CHAPTER I

INTRODUCTION

1.1.Background

Information technology (IT) has opened a new era of information for today's organization (it might be business, non-profit, educational, research etc.) and has enabled it to gather and communicate information and thus function in a more effective way. On the other hand, decision-making capability of the computers has changed the pattern of authority and responsibility within the organization.

With development of such inventions like the internet, the popularity with educational technology is growing every day. Nowadays, it is one of the most preferred methods of learning. Traditional lessons have been supplemented by virtual ones. Online classes include transferring files, chat rooms and even board of progress to follow the students' success. Another benefit is that students can maintain a flexible schedule that is convenient for them (anytime, anywhere learning). It helps to combine distance education and work. "Paul Smith, (23 oct 2013), great benefits of technology in education" [online] 2015, available: http://edtechreview.in/news/705-benefits-of-technology-in-education.

Education is central to development. It is one of the most powerful instruments for reducing poverty and inequality and lays a foundation for sustained economic growth. With this aim Papua New Guinea (PNG) government has given special emphasis to educational sector and school improvement activities such as continuous professional's development for teachers, training and upgrading teachers and capacitating schools with manpower and materials are among the major actions which have been taken in both primary and secondary schools. In order to facilitate and simplify these actions one of the major tool is to have automated school management system.

Automation is the utilization of technology to replace human with a machine that can perform more quickly and more continuously. Therefore, Gerehu Secondary School Academic is

yet not equip with such Information Technology system implemented in the school which to monitor the number of students present and absent during schooling hours. Some students usually get themselves absent due to they feel like the lesion in class is boring, plain laziness to attend class and some students get caught in peer pressure or peer group related to abscond classes. This all lead to a poor academic performance when seating in exam time. The way to inform the parents is still a traditional way by calling up the parents and letting them know the number of absenteeism and the grading and rank their children/child is in class. Due to number of students, it takes a long process for and sometimes parents aren't able to make it on time due to some reason such as work, etc. For that, the parents are not informed of the number of absenteeism their child has come to and the manual system of the school does not cater for the parents to view attendance of their children online to take disciplinary measures, dose not facilitate registering student and parent as a parents of a student enabling parents to have access to the automated system to view his/her children attendance report and does not facilitate someone who is responsible for recording attendance and do not allocate student classes and subjects.

For that the researcher here by propose Student Academic Monitoring System. The design and development consists of several panels. The administration panel which facilitates the managing students and managing classes and a teacher panel which facilitates the recording of absentees of a student. A parent panel facilitates the parents to view his/her child report (status or attendance) online.

1.2.Problem Identification and Formulation.

The Identification and formulation is as follow;

1.2.1. Identifying the Problem

The problems can be clearly identified as:

1. Do not facilitate register student and parent as a parent of a student by the Administration offline.
2. Do not facilitate attendance record keeping by the home room teacher.
3. Do not sufficiently produce the required attendance reports to allow parents to view attendance of the students to help them participate in disciplinary measures and decision making.
4. Do not facilitate allocation of class for the student.

1.2.2. Problem Formulation.

According to the above stated problems, formulation of problems can be listed as:

1. How to analyze the system of Gerehu Secondary School in Student monitoring and compiling school report.
2. How to Design the system that will help solve problems that occur with the current system.
3. How to Evaluate and Test the system at Gerehu Secondary School so that it performs well for the students and parents/guardians likings.
4. How to Implement the System in Gerehu Secondary school so that it is a full system package in Gerehu Secondary School.

1.3. Research Objective.

The research objectives are described as follows;

1.3.1. Purpose.

The main aim for this research is to design and develop a reliable monitoring system producing report online for parents and guardians of students in Gerehu Secondary School Academic which may boost the academic performance of the students plus parents can monitor their child every movement.

1.3.2. Objective.

The purpose of this study is as follows:

1. A system that will register student and a parent as a parent of a student and keeping record of student's attendance in Gerehu Secondary School.
2. A system that has a web browser feature that will replicate the inputted data in stand-alone system and solves the problem that occur in Gerehu Secondary School.
3. A system that will allow parents to view status of the students to help them participate in disciplinary measures and decision making and meets the requirement in academic performance in Gerehu Secondary School.
4. A web-based system that will print result and boost the academic performance of students and parents likings**.**

1.4. Research Implications.

It is expected that the research will be useful by the following parties:

1.4.1. Practical Uses.

This research has limited users practically.

1. Administration

Administration is a person who is responsible for register a student, a staff and as a parent of a student and can manage classes of a student.

2. Teacher

A Teacher is a teacher assigned by the school director to each class of students to follow the students closely. He/she has the responsibility of recording attendance of student and submitting.

3. Parent

A parent is a person who is registered as a parent of a student by the admin after registering his/her children and responsible to follow the student in close contact with the school. He/she can view the attendance of the student in school online.

4. **Staff**

   Staff are registered from the Administration to facilitate student and Parents requirements and stores data obtained from the teacher.

1.4.2. Education System.

In the education system, this research can be of great help in the following areas:

1. Displacing of the manual school system with automated system can improve the quality of education and learning progress of students.
2. The implementation of a fast, easy and systematic way of managing student/staff profiling, registration processes, generating transcript, report, timetable and attendance record keeping can greatly influence a school's progress in a more positive way and this may contribute towards meeting the general objectives and goals of the education system.

1.4.3. Academic Purpose.

Other researchers may use this as a reference to improve and design a more effective system or related to this system and can be referenced to any other researches done later on.

1.5. Limitation of Research.

The limitations or restrictions involved in this Academic Monitoring scope; Attendance and Marks, are as follows:

1.5.1. Limited Users.

1. **Administration**

   Provide a simple and fast access to verify that the student is eligible for registration; manage classes and giving principals better tools to make their best, most informed decisions.

2. **Staff**

   Provides a easy access to teacher registration, manage class data and imports file from excel for database records.

3. **Teacher**

   Provide an easy access to record attendance in each school day. A home room teacher must log in as the home room teacher to record attendance.

4. **Parent**

   Provide fast and easy access to view the attendance of a student online. A parent must be recorded in a system as a parent of the student in order to view their children attendance report in school online.

1.5.2. Online.

It is an online school system so that clients and users can access through the use of internet.

1.6. Research Time and Location.

The location and time the research was conducted:

1.6.1. Research Location.

The Research location was done in Universitas Komputer Indonesia, Bandung, West Java, Republic Of Indonesia.

1.6.2. Research Time.

The research time was set in Universitas Komputer Indonesia, Bandung West Java, Republic of Indonesia.

Table 1.1 Research Time

SCHEDULE	MONTH																			
	OCTOBER 2016				NOVEMBER 2016				DECEMBER 2016				JANUARY 2017				FABRUARY 2017			
1. Identification of Needs	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
a. Observing																				
b. Interview																				
c. Collect Data																				
d. Document Analysis																				
2. Creating and Fixing Prototype																				
a. The Design Process																				
b .Design Database																				

c. Make Program																			
3.Testing the Prototype																			
a. Black Box Testing																			

1.7. Outline of Script Sheet.

CHAPTER 1 : INTRODUCTION

This chapter proposes the research background, problem identifying and formulation, research objectives, research use-ability and the limitation of the research.

CHAPTER 2 : LITRATURE REVIEW

This chapter contains the citing of the theories and previous studies, related to the development of the Student monitoring and attendance System

CHAPTER 3 : OBJECT AND METHODS

This chapter discusses the research methodology and procedures used in the development of the Monitoring and attendance system.

CHAPTER 4 : RESULTS AND DISCUSSION

This chapter is more on analysis and design of the Student monitoring and attendance system. It discusses the development of the proposed system, including process, data interpretation, database design, coding and software testing.

CHAPTER 5 : CONCLUSIONS AND SUGGESTIONS

This chapter is the conclusion that are been made according to research and certain recommendation been made concerning the usability and maintenance of the developed system that is outlined.