lay-out of what is needed to be done..

The diagram below shows the traditional or Waterfall Life Cycle that the researcher used in the study.

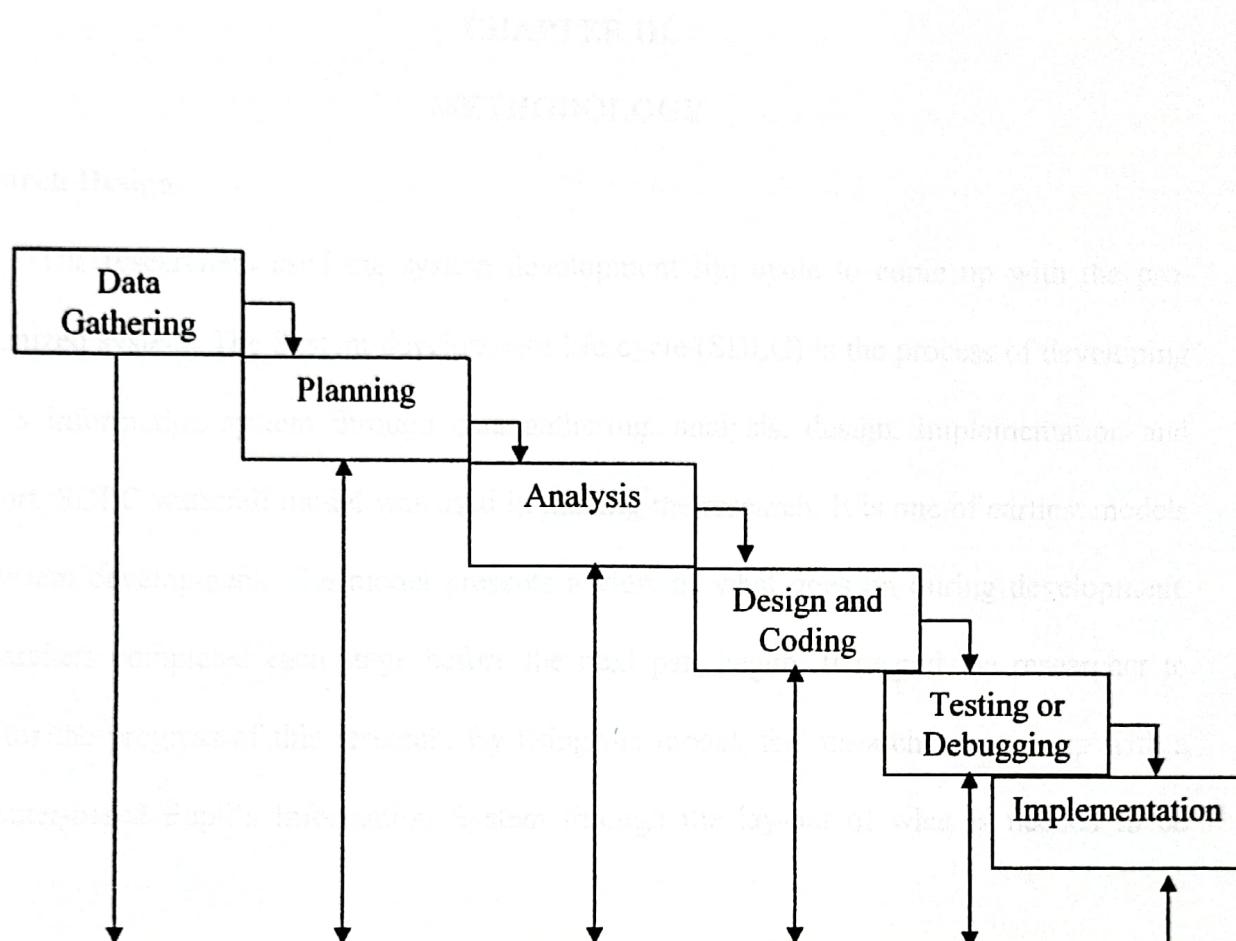


Figure 2. System Development Life Cycle (Waterfall model)

In information systems after identifying the different system, looking for a school who can help in the system followed. The researchers have chosen Ilocos Community School as the pilot school for the new information system.

Preparation for the interview took place in this phase. Question type used was the open-ended question. After the interview, required documents, products, and related materials of the existing system were gathered.

After gathering the data from interview about the system of the school, the next step is to draw the data flow diagram. This diagram includes the input, process and output of the system. The input is the source of user. Process uses the source the process of reading the data from the source.

The output is the result of the data processing of the data system. The output is the result of the data processing of the data system.



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