

**DEVELOPMENT OF ONLINE STUDENT PORTAL FOR TAGAYTAY CITY
NATIONAL HIGH SCHOOL - INTEGRATED SENIOR HIGH SCHOOL**

A Capstone Project
Presented to the
School of Computer Studies
City College of Tagaytay

In partial fulfillment
of the requirements for the degree
Bachelor of Science in Information Technology

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ABSTRACT

Lecture timetabling is a very important process in any educational institution. It is an open-ended program in which courses must be arranged around a set of time slot 'T' and remains so that some constraints are satisfied. It constitutes a class of difficult-to-solve optimization problems that lacks analytical solution method. Data gathering on the current system was analysed to create a requirement definition for the improved timetable system. Literature review was carried out to search the best approach that can help to solve the problem in the timetable system. Genetic Algorithm has been implemented in the Timetable Management System. This is because Genetic Algorithm is able to produce a feasible timetable system. Java, XML and PHP programming languages were used in developing the solution. MySQL database was used as the back-end for the solution. The front-end solution will be implemented in an android mobile operating system for easier accessibility and proximity to users.

Chapter I

INTRODUCTION

Innovation have made possible for the operations of the computer easy enough in processing record systems such as, creation of data records, storing, and filing and retrieved of data. Through the development of Information and Communication Technology, people nowadays are living in the so-called digital world, because of this trend, even schools and universities are taking steps to be a part of digital community. Portals have risen in popularity as a way of collecting, organizing and presenting content in a uniform, customizable and personalized way. It is commonly use in colleges and universities where prompt information and necessary updates must be readily available to a large number of students retrieved

from

https://www.academia.edu/28464670/Online_Student_Portal_With_Grades_Notifications_Via_Sms_The_Problem_And_Its_Scope.

In this world, when students are mostly online, students' portals become the easiest way to get answers. Educational institutions use student portals to allow access to their curriculum, grades, class schedule, etc. retrieved the student records. A student portal is a commonly used phrase to describe the login page where students can provide a username and password to gain access to an education organization's programs and other learning related materials according to Beal (2017).

TCNHS-ISHS was established in 2017 through the years the manual system somehow improved but still need improvements because of the growing numbers of students every year. The students' documents in TCNHS-ISHS have become more crowded, with increasing documents across different needs.

To lessen the problem of managing documents, such as student information, viewing of grades, student schedule, learning material and posting of announcements. The researchers proposed the Online Student Portal to provide an efficient and convenient process to the SHS student of Tagaytay City National High School. The new system would certainly improve the process of managing student information, tracking of grade, viewing of student schedule, accessing of learning material and posting of announcements.

Background of the Study

Tagaytay City National High School is a public secondary school and was established in 1956. Located in Mayors drive Mendez Crossing East Tagaytay City, TCNHS mainly provides junior high as well as senior high school program. The Integrated Senior High School opened in 2017. It has four strands, including HUMSS, ICT, HE, STEM, and ABM, and approximately 240 students enrolled.

Tagaytay City National High School and Senior High School is currently using a manual system that requires more steps to get task done. When the pandemic came, the whole process changed to online. The school used the internet to continue the class because students were not allowed to go to school. And students can access Facebook or email to send the application form or

direct to the school to enroll or get grades and module physically. The study will assist the school in managing the students' data with efficiency, less time spent in keeping track of information, and data organization accuracy and also assist the student and parent getting grades and modules online.

Objectives (General and Specific)

The main objective of this study is to develop an Online Student Portal for Tagaytay City National High School- Integrated Senior High School that will provide an efficient and convenient way that will assist the school, parents and students to access information promptly.

Specifically, it aims to:

1. identify all the procedures and requirements needed for the development of Online Student Portal for Tagaytay City National High School- Integrated Senior High School;
2. analyze the gathered data through the use of different tools and instruments such as data flow diagram and context diagram to represent the flow of the system design;
3. design and develop the Online Student Portal for Tagaytay City National High School- Integrated Senior High School which is capable of:
 - a. providing student information;
 - b. providing student access to view grade online;
 - c. providing student schedule;
 - d. providing student materials to access learning;
 - e. providing school announcement and;

- f. providing data security.
4. test the systems' performance using unit testing, acceptance and integration testing; and
5. evaluate the system in order to determine if it complies with the ISO 9126 standards.

Scope and Limitation

The research focuses on the development of an Online Student Portal for Tagaytay City National High School- Integrated Senior High School using Notepad++, Bootstrap, HTML, CSS, JavaScript, MySQL and PHP web server. The users of this system are consisting of three (3) levels, which are administrator, teachers and student.

Administrator have the ability to input, save and retrieve, and edit, while students only have the access to view their information.

Teachers have the ability to manage the student grades, schedule, and learning materials, and they can print the grades and list of students to make a hard copy.

Students can access learning materials, announcements, and class schedules and can access the gradebook using the passcode from their parents. Only registered cellphone numbers are eligible to be notified of their children's grades.

Using SMS messages, that need to provide or get a premium account on messengerbird technology for sending messages that system needs to be.

The website could be slow at times, though this was not always the case. The system is free for 88-day trials because it only uses free hosting. The system's storage capacity has been increased. The institution covers the cost of Webhosting.

Parents, having been registered, can only receive a passcode from the system as well as the student's grade and a concern message via SMS.

This system is only available to TCNHS-ISHS students who are currently enrolled. It can't be used to hold a conversation. The system will not accept a landline number as a contact number for the parents when they register.

The system consists of Four (4) modules. Account Management Module, GradeBook Management Module, Student Management Module, and Report Management Module.

The Account Management Module is accessible by the administrator that is responsible to manage the account of the teachers and students.

The Gradebook Management Module, the teacher is responsible for inputting the students' grades and sending a pin code with a concern message to the parents. The teacher can print the grades for the students and also update the submitted records in terms of changing incorrect grades. The administrator can change the student's information.

Student Management Module, the teachers are responsible for inputting the schedule and subject modules of the students. Furthermore, students are

responsible for viewing the administrator's posted schedule, module, and announcements. The administrator's task is to update the student's record.

Report Management Module is the collected data that is organized and presented as a summary, such as student information or the grades of the students in different subjects. The summary report can be downloaded by the teacher and administrator..

Significance of the Study

The Development of Online Student Portal for Tagaytay City National High School - Integrated Senior High School will be used for more convenience, faster, reliable, and user friendly in searching. This study is beneficial to the following:

Tagaytay City National High School - Integrated Senior High School.

The system will be beneficial to the school since it will provide to help the school easily manage the students. Since the Student increases in population by using the system, monitoring will become more organized when it comes to student information.

Students . The system will help students to view their grades online, provided that the parents' passcode is used, and will send via SMS, learning materials, schedules, and announcements.

Teachers. The system will be a big help to each teacher because the system will help to increase their productivity. And the proposed study will help them lessen their work and consumes less time in managing students' data. It

will be easier to them that in just a click away, and they can locate easily the student information needed.

Administrator. They help to securing all the records and also fast way of searching student information

Researcher. Researcher apply all the knowledge and skills they gained and learned from the institution. This study will help them to evaluate themselves and serves as their training ground for their future career.

Future Researcher. They can use this study for additional reference or as a source of information in conduction similar study.

Theoretical Framework

The Theoretical Framework introduces and describe the structure that can support the theory of a research study.

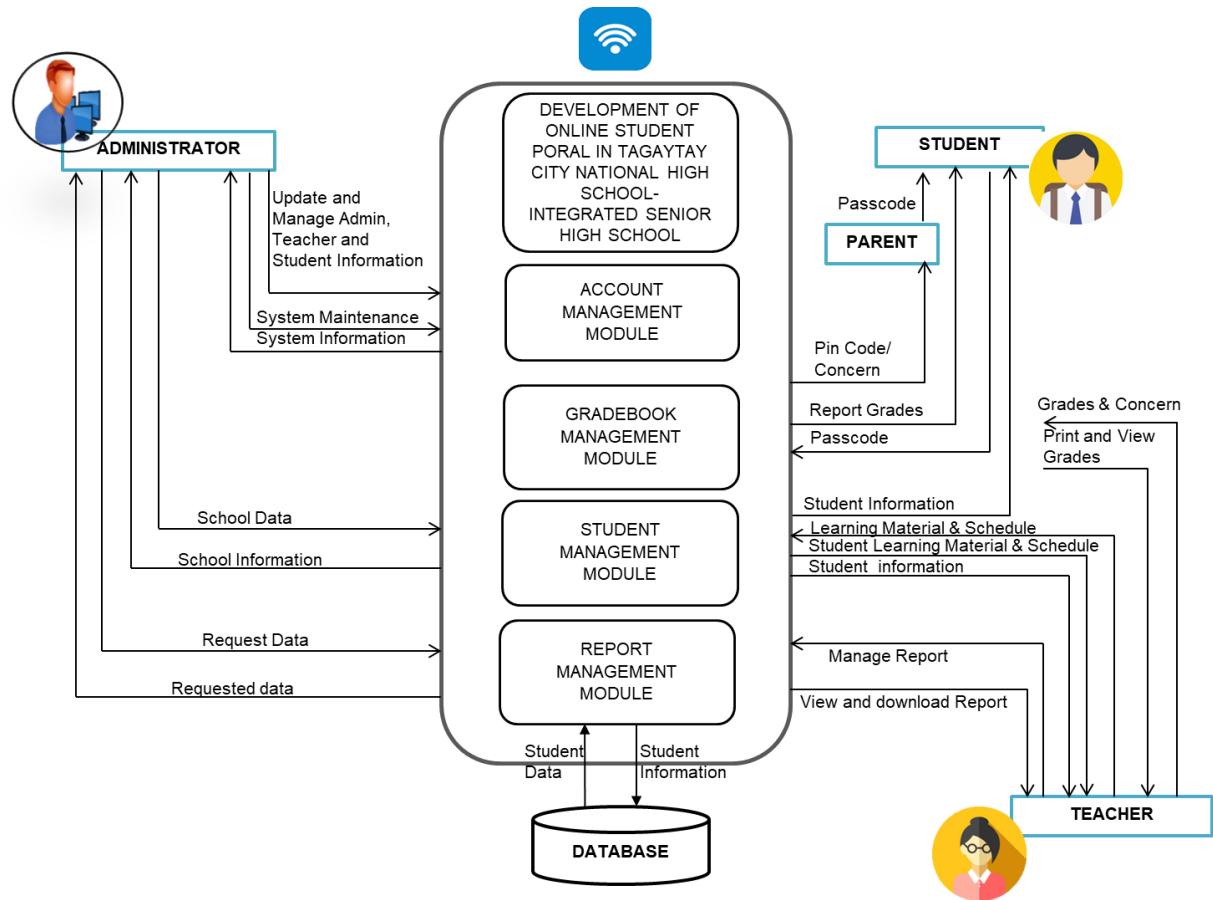


Figure 1. Theoretical Framework for the Development of an Online Student Portal for Tagaytay City National High School- Integrated Senior High School.

Figure 1 shows the Theoretical Framework of Online Student Portal for Tagaytay City National High School- Integrated Senior High School. The system consists of four (4) modules. Account Management Module, Gradebook Management Module, Student Management Module, and Report Management Module.

Account Management Module. In this module, the system administrator is responsible for the system's upkeep. It also helps to secure the system by using a username and password to safeguard it from unauthorized users. The account management module allows the administrator to create and store a student's, teacher's, and admin account. In this module, school administrators can also update the information of the students that are under their supervision, and the administrator has only the authority to view and access the student's information.

Gradebook Management Module. The teacher is responsible for inputting the grades, schedules, and modules, and the teacher can print the grades for the students, while the parents are responsible for receiving a pin code that students use to view their grades. The teacher is responsible for posting the grades and the SMS message that will be sent to the parents with a code and a concern message about the status of the student.

Student Management Module. The teacher is responsible for inputting the schedule and learning materials, while the students are responsible for viewing the student information, schedule, learning materials, and announcements. And administrators can also update the submitted records of the students in terms of changing their information, making announcements, and managing the section and subject assigned to them.

Report Management Module. The collected data is organized and presented as a summary for the teacher's reports, such as student information

and the grades of the students in different subjects. The summary report can be downloaded by the administrator and teacher, including the master list.

Conceptual Model of the Study

On the basis of foregoing concept, theories and findings of related literatures studies and insight taken from them a conceptual model is developed as shown below.

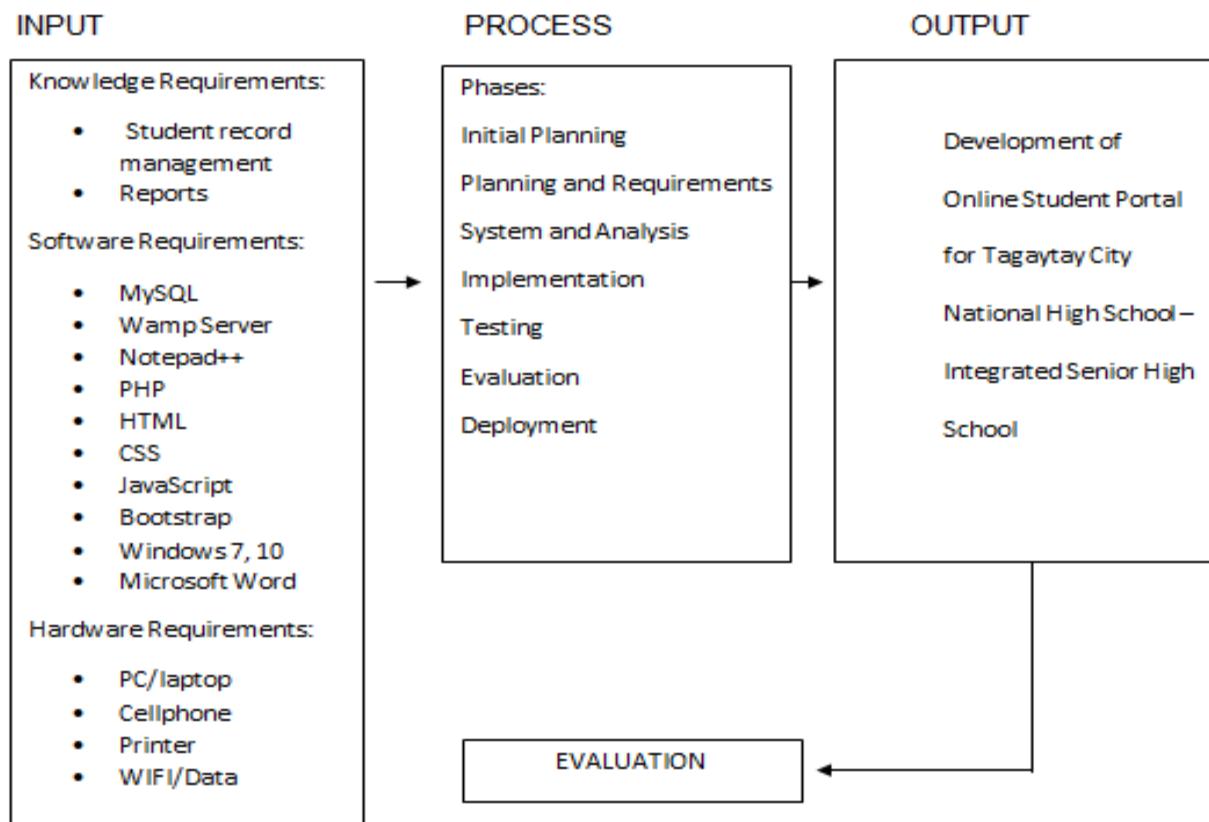


Figure 2. Conceptual Model of Development of Online Student Portal for Tagaytay City National High School- Integrated Senior High School.

The conceptual model, as illustrated in Figure 1, shows the different stages of the processes involved in order to achieve the objectives of the study.

Input Stage. The input stage consists of the knowledge requirements, software requirements, and hardware requirements. The knowledge requirement describes the needed know-how to be able to generate systems such as the student record, which is composed of grades, schedules, announcements, and subjects. The software requirements of the study are composed of the different applications that will be used to construct the system, such as MySQL for databases, the used WampServer, Notepad++, Bootstrap, HTML, CSS, JavaScript, and PHP that are used for coding, and the (OS) operation systems are Windows 7 and 10. The hardware requirements use different devices, such as the computer system, with a minimum specification of a minimum of 1 GB of RAM and a minimum of 32 GB of hard drive. The system will run with an internet connection, either WIFI or data.

Process Stage. This stage used an iterative methodology for developing the system. The first stage is initial planning and searching. The second stage is data gathering and analysis. During this phase, the researchers will conduct an interview with the system's intended beneficiaries. Researchers use tools such as questionnaires to conduct research interviews and surveys. Following that, data will be gathered to identify the desired and required features to include in the proposed system. Following the collection of data, the researchers conduct an analysis of the potential problem. The second stage is system design. This stage discusses the physical and logical design of the developed system. This page will show the screen layout of the proposed system. The fourth stage is testing. In this phase, the researcher will conduct a series of tests to look for any potential problems that may arise during the implementation and operation of the

software, as well as to see if the specifications have been met. Expert testing, which was evaluated by two IT experts in order to ensure the system's reliability. For user testing, researchers distributed a questionnaire to the users to rate the system. During the maintenance phase, errors or defects may occur, necessitating repairs during additional software testing. During the deployment phase, if the software performance is run successfully, it can be deployed to the institutions by approving from principal. And then evaluate and solve all of the problems. The last is documentation for the research paper.

Output Stage. The output stage of the study is the system that will be developed, which is the Online Student Portal for Tagaytay City National High School-Integrated Senior High School.

Evaluation Stage. The last stage is wherein the developed system will be evaluated to ensure that it satisfies the software quality characteristics as to its functionality, reliability, usability, efficiency, maintainability, and portability.

Chapter II

REVIEW OF RELATED STUDIES AND LITERATURE

This chapter presents the review of related literature and studies underlying the framework of the study. It includes the conceptual model of the study and the operational definition of terms.

RELATED LITERATURE

Definition of Student Portal 2018

According to Beal(2018),A student portal is a commonly used phrase to describe the login page where students can provide a username and password to gain access to an education organization's programs and other learning related materials. Sometimes a student portal also refers to the entire student-facing part of a learning management system (LMS). Student portals may be used to provide information about the school, course details, calendars, academic resources, and contact information.

Using an online portal instead of printing information in booklets saves schools printing and paper costs. An online portal makes it easier for students to access important information from anywhere at any time of day. Portals contain information on courses offered, transcripts, email programs, timetables, exam schedules and exam schedules according to Suzannah Windsor(2010)

Student Portal works 2021

A student portal is usually part of a broader LMS that can also be used by parents and faculty members. This system is also usually built and managed in-

house by the college/university, school district, or private educational institution. Students typically use their school-provided email address or student ID number to access the portal, and sometimes additional layers of authentication are required to verify the student's identity that reported by Kaiti(2021).

Benefits of using student portal 2021

As concluded by Kaiti(2021). A student portal is essential in a digital-first education environment. As referenced above, it centralizes all school-related announcements, information, and resources. Students can keep up with assignments, course material, grades, and announcements from the same place, so It also enables students to take care of all school-related needs from a single location, which means students have fewer accounts to manage. This ultimately benefits campus-wide cyber security because it minimizes the opportunities for a malicious actor to intercept a student's login credentials.

My Structured Query Language (MySQL)

MySQL is a relational database management system (RDBMS) that allows you to organize the data in your database. Databases can be accessed by multiple users with MySQL. On top of a Linux distribution, this RDBMS system is used with the PHP and Apache Web Server combination. To query a database, MySQL employs the SQL language.

PHP: Hypertext Preprocessor

PHP is a free scripting language and interpreter that is primarily used on Linux Web servers. PHP, which was derived from Personal Home Page Tools,

now stands for PHP: Hypertext Preprocessor, and is described as a "recursive acronym" by the PHP FAQ.

PHP is a server-side programming language, whereas JavaScript is a client-side programming language. PHP is a programming language that is an alternative to Microsoft's Active Server Page (ASP) technology. The PHP script, like ASP, is embedded within a Web page alongside the HTML. Before sending the page to a user who has requested it, the Web server invokes PHP to interpret and perform the operations specified in the PHP script

HTML (Hypertext Markup Language)

HTML, or HyperText Markup Language, is the standard markup language for documents intended to be displayed in a web browser. It can be aided by technologies like Cascading Style Sheets (CSS) and scripting languages like JavaScript. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

CSS (Cascading Style Sheets)

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts .This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and

repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

JavaScript

JavaScript is designed on a simple object-based paradigm. An object is a collection of properties, and a property is an association between a name (or key) and a value. A property's value can be a function, in which case the property is known as a method. In addition to objects that are predefined in the browser, you can define your own objects. This chapter describes how to use objects, properties, functions, and methods, and how to create your own objects.

Relational Database Management System RDBMS

A relational database management system (RDBMS) is a program that allows you to create, update, and administer a relational database. Most relational database management systems use the SQL language to access the database.

MessageBird SMS API - Global Messaging Service Provider

MessageBird powers communication between businesses and their customers across any channel, always with the right context, and on every corner of the planet. If you've ever ordered takeaway, returned a package, contacted customer service or requested a login code, it's almost guaranteed your interactions have been powered by MessageBird's technology. According to frank Hoen the founder this products, tools and omnichannel solutions are

building blocks that help businesses streamline conversations through their customers' preferred channels like SMS, Voice, WhatsApp, WeChat, Messenger, Instagram, Email and more. This versatility gives end consumers instant, safe and secure access to information they need. It also means they can spend less time on hold, avoid repeating stories to multiple agents, and get more time to do what they love.

Related Studies

Local Studies

Information Management Service

Based on the Information management Service of UP Manila, A website that will serve as an online channel for student concerns was launched today in the Office of Student affairs. It is called Student Portal. through this portal, you may view our student profile and grades, check for announcements posted by the Office of Student affairs , post on the student bulletin board, and engage in online discussions. Student organizations can also use this portal to apply for OSA accreditation

UE portal 2020

Based on the University of the East Student Portal, the portal is a gateway to online student information, lectures, discussions, resources, and other UE-only services. It aims to enhance and extend students' learning experiences by providing information outside of the classroom. They have separated portal included student, faculty, employee, parent, admission, admin and HR portal.

University of the Philippines Open University Academic Information Management System (AIMS) STUDENT PORTAL 2011

The UPOU Student Portal is an online gateway where students can access the online registration system (ORS), view their grades, request documents and update their contact information. It also includes links to the learning management system (MyPortal), the library, and other online services exclusive to UPOU students. The system provides guidelines below for the login form. The announcement is provided on the front page and depends on the needs of the student.

ValSci: Student/Faculty Portal 2015

According to Valenzuela City Science High School, no computerized system is used for student record keeping, easy access to student information, or efficient communication between students and teachers. The system would function as a student/faculty portal, with users including students, faculty, and school administrators.

Learners satisfaction level with online student portal as a support system in an open and distance Elearning environment (ODel) 2015

Turkish Online Journal of Distance Education 2015

The study is entitled "Learners' satisfaction level with online student portal as a support system in an open and distance learning environment" by the Turkish Online Journal of Distance Education 2015. This study focuses on learner support in open, distance, and online learning. It is defined as "all

activities and elements in education that respond to a known learner or group of learners, and which are designed to assist in the cognitive, affective, and systemic realms of the learning process" (Brindley, et. al, 2004). Teaching and tutoring, advising and counseling, and information and administration are the main institutional systems involved in learner support. The UP Open University functions under an open and distance e-learning (ODeL) framework of distance education where most of its academic and non-academic processes are done through the Internet. It has developed an online Academic Information Management System (AIMS) which serves as the gateway to the University's academic operations. The Online Student Portal (OSP) is the component of the system for the students. OSP serves such functionalities as online registration, viewing of grades, request for their records, payment of fees, and information hub. The study analyzed the learners' satisfaction with the portal's functionality, efficiency, appearance, ease of use, and security. An online survey was conducted of continuing undergraduate and graduate students ($n=147$) who were admitted prior to the implementation of the portal and thus had experienced both the manual and online processes. The survey was conducted from September 26 to October 3, 2013. In general, about 85 percent of those who participated in the survey were either very satisfied or satisfied with their overall experience of the portal. Ninety percent of the total participants found the portal cost-effective and informative. Overall, the participants identified the portal as a convenient and effective venue for getting accurate and immediate information about their performance, school activities, academic schedules, and other information relevant to their learning transactions. These features had made the

portal an important student support tool that may enhance the learning experience of online learners.

According to UP Open University, it operates within the framework of distance education known as open and distance e-learning (ODeL). It has created a web-based Academic Information Management System (AIMS). The Online Student Portal (OSP) is a system component for students. The study looked at how satisfied learners were with the portal's functionality, efficiency, appearance, ease of use, and security for the users.

Related Studies

Foreign Studies

Teachers Perceptions of the Impact of Online Grading Systems 2011

In this research entitled Teachers Perceptions of the Impact of Online Grading Systems by Mize, Brenda Gail (2011) .The purpose of this study was to investigate teachers' perceptions of the implications of making the grading process transparent to parents. The goal of this study was to help teachers find ways to foster a positive parent-teacher relationship. Many of the features of Engrave, an online grade book, were praised by teachers, according to the researchers. The student benefits from a positive and constructive parent-teacher relationship. With the use of an online grading program, parents and teachers will be able to communicate with one another on a regular basis. Teachers see Engraved's perceived primary result as a positive. A recent study looked into the communication aspects of using an online grading program. An

interview guide was used to conduct in-depth interviews with ten middle school teachers. The researchers discovered that teachers benefited from the ease of communication with parents and students. More research is needed to assess the perceived consequences of implementing an online grade book.

Based on this study entitled teachers' perceptions of the implications of making the grading process transparent to parents. The Researchers wants to have a good relationship between students and with their parents and also the researchers wants the parents to aware to the academic performance of the students with the help of Student Portal for Tagaytay City National High School the parents can easily monitor the academic performance of the students and parents are also aware if the students have a failing grade with the use of verification code the parents are able to view the grades of the students and the days that the students attended.

Online Report Card: Tracking Online Education in the United States 2016

In this research entitled Online Report Card: Tracking Online Education in the United States by Allen, I. E., & Seaman, J. (2016). The thirteenth annual report on the state of online learning in higher education in the United States has been released. The report focuses on online courses and programs that are offered as a regular part of an institution's programs, as well as Massive Open Online Courses (MOOCs) (MOOCs). The number of students enrolled in distance education courses increased by 3.9 percent in 2015 over the previous year. Private nonprofit institutions increased their distance enrollments by 11.3 percent, while private for-profit institutions decreased their distance enrollments

by 2.8 percent. The Babson Survey Research Group conducted the study. Russell Poulin and Terri Taylor Straut collaborated on this report. The Babson Survey Research Group surveyed over 1,000 students across the online education study, with the goal of answering fundamental questions about the nature and scope of online education in the United States. The study's findings will be used to inform a national survey on the future of online learning.

This Studies show the effectiveness of Online Report card and during this pandemic the online report card Is important with the Help of the Student Portal for Tagaytay City National High School the parents can easily look at the report card of the students the didn't need to go at the school to look at the report card of the students the can easily monitor the strength and weaknesses of the students in different areas and what are they need to improve

Comparing Electronic and Traditional Lab Notebooks in the Advanced Lab Documents 2015

In this research entitled Comparing Electronic and Traditional Lab Notebooks in the Advanced Lab Documents by Eblen-Zayas, M. (2015, July 22-24). The Carleton College switched from traditional paper notebooks to electronic lab notebooks (ELNs). According to a survey of the class's students, more than 80% of them would recommend that other science classes use ELNs. This paper discusses the advantages and disadvantages of ELNs, as well as an overview of the reasons for switching to ELNs. It also investigates the difficulties that students face as a result of this instructional technology. An examination of the nature of the lab notebook entries, organizational structure, and how those

factors impact student performance in the course may yield interesting clues about the pedagogical value of ELNs, as well as identify the challenges that this instructional technology poses for students.

This study talks about comparing electronic and traditional lab notebooks that emphasize that the most efficient way to use them is electronic because of easy access. They show the advantages of two compared things as well as the function of two. I agree that the most usable and efficient way to perform is electronically. Compared to lab notebooks, teachers can also find what information is and, using electronic devices, they can easily search and find it.

Design and Development of an Academic Portal 2003

In this research entitled Design and Development of an Academic Portal by Pienaar, H. (2003), The Web's introduction of the portal concept has opened up new avenues for addressing some of the issues surrounding the personal management of academic information and knowledge. The lack of integration, personalization, and customization of existing academic information sources and systems is one of the major issues. A Web portal is a Web site that aggregates a variety of content and offers a variety of services such as search engines, directories, news, e-mail, and chat rooms. Portals have evolved to provide a personalized access point to Web information. It is possible to have a high level of personalization and customization (Melzer 1999; Boye1999). It was thought that the portal concept could be further developed to function as a sophisticated Web interface to support academics' task performance (teaching and research).

The study shows how the web portal is very accessible in terms of any information inserted online. I agree that portal services are more helpful for our daily lives. The Impact online portal can manage personal information easily. An online student portal can support the academic performance of the students.

Impact of on-line education on Higher Education System 2016

In this research entitled Impact of on-line education on Higher Education System by Aithal, P. S., & Aithal, S. (2016), they discussed the online education system as the next generation education system. The types of online education models and their importance are discussed. The online education system is compared with a hypothetical system called the "Ideal education system" in which it would be more expensive. The advantages, benefits, constraints and disadvantages of online education systems are discussed. Some of the important online education models, e.g., edX, Alison, NPTEL, and UZity, as case examples. The online education system is also being discussed. Education is the most important thing for any country to develop and prosper. The conventional education system at higher education level is analogous to brick and mortar type business system, where a student gets systematic education from college/university by personally attending required courses regularly (Full time/part time). The conventional education system has many drawbacks and a lot of improvements are expected in future days. Online education is one of the possible developments in next generation education system, according to Dr. Jodie O'Mara from the University of South Wales.

The study shows the possible developments in the next generation education system is online education. Online education systems are explored in terms of their advantages, benefits, limits, and downsides. Some of the most notable online education models are also examined, including edX, Alison, NPTEL, and UZity. And by using an online student portal, we can access it at any time or visit it in the present generation.

Mobile student information system 2011

A mobile student information system (MSIS) based on mobile computing and context-aware application concepts can provide more user-centric information services to students. The purpose of this paper is to describe a system for providing relevant information to students on a mobile platform. The research followed a design science approach, including surveys to argue for the relevance of the system and evaluation of different versions of the system using a mobile system acceptance model (MSAM).

It was found that the intention to use such services is high, in particular relative to services providing information based on localization and the personal schedule and interests of the student. Several mobile systems exist that provide generic campus information for students, and this paper describes one of the few systems that has been evaluated. They were conducted by Asif, M., and Krogstie, J. (2011).

According to the research, a mobile student information system (MSIS) based on mobile computing and context-aware application concepts can provide

more user-centric information services. The intention to use such services is high, especially when it comes to services that provide information based on location as well as the student's personal schedule and interests.

Web Based Student Information Management System 2013

In this research entitled Student Information Management System (SIMS) by the National Journal of Advanced Research in Computer and Communication Engineering (2013), they provide a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters, years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities happening in the college, Different reports and Queries can be

generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college.

According to the study, the Student Information Management System (SIMS) provides a simple interface for student information maintenance. It can be used by educational institutes or colleges to easily keep track of student records. Various reports and queries can be generated based on a wide range of options pertaining to students, batches, courses, exams, semesters, certification, and even the entire college.

Chapter III

Methodology

This chapter discusses the methodology that will be used in the development of the system. It is presented in the following: project design, project development, system operation and testing procedure and evaluation procedure.

Project Design

The system entitled “Development of Online Student Portal in Tagaytay City National High School- Integrated Senior High School” will be developed using Bootstrap, HTML, CSS, Java Script and PHP web server and My SQL as a back end.

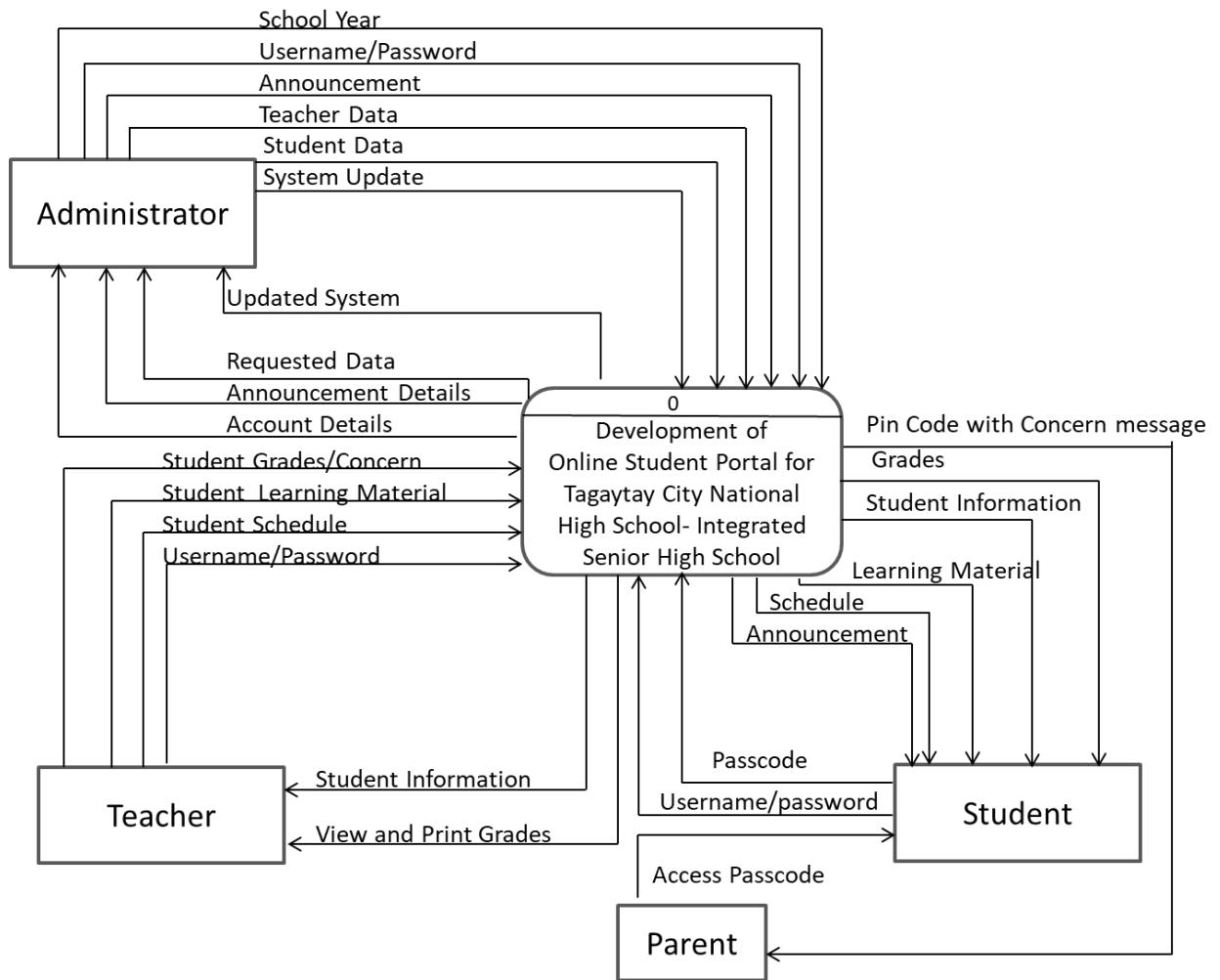


Figure 3. Context Diagram of “Development of Online Student Portal in Tagaytay City National High School- Integrated Senior High School”.

Figure 3 shows that the study will have three (3) users, namely: (1) an administrator who is responsible for inputting the teacher and student information, announcements, managing the accounts, and also updating the system; (2) a teacher who is responsible for inputting the learning materials and managing the students' grades and schedule. (3) Students are responsible for viewing and reading the student learning materials, announcements, schedules, and grades, and the students are responsible for changing the password of their account as given by the administrator. Parents will be responsible for receiving

the code with the status of the student to be reminded about their children. The code will be used for accessing the grade on the portal

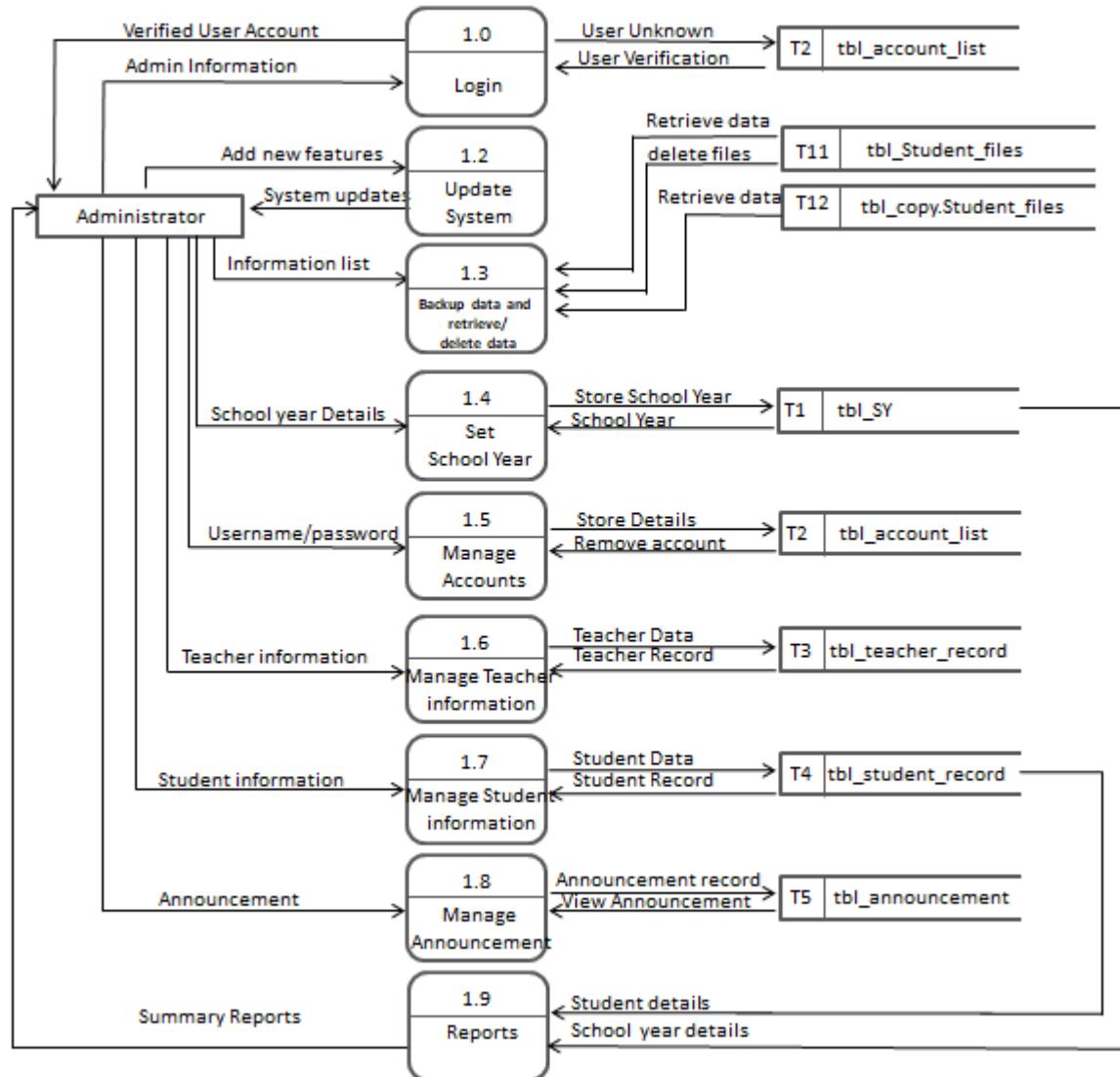


Figure 4. Data Flow Diagram of admin “Development of Online Student Portal in Tagaytay City National High School- Integrated Senior High School”

Figure 4 shows the process of how the administrator works. The image above is the data flow diagram that shows the list of features that can be accessed by the administrator account. After the administrator is in charge of updating the system for new records, they can set the school year, manage the

teacher and student information, including section and subject assignments, and manage the announcements. And the administrator is responsible for adding accounts for students and new teachers and retrieving and removing data from the system. And the administrator can view the summary report about student data.

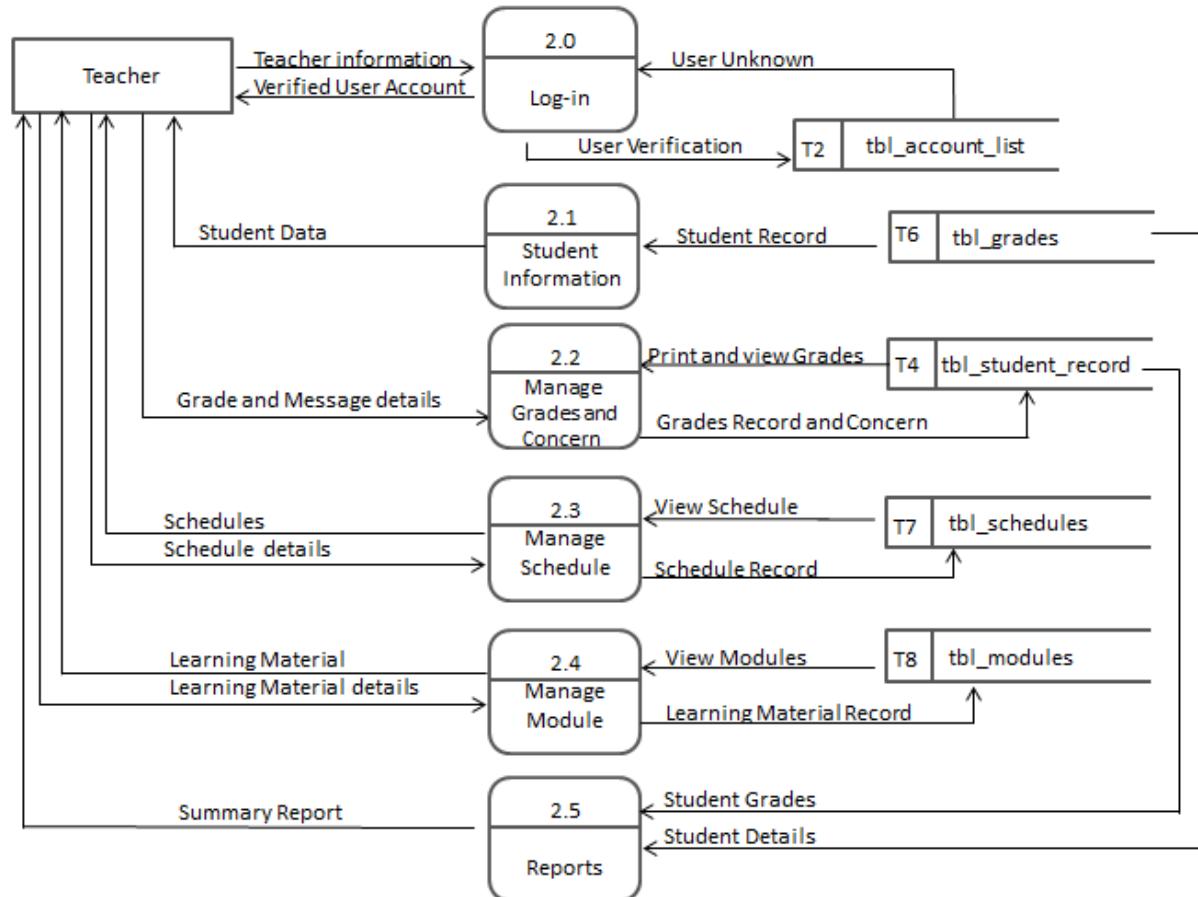


Figure 5. Data Flow Diagram “Development of Online Student Portal in Tagaytay City National High School- Integrated Senior High School”

Figure 5 shows that the teacher needed to log in to have access to the system. The teacher is responsible for inputting the grades of the students' with concern message, the schedule, and the learning materials. Teachers have access to view student records, and they can download the summary reports and

print the students' grades

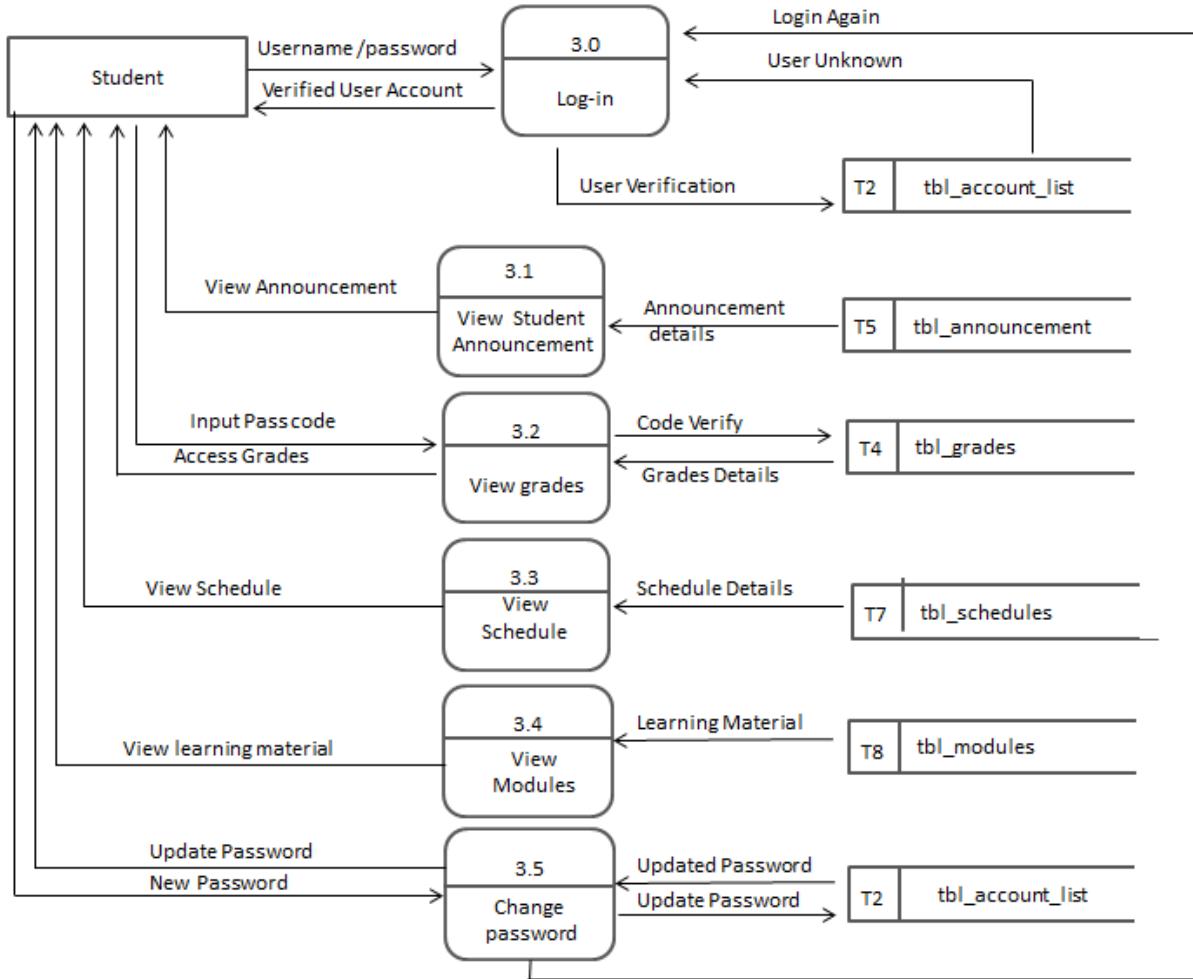


Figure 6. Data Flow Diagram “Development of Online Student Portal in Tagaytay City National High School- Integrated Senior High School”

Figure 6 shows that the teacher needed to log in to have access to the system. The teacher is responsible for inputting the grades of the students' with regard message, the schedule, and the learning materials. Teachers have access to view student records, and they can download the summary reports and print the students' grades.

Project Methodology

The project methodology present the system development method employed by the researchers in conducting the study, the discussion in regards for the Software development procedures. The researchers will use Iterative methodology in the development of proposed system by Aflafla1. Figure 7 presents the Iterative methodology. The developments of the system were time boxed, delivered and then assembled for iteration.

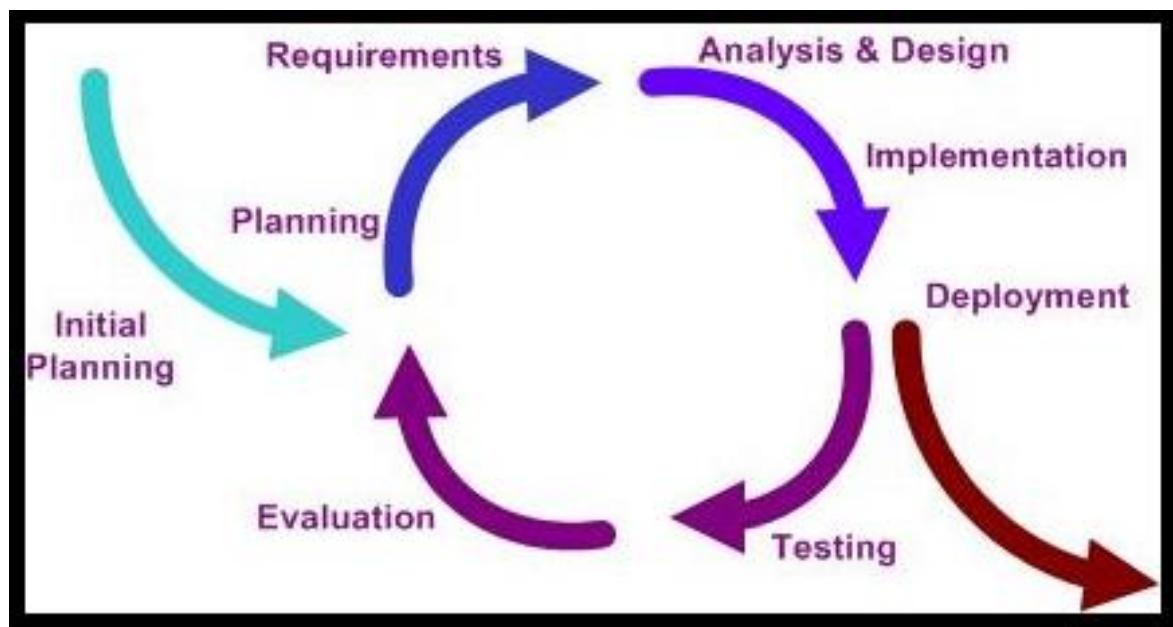


Figure 7. Iterative methodology by Aflafla1(2014)

Initial planning

The researcher will look for an institution to develop the student online portal.

Planning & Requirements

The researchers aim to develop an online student portal for the chosen school. The researchers conducted a survey to determine if there was any system in this school that we could request to develop an online student portal in Tagaytay City National High School-Integrated Senior High School. And the researchers think and search for the possible software and hardware that they are going to use in the study.

Analysis & Design

Once Once the planning is complete, the researchers start to create a story board that the researchers are going to use as a basis for the system that they are going to conduct. The Story Board includes the following: student learning materials, a schedule, announcements, and the gradebook. They have three user pages, such as an administrator, teacher, and student account.

Implementation

After the planning and analysis, the researchers started to encode a program to create a system that is based on the story board that the researchers created. The researchers used different development tools, such as Notepad++ for editing and for template design, Bootstrap, HTML, CSS, and Java Script. The databases used are PHP Server and MySQL, which are used in this system..

Testing

Once the implementation was done, the researchers started to test the system and check if there was a possible problem with the system. Once they encounter a problem, the researchers will go back to the implementation stage to

fix the problem that they encountered. The researcher used the following kind of testing: Unit testing, Integration, System testing

Evaluation

Once all of the phases have been completed, the researchers will conduct an evaluation on the students of City College of Tagaytay to see if there are any possible things that the researchers need to improve. Once the evaluation is completed, the researchers will return to the implementation stages to include the following information that the researchers gathered during the evaluation..

Deployment

Once the software works efficiently and at a faster rate, it works properly and produces accurate results in a short time. The software will be installed online with a web address to access the student portal..

System Operation and Testing Procedure

Unit testing involves testing individual components of the software program or application. The main purpose behind this is to check that all the individual parts are working as intended. A unit is known as the smallest possible component of software that can be tested. Generally, it has a few inputs and a single output.

Integration testing is a type of testing meant to check the combinations of different units, their interactions, the way subsystems unite into one common system, and code compliance with the requirements.

System testing is a type of software testing that is performed on a complete integrated system to evaluate the system's compliance with the corresponding requirements.

Evaluation Procedure

In the preliminary evaluation, the researchers will review all the necessary factors that will need in the completion of the system based on the system requirements.

Results will be analyzed to determine if the preferred output is achieved through the given input. For the final evaluation sheet, evaluation sheet will be given to the respondents. The computation of number of respondents will be based on Solving formula.

The comments, suggestions, and recommendation will be use to improve and enhance the system. The study will use the Evaluation Criteria for Software. The statistical scale will be used in interpreting the results of the evaluation has a scale of 1.00 to 5.00 as 1.00 being the lowest and 5.00 being the highest.

Table 1 shows the numerical rating and its equivalent interpretation to scale the result of the project evaluation.

Numerical Rating	Interpretation	Definition
4.21 – 5.00 the most	Excellent	The system fully meets and far exceeds expectations.
3.41 – 4.20 the most	Very Good	The system fully meets all and exceeds several expectations.
2.61 – 3.40	Good	The system fully meets all expectations.

1.81 – 2.60	Fair	The system does not fully meet all expectations.
1.00 – 1.80 significant	Poor	The system fails to meet expectations to degree in several areas.

The gathered data will be computed by using Mean Range Formula to achieve the proposed system met the Software Factor Standard for Acceptance.

Chapter IV

RESULTS AND DISCUSSION

This chapter presents the Project Description, Project Structure, and Screen Hierarchy of the system.

Project Description

The Online Student Portal System is a web-based system that was developed for the Integrated Senior High School in Tagaytay City National High School. The purpose of the developed study is to create an online gateway where students can log into a school website to access grades, announcements, modules, and schedules.

The Student Portal is a web-based system that is developed using HTML, CSS, JavaScript, and BootStrap to create a graphical user interface for a website, messengerBird for SMS messages, and MySQL to manage database services. The researchers used system methodology, which is the iterative model in the whole study. The iterative model has seven (7) phases;

The first phase is the initial planning. The researcher will look for an institution to develop the online student portal.

The second phase is planning and requirements. The researcher will make a plan for conducting a system. And to gather all the resources needed to craft an alternative action for this project and to finish it within a specific time. The researcher conducted a survey to determine if there was any system in this

school that we could request to develop an online student portal in Tagaytay City National High School-Integrated Senior High School.

The third phase is analysis and design. Once the planning is complete, the researchers start to create a story board that they are going to use as a basis for the developing system. The Story Board includes the following: The student online portal log in page has three users, namely admin, teachers, and students; the system is composed of the homepage, student learning materials, announcements, and the student gradebook pages.

The fourth phase is implementation. After the planning and analysis, the researchers started to encode a program to create a system that is based on the story board that the researchers created. The researchers used different development tools such as Notepad++, Bootstrap, HTML, CSS, Java Script, PHP server, and MySQL for the database services of the system.

The fifth phase is testing. Once the implementation was done, the researchers started to test the system and check if there was a possible problem with it. And once they encounter a problem, the researchers will go back to the implementation stage to fix the problem that they encountered. The researcher used the following kinds of testing: unit testing, integration testing, and system testing.

The sixth phase is evaluation. Once all phases have been completed, the researchers will conduct an evaluation on the students of City College of Tagaytay to see if there are any possible things that the researchers need to

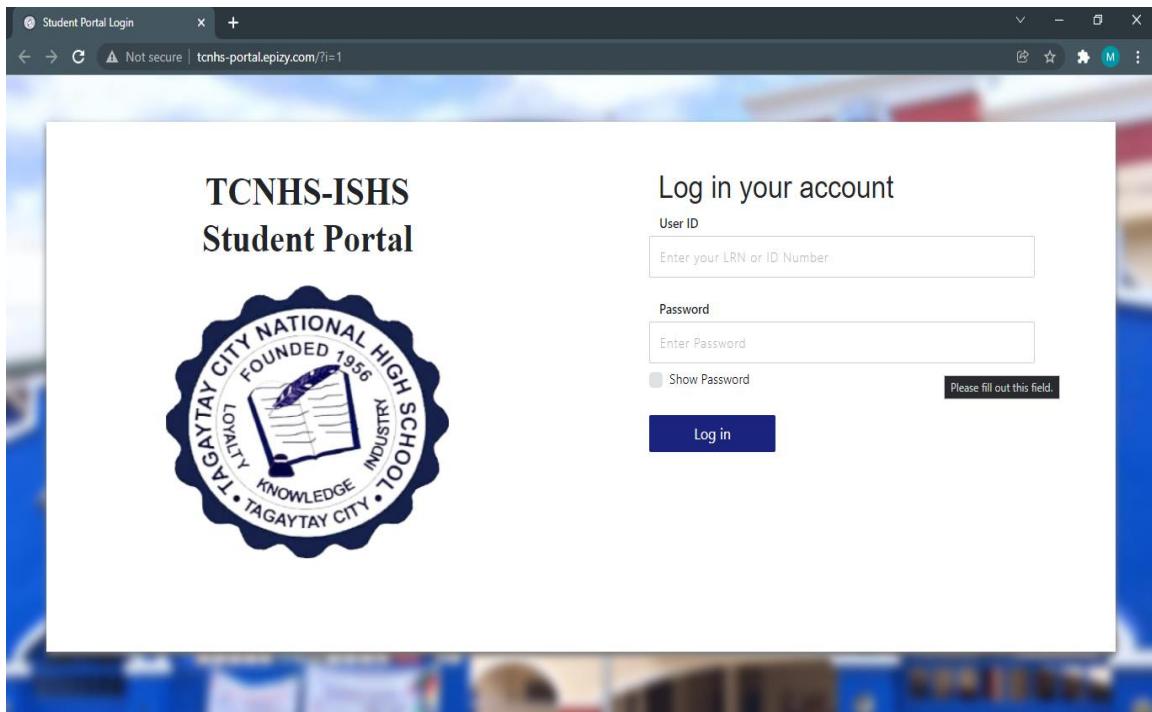
improve. Once the evaluation is completed, the researchers will return to the implementation stages to include the following items that the researchers gathered data for during the evaluation.

Lastly, the deployment phase, once the software works efficiently and at a faster rate, ensures that the software works properly and produces accurate results in a short time. The software will be launched online with a web address to access the student portal.

Project Structure

The developed study holds the teacher's data and student data, usernames and passwords. The system has three users, namely: the administrator, teachers, and students. The administrator is assigned to add the information for the teacher and student and post an announcement. The teachers can add student grades and post them, and they can also send a message to the parents with a concern message. The student can access the grades, announcements, schedule, and learning materials, and the parent can receive a message with a code to access the grades online.

Screen Hierarchy



The screenshot shows a web browser window titled "Student Portal Login". The address bar indicates the URL is tcnhs-portal.epizy.com/?i=1. The page itself is the login interface for the "TCNHS-ISHS Student Portal". On the left, there is a logo of the school, which is a circular emblem with the text "TAGAYTAY CITY NATIONAL HIGH SCHOOL" around the perimeter and "FOUNDED 1956" in the center. The main heading "TCNHS-ISHS Student Portal" is displayed above the logo. To the right, there is a form titled "Log in your account". It contains two text input fields: "User ID" and "Password", both with placeholder text "Enter your LRN or ID Number" and "Enter Password" respectively. Below the password field is a checkbox labeled "Show Password". A red error message "Please fill out this field." is displayed next to the User ID field. At the bottom right of the form is a blue "Log in" button.

Figure 8. Login Form

Figure 9 shows the login page for all the end users of the system. This includes two text fields where the users will put their user ID and password. The login button will validate if the username and password are correct. The check box is to hide and show the password.

Administrator Account

Super Admin Dashboard

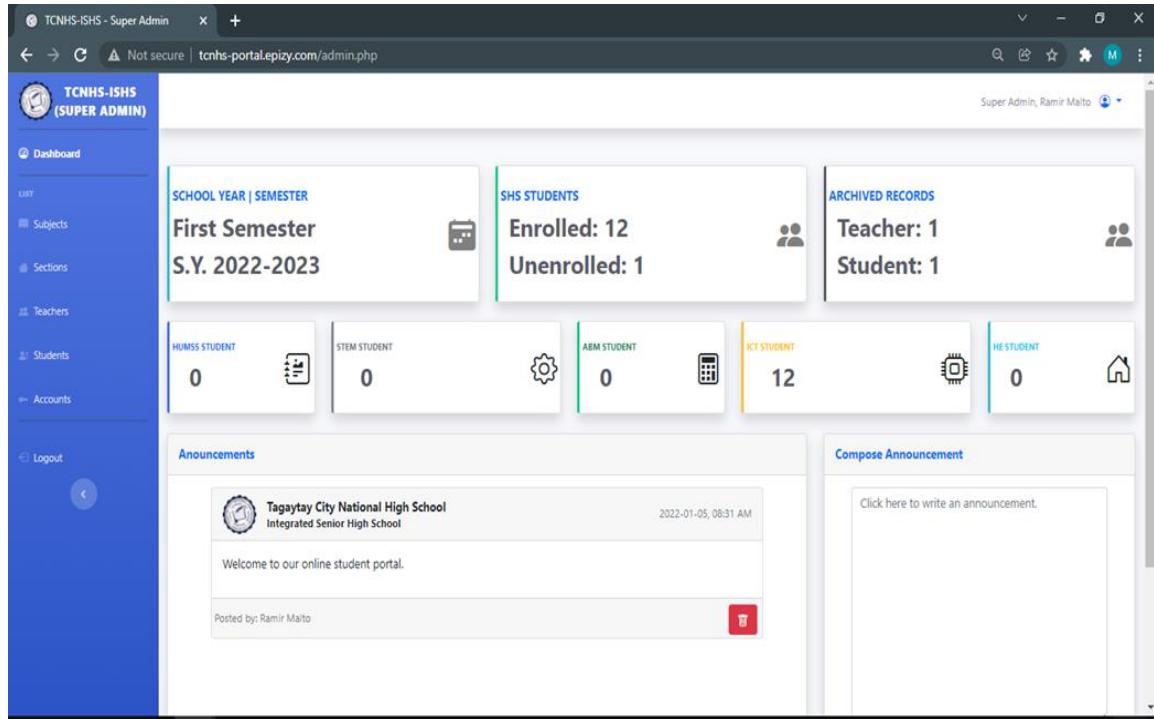


Figure 9. Super Admin Dashboard

Figure 9 shows the system administrator dashboard that contains the school year and the semester, the number of students who are not enrolled or enrolled, and also the number of teacher accounts. The five containers contain the number of students per strand. The text field can be added to create a posted announcement on the portal, and once we are done creating, we can delete the posted announcement. The right side contains admin information like their profile.

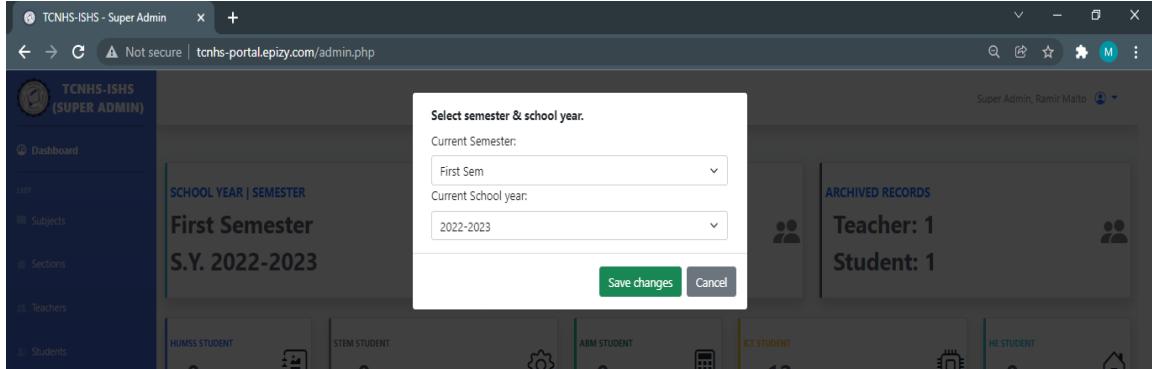


Figure 10. Super Admin: Set School Year and Semester

Figure 10 shows the super admin's ability to change the school year and school semester for the upcoming another year. The school year is auto-generated, so it will automatically update when the year changes.

```

[2022-01-27 10:24:10] super admin 11111111 logged in
[2022-01-27 10:26:01] teacher 49849494 logged in
[2022-01-27 14:00:01] super admin 11111111 logged in
[2022-01-27 14:00:01] teacher 49849494 logged in
[2022-01-27 15:00:01] super admin 11111111 logged in
[2022-01-27 15:00:01] teacher 49849494 logged in
[2022-01-27 15:00:20] super admin 11111111 logged in
[2022-01-27 15:00:20] teacher 49849494 logged in
[2022-01-27 16:21:55] student 20211209 logged in
[2022-01-27 16:30:01] admin 99441199 logged in
[2022-01-27 16:30:01] super admin 11111111 updated subject 1190 from (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1) to (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1)
[2022-01-27 16:30:02] super admin 11111111 updated subject 1190 from (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1) to (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1)
[2022-01-27 16:30:02] super admin 11111111 updated subject 1190 from (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1) to (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1)
[2022-01-27 16:30:02] super admin 11111111 updated subject 1190 from (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1) to (21st Century Literature from the Philippines and the World, 11, STEM,HUMSS,ABM,ICT,HE, 1)
[2022-01-27 16:30:02] super admin 11111111 updated subject 1190 from (Contemporary Philippine Arts from the Regions, 12, STEM,HUMSS,ICT, 1) to (Contemporary Philippine Arts from the Regions, 12, STEM,HUMSS,ICT, 1)
[2022-01-27 17:02:10] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, -)
[2022-01-27 17:02:10] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, -) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 17:02:10] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 17:02:10] student details with ID (20211207) updated by super admin 11111111
[2022-01-27 17:44:21] student details with ID (20211207) updated by super admin 11111111
[2022-01-27 17:44:21] student details with ID (20211207) updated by super admin 11111111
[2022-01-27 17:44:45] teacher details with ID (49434474) updated by super admin 11111111
[2022-01-27 17:44:45] teacher details with ID (49434474) updated by super admin 11111111
[2022-01-27 18:00:01] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 18:00:01] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 18:00:01] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 18:00:02] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, Daniel M. Barrientos ) to (GENEROSITY, ICT, 12, -)
[2022-01-27 18:00:02] super admin 11111111 updated section 10 from (GENEROSITY, ICT, 12, -) to (GENEROSITY, ICT, 12, Daniel M. Barrientos )
[2022-01-27 22:09:17] super admin 11111111 logged in
[2022-01-28 00:40:01] super admin 11111111 logged in
[2022-01-28 11:20:42] student details with ID (20211207) updated by super admin 11111111
[2022-01-28 16:02:42] super admin 11111111 added new student with ID (4293842424792)
[2022-01-28 19:01:07] super admin 11111111 archived student with ID (65727854750)
[2022-01-28 19:09:23] student details with ID (4293842424792) updated by super admin 11111111
[2022-01-28 19:15:13] super admin 11111111 added new student with ID (69599795694969)
[2022-01-28 21:46:32] student details with ID (4293842424792) updated by super admin 11111111
[2022-01-28 22:47:02] student details with ID (949324545123) updated by super admin 11111111
[2022-01-28 22:47:02] student details with ID (949324545123) updated by super admin 11111111
[2022-01-29 09:22:15] super admin 11111111 logged in
[2022-01-29 09:23:00] teacher 49849494 logged in
[2022-01-29 17:44:14] super admin 11111111 logged in
[2022-01-29 17:51:32] super admin 11111111 archived student
[2022-01-29 17:52:00] super admin 11111111 logged in
[2022-01-29 17:53:25] teacher 49849494 logged in
[2022-01-29 18:22:52] super admin 11111111 archived student with ID (6969979496969)
[2022-01-29 18:23:46] student details with ID (20211202) updated by super admin 11111111
[2022-01-29 18:23:46] student details with ID (20211202) updated by super admin 11111111
[2022-01-29 18:47:10] super admin 11111111 enter all pincodes
[2022-01-29 08:27:00] super admin 11111111 logged in

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Figure 11. Super Admin: System Log Analysis

Figure 11 shows log analysis that super admin can view the process of reviewing website event logs to proactively identify bugs, security threats, factors

affecting the system or other risks. Log analysis can also be used more broadly to ensure compliance with regulations or review user behavior.

The image shows two side-by-side screenshots of a web application interface for managing subjects. Both screens have a header bar with a logo, 'TONHS-SHS Super Admin' and 'Not secure tonhs-portals legacy.com/Subjectinfo.php'. The left screen is labeled 'First Semester' and the right screen is labeled 'Second Semester'. Both screens feature a sidebar with navigation links: Dashboard, Subjects, Sections, Teachers, Students, Accounts, Logout, and a three-dot icon. The main content area is titled 'Subjects List' and contains a table with columns: Subject ID, Subject Name, Subject Level, Subject Strand, and Edit. The 'Edit' column includes a green button with a white minus sign. The 'First Semester' table has 15 rows, and the 'Second Semester' table has 16 rows. The data in the tables is as follows:

Subject ID	Subject Name	Subject Level	Subject Strand	Action
1110	21st Century Literature from the Philippines and the World	G-11	STEM/HUMSS/ICT/HE	Edit
1114	Contemporary Philippine Arts from the Regions	G-12	STEM/HUMSS/ICT	Edit
1115	Contemporary Philippine Arts from the Regions	G-11	HUMSS/ABM/CT	Edit
1116	Creative Writing (Oil)	G-12	HUMSS	Edit
1117	Disciplines and Ideas in the Applied Social Sciences	G-12	HUMSS	Edit
1118	Earth and Life Science	G-11	HUMSS/ICT	Edit
1119	Earth Science	G-11	STEM/ICT	Edit
1120	Edukasyon sa pagpapakatao	G-11	STEM/HUMSS/ICT	Edit
1121	Empowerment Technologies	G-11	STEM/HUMSS	Edit
1122	English for Academic and Professional Purposes	G-12	STEM	Edit
1123	English for Academic and Professional Purposes	G-11	HUMSS	Edit
1124	General Physics 1	G-12	STEM	Edit
1125	General Physics 2	G-12	STEM	Edit
1126	General Chemistry 1	G-11	STEM	Edit
1127	General Chemistry 2	G-12	STEM	Edit
1128	General Biology 2	G-12	STEM	Edit
1129	Entrepreneurship	G-12	STEM/HUMSS	Edit
1130	Community Engagement, Solidarity and Citizenship	G-12	HUMSS/ICT	Edit
1131	Creative Nonfiction: The Literary Essay	G-12	HUMSS	Edit
1132	Summative Activity	G-12	HUMSS	Edit
1133	Disaster Readiness and Risk Reduction	G-11	STEM/ICT	Edit
1134	Disciplines and Ideas in the Social Sciences	G-11	HUMSS/ICT	Edit
1135	General Physics 3	G-12	STEM	Edit
1136	General Chemistry 3	G-12	STEM	Edit
1137	General Biology 3	G-12	STEM	Edit
1138	General Chemistry 4	G-12	STEM	Edit
1139	General Physics 4	G-12	STEM	Edit

Figure 12. Super Admin and Admin: Subject List Page for 1st and 2nd Semester

Figure 12 shows the subject list for every strand. It contains the Subject ID, Subject Name, Subject level, and two action buttons. We can add the subject using the "add" button, and we can delete the subject using the "delete" button. The three-dot icon is for adding a subject list.

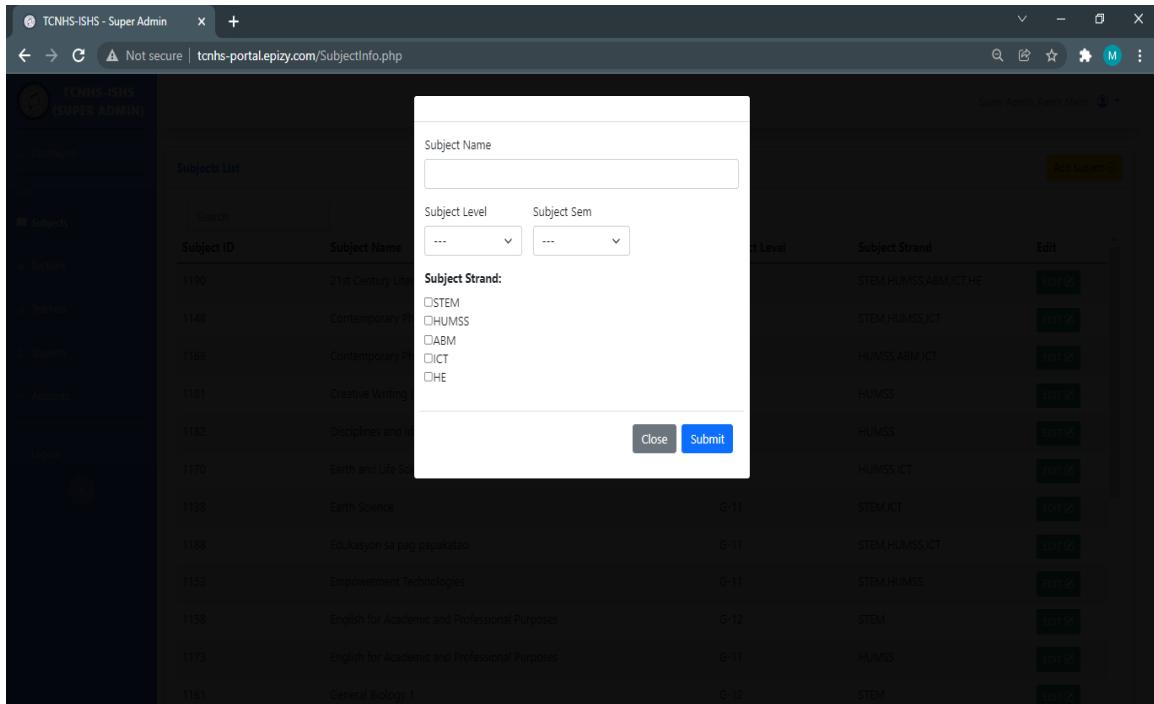


Figure 13. Add Subject Button

Figure 13 shows the adding subject modal, which contains the subject name, level, semester, and subject strand. The text fields are for inputting the name of the subject. The two action buttons are for submitting if done, and if any fields are not filled completely, they have notification to fill in the blank fields. The "cancel" button is used to disregard our subject of creation.

Section Name	Section Strand	Section Grade	Adviser	Edit	Delete	Download
RESPONSIBILITY	ICT	11	Jiniel T. Batara	<button>Edit</button>	<button>Delete</button>	<button>MASTERLIST</button>
GENEROSITY	ICT	12	Daniel M. Barrientos	<button>Edit</button>	<button>Delete</button>	<button>MASTERLIST</button>

Figure 14. Section List Page

Figure 14 shows the list of all sections in senior high school, and they have an edit button for some changes that they are going to make, a delete button if they are going to deduct some strands, and a download button to download all the master lists of students in every section

Section Name
Adviser

Strand:
Grade:

Close
Submit

Figure 15. Add Section

Figure 15 shows that the system has an "add section" button and they need to fill in the section name, adviser, strands, grade, and school to create a new section. And when they are done, it will appear on the dashboard.

The screenshot shows a web-based administrative interface for 'TCNHS-ISHS - Super Admin'. The left sidebar includes links for Dashboard, Subjects, Sections, Teachers, Students, Accounts, and Logout. The main content area is titled 'Teachers list' and displays a table with two rows of teacher information. Each row has 'Edit' and 'Archive' buttons. The table columns are ID, Full Name, Position, Section Handle, Subject, Edit, and Archive.

ID	Full Name	Position	Section Handle	Subject	Edit	Archive
4343434	Jinie T. Batara	Master Teacher II	RESPONSIBILITY	1190	<button>EDIT</button>	<button>ARCHIVE</button>
987523453	Daniel M. Barrientos	Teacher III			<button>EDIT</button>	<button>ARCHIVE</button>

Figure 16. Teacher List Page

Figure 16 shows the list of teachers. The edit button is to change and update the information, and the archive button enables you to move an data from your inbox to an archive folder.

The screenshot shows the 'Add Teacher' process across three sequential steps:

- Step 1: Basic Information** (Left Panel)
 - Form fields include: ID Number, Last Name, First Name, Middle Name, Suffix, Date of Birth, Position, Home Address, E-mail Address, and Phone or Tel number.
 - Buttons: Close, Next, Back.
- Step 2: Assign Section** (Middle Panel)
 - Form fields: Assign Section (checkboxes for Grade 11: RESPONSIBILITY and Grade 12: GENEROSITY).
 - Buttons: Back, Next.
- Step 3: Assign Subject** (Right Panel)
 - Form fields: Assign Subject (checkboxes for various subjects categorized by grade).
 - Buttons: Back, Submit.

Figure 17. Add Teacher Account Modal

Figure 17 shows that the system allows adding teachers and the need to fill in the ID number, last name, first name, middle name, suffix, date, position, home address, email address, and phone number. The system also allows them to choose the section they want to assign and also to choose the subject that they want to assign to the teacher.

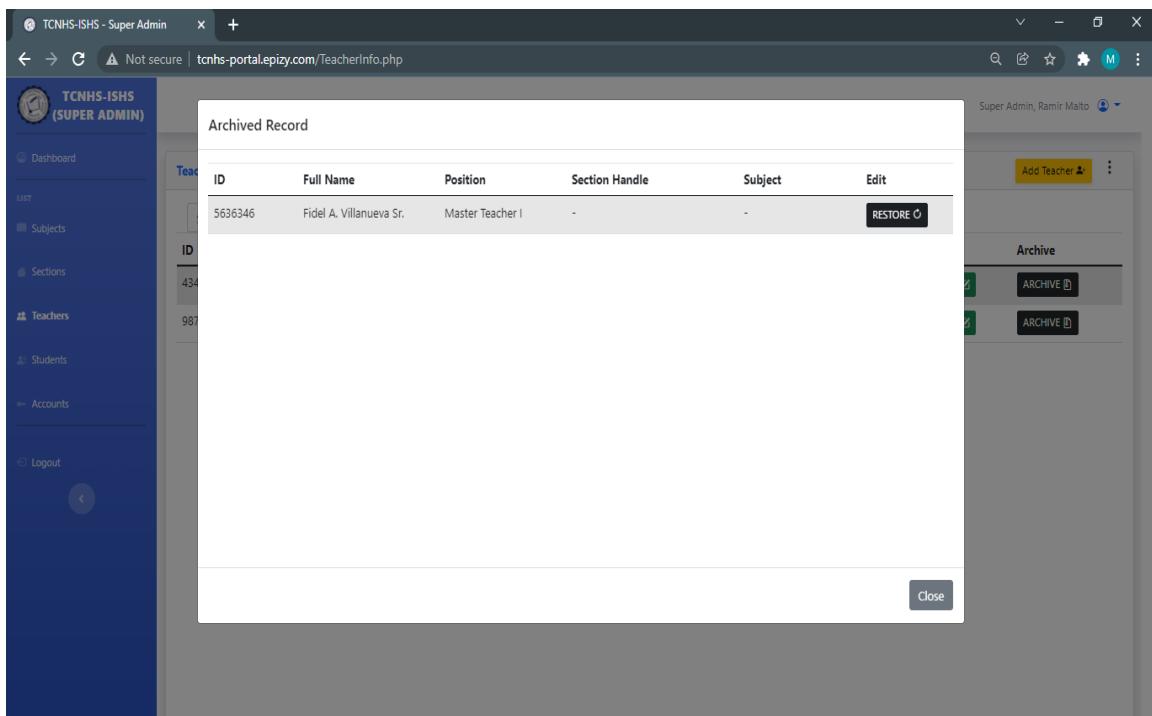


Figure 18. Achieve Teacher Account

Figure 18 shows the archive button. The purpose of this button is to restore the teacher account if they are going to resign and go back to the school so that they did not create an account for the teacher.

Students List						
	LRN	Full Name	Enrolled	Track/Strand Grade-Section	Edit	Archive
	20211207	Aileen A. Alegero	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	20211201	Mulat D. Biglang	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	9483345820	John D. Cruz	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	9483345123	Steve S. Flores	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	20211202	Mary R. Fresto	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	9483345756	Gavin M. Meme	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	84735645646	Mae D. Mendoza	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	2524572572	Jake F. Mercado	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	20211206	Monique B. Reyes	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	385927384937	Jerico A. Robles	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	20211209	Mc darren b. Rocillo	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>
	20211203	Reign O. Santos	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<button>EDIT</button>	<button>ARCHIVE</button>

Figure 19. Student List Page

Figure 19 shows the student list. It also displays the student's information and has two buttons: the edit button for some changes in the student's information and the achieve button to restore the student's information if they needed it.

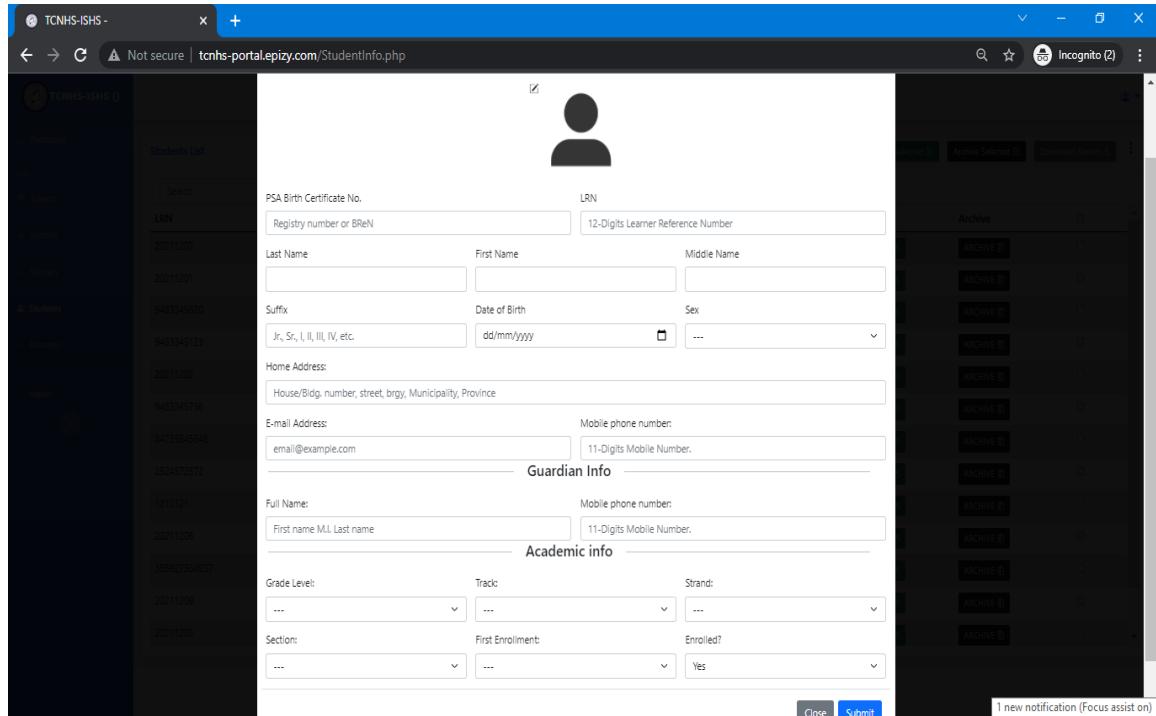


Figure 20. Add Student List Modal

Figure 20 shows that the system allows adding students. They need to fill in the personal information of the students, especially PSA number, LRN, name of the student, date of birth, gender, home address, email address, and phone number, and they also need to fill in the guardian information, including name and phone number. And lastly, the academic info they need to fill in the grade level, track, strands, section, and semester. And also, they can upload the profile of the student that is displayed on the student portal.

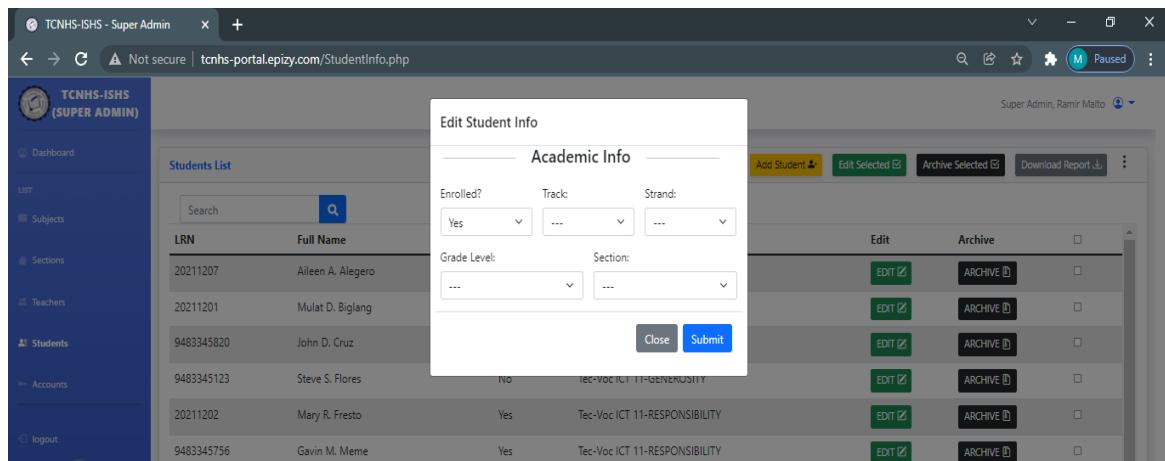


Figure 21. Edit Multiple Student List Modal

Figure 21 shows that the system has an edit button for student information and it allows you to change the status of the students if they are enrolled or not, and also makes some changes in track, strands, grade level, and section of the students.

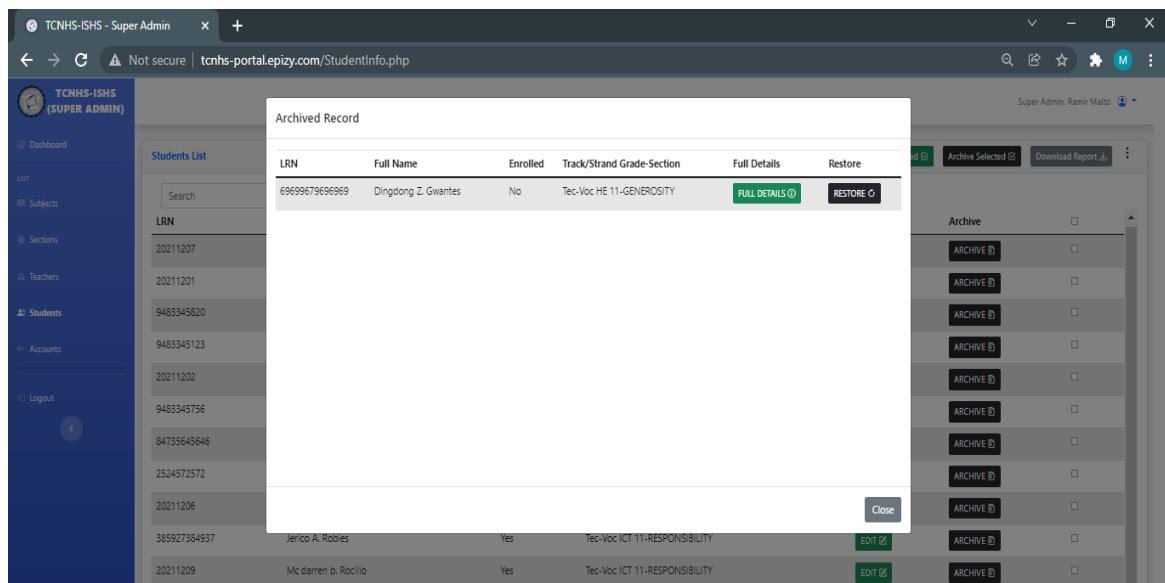


Figure 22. Archived Student Record Modal

Figure 22 shows that they have an archive button to restore the student information when they delete it, and when they restore it, the data will be recovered and displayed on the dashboard.

The screenshot shows a web browser window titled "TCNHS-ISHS - Super Admin". The URL is "tcnhs-portal.epizy.com/StudentInfo.php". The main content area displays a "Students List" table with columns: ID, Full Name, and Status. A modal dialog box is overlaid on the page, containing fields for "Report Title", "Sort By" (set to NAME, Ascending), and a "Download" button. Below the modal, there are two rows of buttons labeled "Edit" and "Archive".

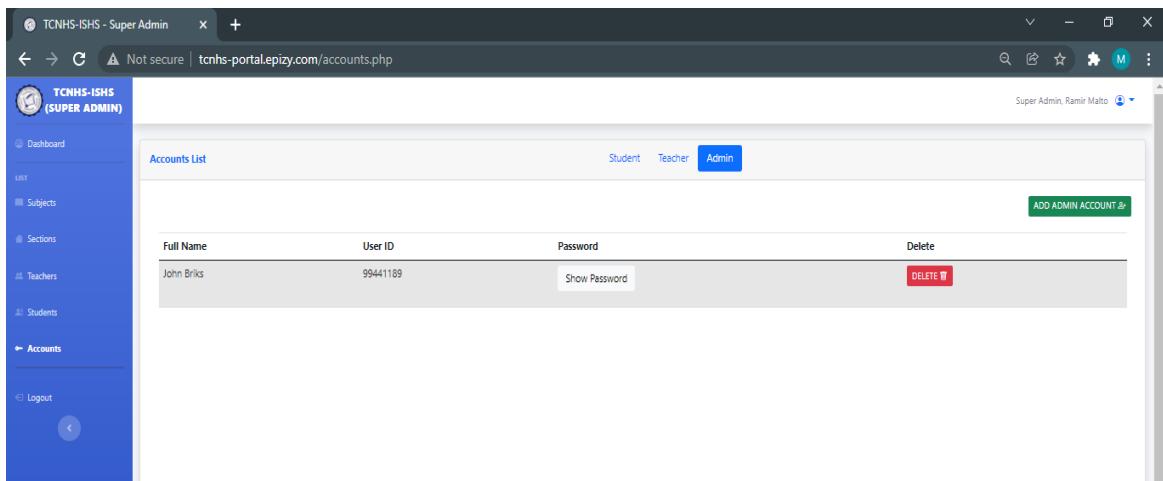
Figure 23. Download Report

Figure 23 shows the download report button to make a report for all students enrolled. They filter the student information and we can provide a softcopy to be printed as a report.

The screenshot shows a web browser window titled "TCNHS-ISHS - Super Admin" with the URL "tcnhs-portal.epizy.com/accounts.php". The left side of the screen shows a sidebar with navigation links: Home, Subjects, Sections, Teachers, Students, Accounts, and Logout. The main content area has tabs for "Student", "Teacher", and "Admin". There are two tables side-by-side. The left table is titled "Accounts List" and shows columns: Full Name, User ID, Password, and Pin Code. The right table is also titled "Accounts List" and shows columns: Full Name, User ID, Password, and Pin Code. Both tables contain several rows of account information.

Figure 24. Super Admin: Account List Page

Figure 24 shows all the lists of the accounts they have, and all the accounts are divided into three parts: students, teachers, and admin. The account list displays the name, user id, and password of the user, but when it comes to students, it has a pin code that students need to enter to view their grades, but the message needs to send it to the parents' number before the students can access their grades.



The screenshot shows a web browser window titled 'TCNHS-ISHS - Super Admin'. The URL is 'tcnhs-portal.epizy.com/accounts.php'. The left sidebar, under the heading 'TCNHS-ISHS (SUPER ADMIN)', includes links for Dashboard, Subjects, Sections, Teachers, Students, Accounts (which is currently selected), and Logout. The main content area is titled 'Accounts List' and features tabs for Student, Teacher, and Admin, with Admin selected. A table displays account information for one user: John Briks, User ID 99441189. There is a 'Show Password' button and a 'DELETE' button. A green 'ADD ADMIN ACCOUNT' button is located at the top right of the table. The top right corner of the window shows the user 'Super Admin, Ramir Malto'.

Figure 25. Super Admin: Admin Account List

Figure 25 shows the list of the admins in the system, and it displays the names of the admins, user id, and password. The system has two types of admin: the super admin and the admin. The super admin can view the accounts, add admins, and delete them, whereas the admin can only view the accounts and cannot view the tab from admin.

The screenshot shows a web browser window titled 'TCNHS-ISHS - Admin'. The URL is 'tcnhs-portal.epizy.com/accounts.php'. The left sidebar, titled 'TCNHS-ISHS (ADMIN)', includes links for Dashboard, Subjects, Sections, Teachers, Students, Accounts (selected), and Logout. The main content area is titled 'Accounts List' and contains a table with three columns: 'Full Name', 'User ID', and 'Password'. There are three rows of data:

Full Name	User ID	Password
Jinie T. Batara	4343434	45491536
Fidel A. Villanueva Sr.	5636346	57530381
Daniel M. Barrientos	987523453	31901041

Figure 26. Admin: Accounts List

Figure 26 shows the account view. The admin cannot add another admin but they can view the account of the teacher and the students.

Super Admin and Admin

The difference between these two administrators is that the super admin is the only one who can set the school year and semester and also view the event logs. They can also add another admin, and the super admin is the one who resets the pin code in the student account, but in the same way, all the functions can handle both admins.

Teacher Account

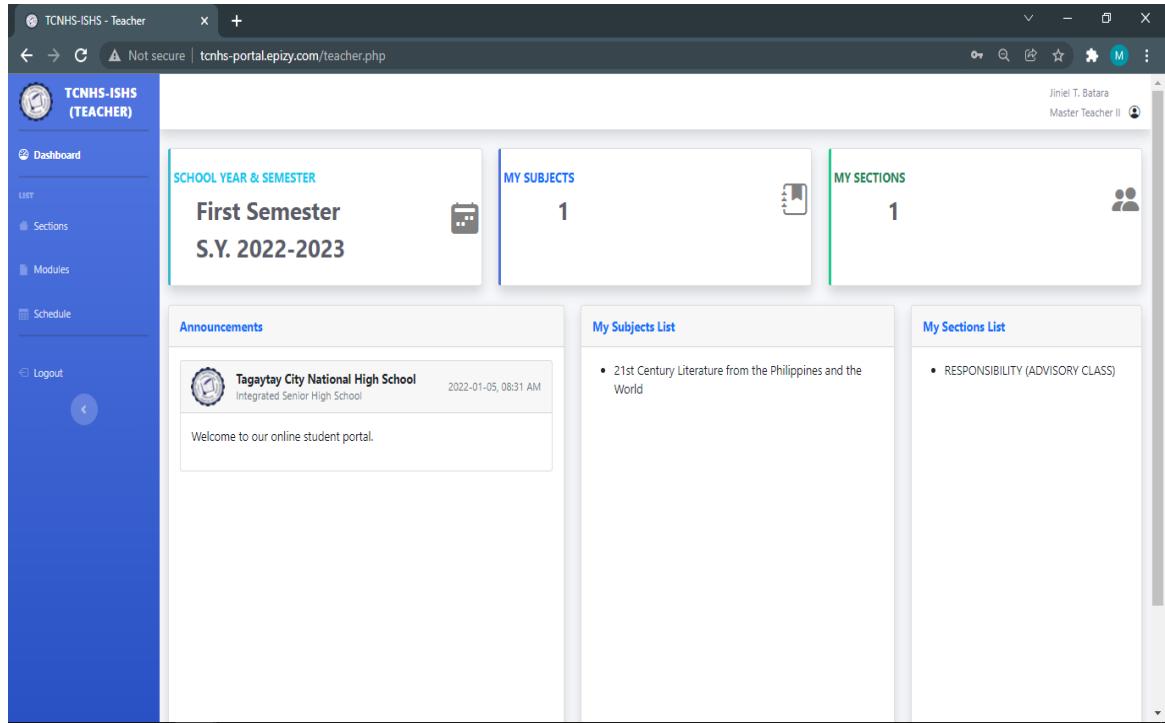


Figure 27. Teacher dashboard

Figure 27 shows the teacher's information. Also, it shows the school year and semester. Also, it shows the number of subjects that the teacher holds and also the number of sections. The teacher dashboard also contains the Announcement, Subjects list, and the Teacher Section List, where all of the names of the sections that are enlisted are displayed.

Sections				
Section Name	Section Strand	Section Grade	Show Students	Download
RESPONSIBILITY	ICT	11	Open in new tab	MASTERLIST

Figure 28. Section Page

Figure 28 shows the teacher's information, which includes the ID of the teacher, the list of sections, Section strand, Section grade, and Show Student with the "open in new tab" button, list of the students that the teacher holds.

LRN	Student Name	Pin Code	Subjects	Send SMS	Print Grades
9483345756	Meme, Gavin M.	3765	SUBJECTS	Send SMS	Print Grades
2524572572	Mercado, Jake F.	8777	SUBJECTS	Send SMS	Print Grades
385927384937	Robles, Jerico A.	6394	SUBJECTS	Send SMS	Print Grades
20211209	Rocillo, Mc darren b.	6765	SUBJECTS	Send SMS	Print Grades
20211202	Fresto, Mary R.	8411	SUBJECTS	Send SMS	Print Grades
84735645646	Mendoza, Mae D.	4849	SUBJECTS	Send SMS	Print Grades
20211206	Reyes, Monique B.	4137	SUBJECTS	Send SMS	Print Grades
20211203	Santos, Reign O.	5972	SUBJECTS	Send SMS	Print Grades

Figure 29. Section New Tab List

Figure 29 shows the teacher's information, which contains the list of information about the student that the teacher holds. This includes the LRN, Student Name, Pin Code, Action with the Subject Modal, Send SMS Modal, and Print Grades Modal.

Subject Name	1st Quarter	2nd Quarter	Action
Earth Science	88	86	UPLOAD GRADES
Contemporary Philippine Arts from the Regions	78	90	UPLOAD GRADES
Earth and Life Science	87	87	UPLOAD GRADES
Edukasyon sa pag papakatao	90	89	UPLOAD GRADES
21st Century Literature from the Philippines and the World	98	99	UPLOAD GRADES

Figure 30. Grades Tab

Figure 30 shows the teacher's information hat that contains the subjects of the students. It also shows the LRN, last name, subject ID, and subject name for the first quarter and second quarter. It also shows the upload grade module, where the teacher can upload the students' grades.

The screenshot shows a web-based teacher portal interface. At the top, there are tabs for 'RESPONSIBILITY' and 'Print Grades'. Below the tabs is a table with columns for 'LRN' and 'Student Name'. The table lists several student records. Overlaid on the page is a modal window with the following content:

To: krisca rocillo [09127102485]

Dear Mr/Mrs. krisca rocillo, The Grades of your son Mc darren b. Rocillo has been uploaded for this quarter. Here is the code (6109) to access the grade of your son. Thank you!

Concern:
None/

Buttons at the bottom of the modal: Send (blue) and Cancel (grey).

Below the modal, there is a section titled 'Send SMS' with multiple rows, each containing a 'Send SMS' button and a 'Print Grades' button. To the right of this section is another section titled 'Print Grades' with several checkboxes.

Figure 31. SMS Modal

Figure 31 shows the name of the student, the contact number of the student, and the message from the teacher to the parent concerning the student's status. It also includes the pin code that the parent should give to the student for them to access their grades.

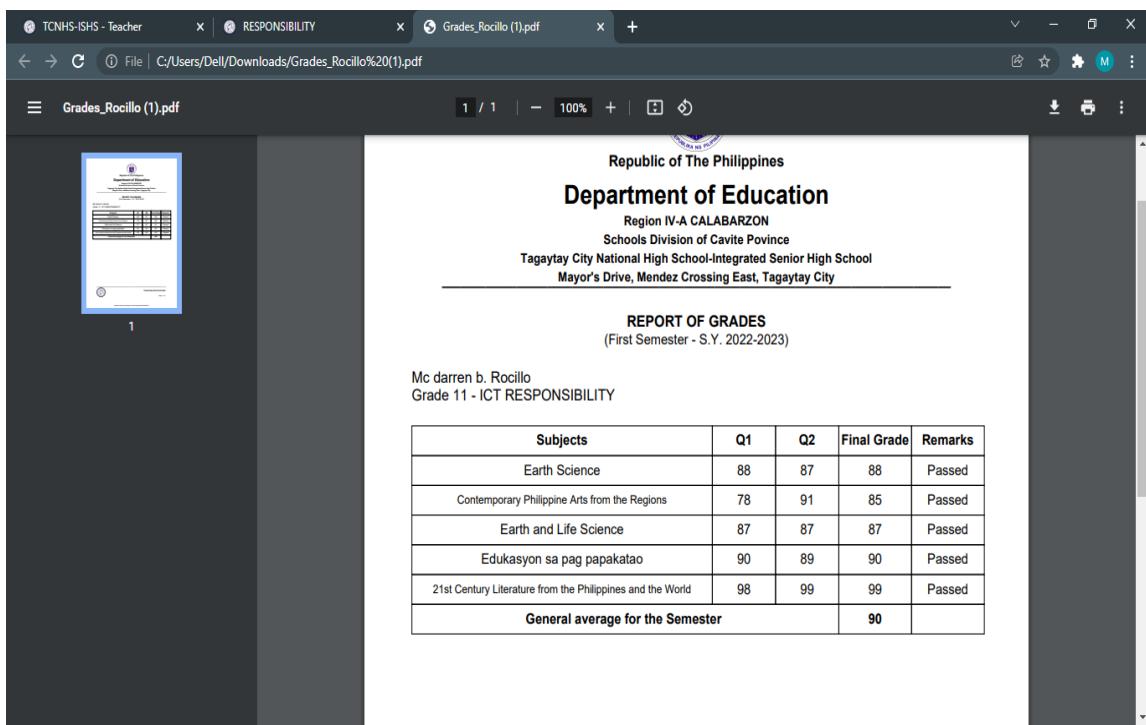


Figure 32. PDF Grades File

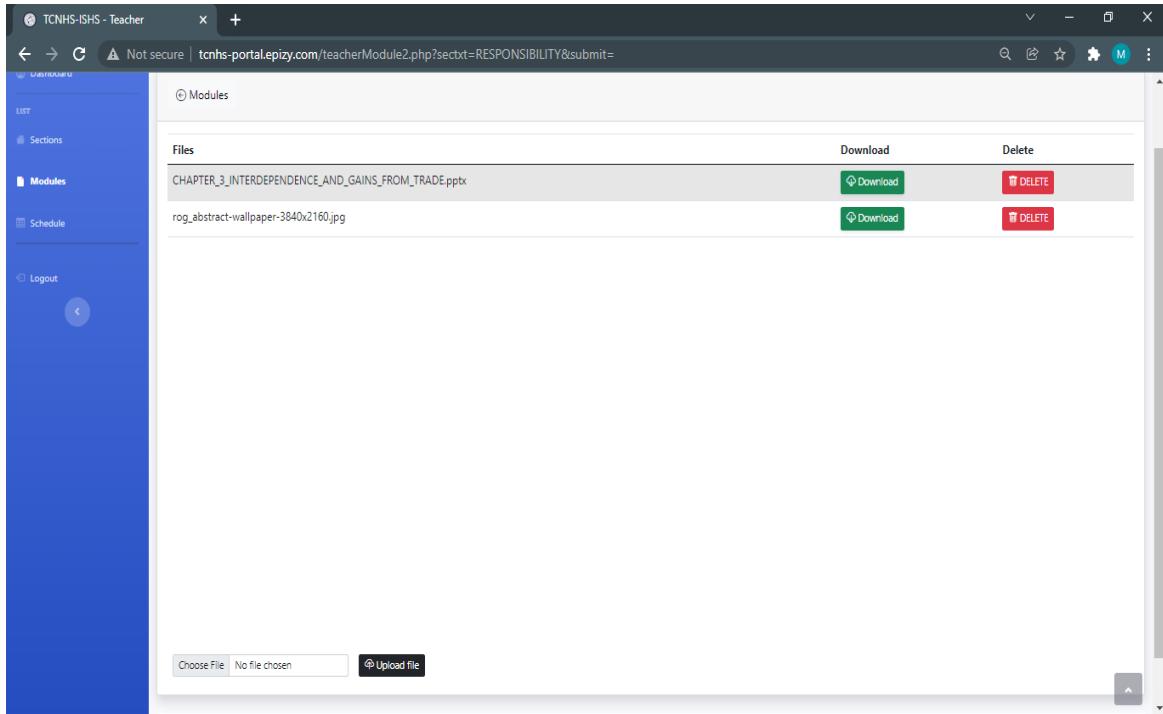
Figure 32 shows the Summary of the Grades Per Student. It shows the Semester, School Year, Name of Student, Strand and Section, Subject, the Grades Per Quarter, Final Grade, and the Remarks "Passed" or "Failed".

The screenshot shows the TCNHS-ISHS Teacher portal interface. The left sidebar has navigation links for Dashboard, Sections, Modules, Schedule, and Logout. The main content area is titled "Sections" and displays a table with columns: Section Name, Section Strand, Section Grade, and Modules. One section is listed: RESPONSIBILITY, ICT, Grade 11, with a "Modules" button.

Section Name	Section Strand	Section Grade	Modules
RESPONSIBILITY	ICT	11	<button>Modules</button>

Figure 33. Module Pages

Figure 33 shows the Modules Pages. It shows the Section Name, Section Strand, Section Grade and the Modules Modal. The Modules Modal is where the teacher can upload the lesson plan. So the student can download the modules that the teacher uploaded.



The screenshot shows a web browser window titled "TCNHS-ISHS - Teacher". The URL is "tcnhs-portal.lepizy.com/teacherModule2.php?secxt=RESPONSIBILITY&submit=". The left sidebar has a blue background with navigation links: "LIST", "Sections", "Modules" (which is selected), and "Schedule". Below these are "Logout" and a circular arrow icon. The main content area is titled "Modules" and shows a table of "Files". The table has columns for "Files", "Download", and "Delete". There are two rows: "CHAPTER_3_INTERDEPENDENCE_AND_GAINS_FROM_TRADE.pptx" and "rog_abstract-wallpaper-3840x2160.jpg". Each row has a "Download" button (green with white icon) and a "DELETE" button (red with white icon). At the bottom of the table is a file input field with "Choose File" and "No file chosen" placeholder text, and an "Upload file" button.

Files	Download	Delete
CHAPTER_3_INTERDEPENDENCE_AND_GAINS_FROM_TRADE.pptx		
rog_abstract-wallpaper-3840x2160.jpg		

Figure 34. Download and delete Modules

Figure 34 shows the Download and Delete modules shows the files of the modules of the teacher and the download modals where used to upload the module, the Delete modals will be use for delete the files that has been uploaded.

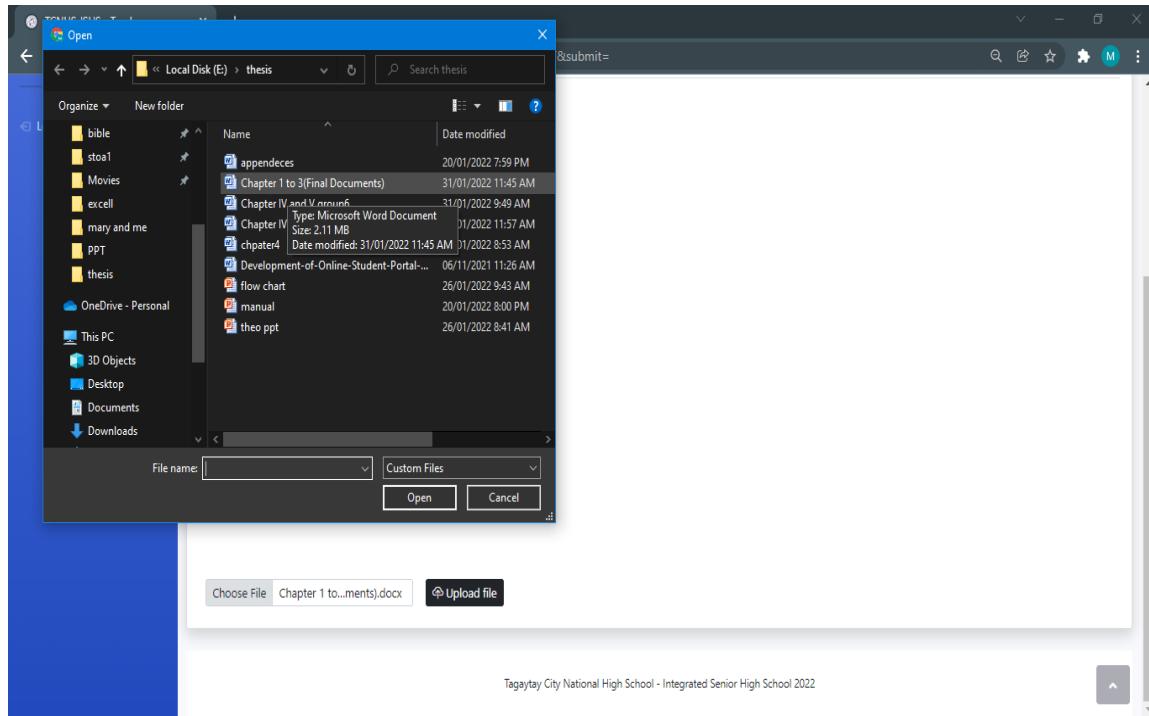


Figure 35. Upload Module files

Figure 35 shows the list of modules that have been uploaded. The "upload file" button allows the teacher to upload modules for the students.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 - 8:30 AM					
8:30 - 9:30 AM					
9:30 - 10:00 AM				Recess	
10:00 - 11:00 AM					
11:00 - 12:00 PM					
12:00 - 1:00 PM				Lunch Break	
1:00 - 2:00 PM					
2:00 - 3:00 PM					
3:00 - 3:30 PM				Recess	
3:30 - 4:30 PM					

Figure 36. Scheduling Table

Figure 36 shows the schedule table pages showing the scheduling of the teacher for the section. It shows the time and the day wherein the teacher can manage the subject and arrange the subject depending on the day that it is scheduled.

Student Account

The screenshot shows the student portal interface. On the left, a sidebar titled 'STUDENT PORTAL' includes links for Home, Grades, Schedule, Change Password, and Logout. The main content area displays the student's profile: Mc darren b. Rocillo, LRN: 20211209, Grade 11 - RESPONSIBILITY, Tec-Voc - ICT. It also shows the 'SCHOOL YEAR | SEMESTER' as First Semester S.Y. 2022-2023, and the 'ENROLLMENT STATUS' as Enrolled. Below this, there are two sections: 'Module Files' listing 'CHAPTER_3_INTERDEPENDENCE_AND_GAINS_FROM_TRADE.pptx' and 'rog_abstract-wallpaper-3840x2160.jpg' with download buttons; and 'Announcements' listing an entry from Tagaytay City National High School dated 2022-01-05, 08:31 AM, Integrated Senior High School, with the message 'Welcome to our online student portal.'

Figure 37. Student Home Page

Figure 37 shows the homepage of the student account where all the information like announcement listed. The student can also download the uploaded module files.

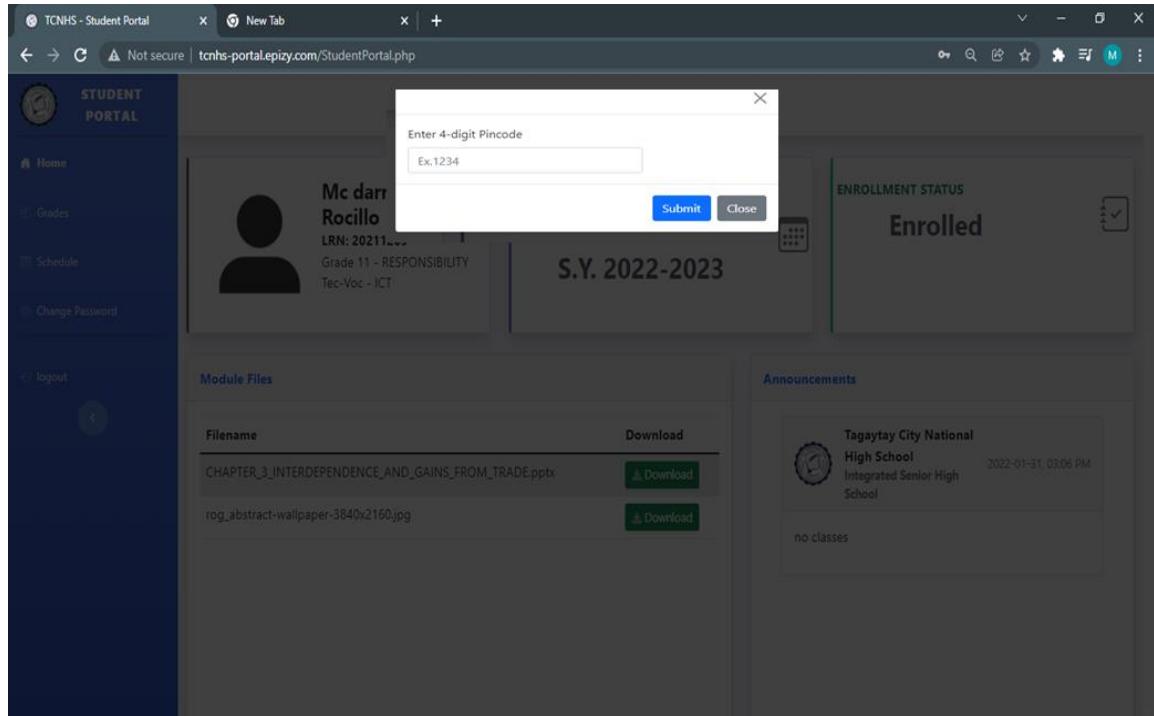


Figure 38. Student Passcode Modal

Figure 38 shows the modal that is used to enter the code from text messaging. The text field is for inputting data and the buttons for submitting and cancelling for notice.

The screenshot shows a web browser window for the 'TCNHS - Student Portal'. The URL is tcnhs-portal.epizy.com/studentgrade.php. The page has a blue sidebar on the left with options: Home, Grades (which is selected), Schedule, Change Password, and Logout. The main content area displays a student profile for 'Mc darren b. Rocillo' with LRN: 20211209, Grade 11 - RESPONSIBILITY, and Tec-Voc - ICT. Below the profile is a table titled 'First Semester' showing grades for various subjects: Earth Science (88, 87, 88), Contemporary Philippine Arts from the Regions (78, 91, 85), Earth and Life Science (87, 87, 87), Edukasyon sa pag papakatao (90, 89, 90), and 21st Century Literature from the Philippines and the World (98, 99, 99). A 'General Average:' row shows 89.40. There is also a 'Second Semester' tab and a 'Filter' button.

Subject	1st Quarter	2nd Quarter	Average
Earth Science	88	87	88
Contemporary Philippine Arts from the Regions	78	91	85
Earth and Life Science	87	87	87
Edukasyon sa pag papakatao	90	89	90
21st Century Literature from the Philippines and the World	98	99	99
General Average:			89.40

Figure 39. Student Grades

Figure 39 depicts the student's data. In the Student Grades table, the student can view their subject name and their grades in the 1st quarter, 2nd quarter, and average. They automatically compute the average.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 - 8:30 AM	Earth Science				
8:30 - 9:30 AM		Contemporary Philippine Arts from the Regions			
9:30 - 10:00 AM			Recess		
10:00 - 11:00 AM				Earth and Life Science	
11:00 - 12:00 PM					
12:00 - 1:00 PM			Lunch Break		
1:00 - 2:00 PM					
2:00 - 3:00 PM					
3:00 - 3:30 PM			Recess		
3:30 - 4:30 PM					

Figure 40. Student Schedules

Figure 40 shows the student's information. The student schedule table shows the students' schedules like time and the day of their subject.

Change Password

Enter your old password:

Enter new password: (minimum of 8 characters)

Re-enter new password:

Submit **Cancel**

Figure 41. Student Change Password

Figure 41 shows the student's information. The student can also change their account password in the password box. The modal shows the three

fields where we need to put the old password and create a new password. If the old password did not match, the show would be invalid, and if the new password did not match, the show would also be invalid.

User Logout Modal

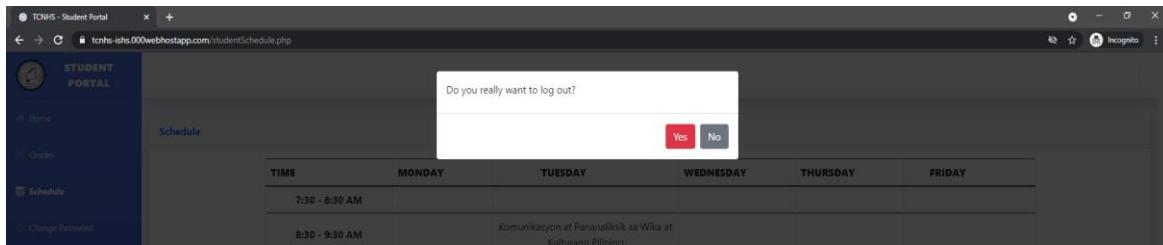


Figure 42. Logout Button

Figure 42 shows what "logging out" means to end access to a website. Logging out informs the computer or website that the current user wishes to end the login session.

Project Evaluation

After developing the system, the system was evaluated by IT Professionals and students using the ISO 9126. It was conducted at the City College of Tagaytay. ISO 9126 evaluation criteria are categorized into functionality - defined as a software product that helps to meet the needs of the clients, reliability - determines the capability of software to sustain its use when put under different circumstances, usability - highly dependent on the functional uses of software, efficiency - the capability of software when used for providing a desired functionality, maintainability – easily to recognize and fix a defect accordingly and portability - easily adapt to the environmental changes frequently as possible. The ratings are as follows:

Rating Scale:

4.21 – 5.00 Excellent

3.41 – 4.20 Very Good

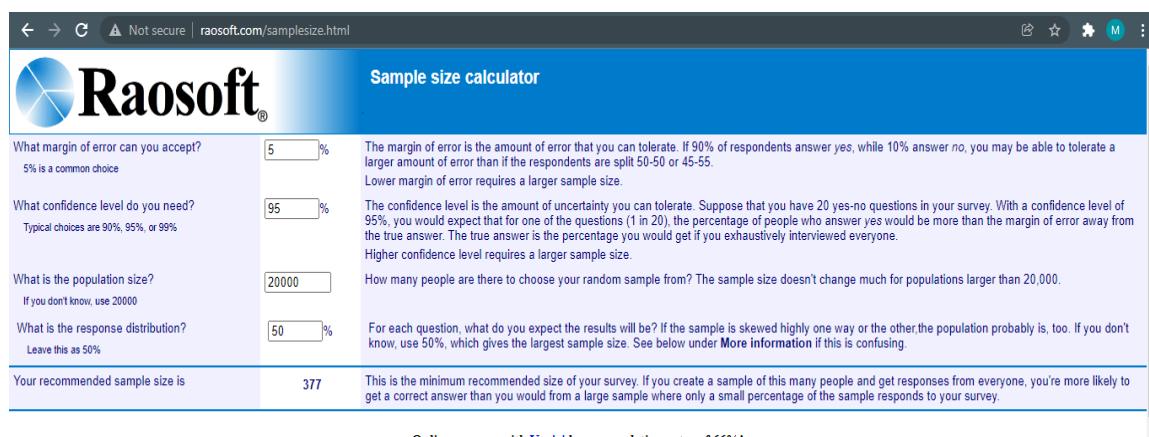
2.61 – 3.40 Good

1.81 – 2.60 Fair

1.00 – 1.80 Poor

Breakdown of Respondents

Given a 4340 students' population and 27 faculty members/IT professionals in the School of Computer Studies (SCS) at City College of Tagaytay, the proponents used the Raosoft size sample calculator to calculate the number of respondents' the sample size with a 5% margin of error, an 85% confidence level, and a 50% response distribution.



The screenshot shows the Raosoft Sample size calculator interface. The page title is "Sample size calculator". It has several input fields and explanatory text sections. The input fields include:

- "What margin of error can you accept?" with a value of "5 %".
- "What confidence level do you need?" with a value of "95 %".
- "What is the population size?" with a value of "20000".
- "What is the response distribution?" with a value of "50 %".
- "Your recommended sample size is" showing the result "377".

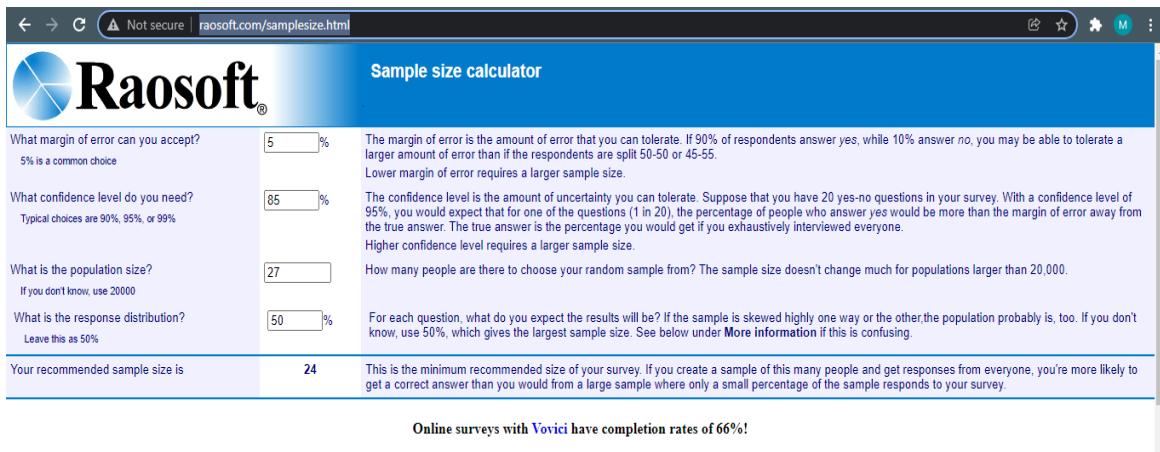
Explanatory text sections provide context for these inputs:

- Margin of error: "The margin of error is the amount of error that you can tolerate. If 90% of respondents answer yes, while 10% answer no, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size."
- Confidence level: "The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer yes would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size."
- Population size: "How many people are there to choose your random sample from? The sample size doesn't change much for populations larger than 20,000."
- Response distribution: "For each question, what do you expect the results will be? If the sample is skewed highly one way or the other, the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under More information if this is confusing."
- Completion rate: "This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey."

At the bottom, it says "Online surveys with Vovici have completion rates of 66%!"

Figure 44. Raosoft Sample Size Calculator

Figure 44 shows the Raosoft Sample Size Calculator, which will be used by the study's proponents to determine the exact number of students and faculty members/IT professionals needed as respondents.



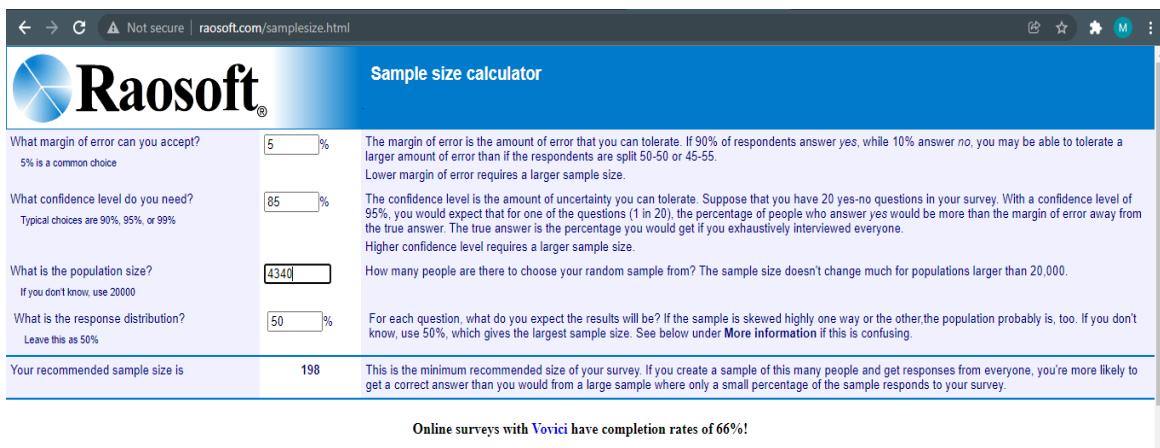
The screenshot shows the Raosoft Sample size calculator interface. The input fields and their values are:

- What margin of error can you accept? %
- What confidence level do you need? %
- What is the population size?
- What is the response distribution? %
- Your recommended sample size is **24**

The calculator provides explanatory text for each input field. At the bottom, it states: "Online surveys with Vovici have completion rates of 66%!"

Figure 45. Raosoft Sample size Calculator for Faculty Members/IT professionals
of City College of Tagaytay

Figure 45 shows the computation for the proponents' required IT professionals. The results show that 24 out of 27 IT professionals are required to complete the survey with a 5% margin of error.



The screenshot shows the Raosoft Sample size calculator interface. The input fields and their values are:

- What margin of error can you accept? %
- What confidence level do you need? %
- What is the population size?
- What is the response distribution? %
- Your recommended sample size is **198**

The calculator provides explanatory text for each input field. At the bottom, it states: "Online surveys with Vovici have completion rates of 66%!"

Figure 46. Raosoft Sample size Calculator for Students of City College of Tagaytay

Figure 46 shows the computation for the proponents' required students. The results show that 198 out of 4340 students are required to complete the survey with a 5% margin of error.

IT Professional Students	24	10.81
	198	89.19
TOTAL	222	100%

Table 2. Breakdown of Respondents

Table 2 shows the number of respondents who will evaluate the developed system using ISO 9126 to ensure that the system adheres to the software quality characteristics. The data shows the breakdown of the respondents. A total of two hundred twenty-two (222) respondents, consisting of twenty-four (24) faculty members or IT professionals and one hundred ninety-eight (198) students, participated in the survey. The percentage of each type of respondent is calculated using the formula:

$$\text{Percentage} = \frac{x}{n} * 100$$

Wherein: x = number of respondents

n = total number of respondents

100 = total percentage

Result of the software quality of the system using ISO 9126

Students' Assessment of the Functionality

Table 3 displays the students' evaluations of the system's functionality. The system was evaluated, and the mean score was 4.17, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation
Suitability	4.21	Excellent
Accuracy	4.15	Very Good
Interoperability	4.19	Very Good
Compliance	4.17	Very Good
Security	4.14	Very Good
Mean Average	4.17	Very Good

Table 3. Students' Assessment of the Functionality

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

IT Professionals' Assessment of the Functionality

Table 4 displays the IT professionals/Faculty members evaluations of the system's functionality. The system was evaluated, and the mean score was 3.69, which is interpreted as "Very Good " This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Suitability	3.67	Excellent
Accuracy	3.79	Very Good
Interoperability	3.75	Very Good
Compliance	3.67	Very Good
Security	3.58	Very Good
Mean Average	3.69	Very Good

Table 4. IT professionals/Faculty members Assessment of the Functionality

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good

1.81 – 2.60 Fair
 1.00 – 1.80 Poor

Students' Assessment of the Reliability

Table 5 displays the students' evaluations of the system's reliability. The system was evaluated, and the mean score was 4.16, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation
Maturity	4.17	Very Good
Fault Tolerance	4.11	Very Good
Recoverability	4.19	Very Good
Mean Average	4.16	Very Good

Table 5. Students' Assessment of the Reliability

Scale:

4.21 – 5.00 Excellent
 3.41 – 4.20 Very Good
 2.61 – 3.40 Good
 1.81 – 2.60 Fair
 1.00 – 1.80 Poor

IT Professionals' Assessment of the Reliability

Table 6 displays the IT professionals/Faculty members evaluations of the system's reliability. The system was evaluated, and the mean score was 3.64, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Maturity	3.67	Very Good
Fault Tolerance	3.71	Very Good

Recoverability	3.54	Very Good
Mean Average	3.64	Very Good

Table 6. IT professionals/Faculty members Assessment of the Reliability

Scale:

- 4.21 – 5.00 Excellent
- 3.41 – 4.20 Very Good
- 2.61 – 3.40 Good
- 1.81 – 2.60 Fair
- 1.00 – 1.80 Poor

Students' Assessment of the Usability

Table 3 displays the students' evaluations of the system's usability. The system was evaluated, and the mean score was 4.26, which is interpreted as "Excellent." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation
Understandability	4.3	Excellent
Learnability	4.29	Excellent
Operability	4.21	Excellent
Attractiveness	4.22	Excellent
Mean Average	4.26	Excellent

Table 7. Students' Assessment of the Usability

Scale:

- 4.21 – 5.00 Excellent
- 3.41 – 4.20 Very Good
- 2.61 – 3.40 Good
- 1.81 – 2.60 Fair
- 1.00 – 1.80 Poor

IT Professionals' Assessment of the Usability

Table 8 displays the IT professionals/Faculty members evaluations of the system's Usability. The system was evaluated, and the mean score was 3.74, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Understandability	3.71	Very Good
Learnability	3.75	Very Good
Operability	3.63	Very Good
Attractiveness	3.88	Very Good
Mean Average	3.74	Very Good

Table 8. IT professionals/Faculty members' Assessment of the Usability

Scale:

- 4.21 – 5.00 Excellent
- 3.41 – 4.20 Very Good
- 2.61 – 3.40 Good
- 1.81 – 2.60 Fair
- 1.00 – 1.80 Poor

Students' Assessment of the Efficiency

Table 9 displays the students' evaluations of the system's efficiency. The system was evaluated, and the mean score was 4.19, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation
Time Behaviour	4.2	Very Good
Resource Behaviour	4.18	Very Good
Mean Average	4.19	Very Good

Table 9. Students' Assessment of the Efficiency

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

IT Professionals' Assessment of the Efficiency

Table 10 displays the IT professionals/Faculty members evaluations of the system's efficiency. The system was evaluated, and the mean score was 3.96, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Time Behaviour	4.08	Very Good
Resource Behaviour	3.83	Very Good
Mean Average	3.96	Very Good

Table 10. IT professionals/Faculty members' Assessment of the Efficiency

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

Students' Assessment of the Maintainability

Table 11 displays the students' evaluations of the system's maintainability. The system was evaluated, and the mean score was 4.23, which is interpreted as "Excellent." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation

Analyzability	4.26	Excellent
Changeability	4.16	Very Good
Stability	4.21	Excellent
Testability	4.29	Excellent
Mean Average	4.23	Excellent

Table 11. Students' Assessment of the Maintainability

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

IT Professionals' Assessment of the Maintainability

Table 12 displays the IT professionals/Faculty member's evaluations of the system's maintainability. The system was evaluated, and the mean score was 3.72, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Analyzability	3.63	Very Good
Changeability	3.58	Very Good
Stability	3.83	Very Good
Testability	3.83	Very Good
Mean Average	3.72	Very Good

Table 13. IT professionals/Faculty members' Assessment of the Maintainability

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

Students' Assessment of the Portability

Table 14 displays the students' evaluations of the system's portability. The system was evaluated, and the mean score was 4.23, which is interpreted as "Excellent." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	Student	Interpretation
Adaptability	4.2	Very Good
Instability	4.21	Excellent
Conformity	4.26	Excellent
Replaceability	4.25	Excellent
Mean Average	4.23	Excellent

Table 14. Students' Assessment of the Portability

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

IT Professionals' Assessment of the Portability

Table 15 displays the IT professionals/Faculty members evaluations of the system's portability. The system was evaluated, and the mean score was 3.74, which is interpreted as "Very Good." This means that the system completely meets and far exceeds the majority of expectations.

Indicators	IT Professionals/Faculty Members	Interpretation
Adaptability	3.63	Very Good
Instability	3.79	Very Good
Conformity	3.71	Very Good
Replaceability	3.83	Very Good
Mean Average	3.74	Very Good

Table 15. IT professionals/Faculty members' Assessment of the Portability

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good
1.81 – 2.60	Fair
1.00 – 1.80	Poor

Respondents' Overall Assessment

Table 16 summarizes the system evaluation results. The portability criteria were rated by the evaluators with a mean average of 4.08, the highest criteria, indicating that the system can provide effectiveness and meet its standards. On the other hand, IT professionals rated the overall mean performance of the Development of Online Student Portal for Tagaytay City National High School-Integrated Senior High School Trading as 3.73; and students, which is 4.21, with a mean average of 3.97.

Indicators	Mean	Interpretation
Functionality	3.93	Very Good
Reliability	3.90	Very Good
Usability	4.00	Very Good
Efficiency	4.08	Very Good
Maintainability	3.97	Very Good
Portability	3.98	Very Good
Mean Average	3.97	Very Good

Table 9. Summary of Evaluation

Scale:

4.21 – 5.00	Excellent
3.41 – 4.20	Very Good
2.61 – 3.40	Good

1.81 – 2.60 Fair
1.00 – 1.80 Poor

Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The researchers designed and developed a web-based application entitled "Development of an Online Student Postal in Tagaytay City National High School-Integrated Senior High School" using PHP and MySQL, wherein it can be accessible through an internet connection. The purpose of this system is to create an online gateway where students can log into a school website to access grades, announcements, modules, and schedules..

In the Online Student Portal, the administrator can view all of the information from student and teacher data, and the administrator and teacher can view the student enrolled in a specific strand and generate a report with the corresponding name, strand, and section. They can create a daily backup of their database.

The researchers used survey questionnaires as the key instrument in collecting data and assessing the level of system performance. The study was composed of 222 respondents, of whom (a) 24 respondents were IT professionals, and (b) 198 respondents were students from the City College of Tagaytay. The questionnaire contained the following categories: (a) functionality, with a descriptive scale rating of "Very Good," indicating that the system can

meet the needs of a specific function; (b) reliability, with a descriptive scale rating of "Very Good," indicating that the system is reliable, stable, and capable of recovering from any breakdown; and (c) usability, with a descriptive scale rating of "Very Good," indicating that the system is effective, efficient, and user-satisfying in achieving the goals.(d) efficiency got a descriptive scale rating of "Very Good", which means that the system is capable of completing tasks without wasting time or resources; (e) maintainability, with a descriptive scale rating of "Very Good" and (f) portability, with a descriptive scale rating of "Very Good", which means that the system is portable in the sense that it can be utilized in a variety of environments and with the same software.

The overall rating for the system obtained a total mean average of 3.97 with a descriptive scale rating of "Very Good," which means that the system completely meets all the requirements and exceeds several expectations.

Conclusions

The Development of Online Student Portal for Tagaytay City National High School- Integrated Senior High School helps to keep track of all the students in the academic institute. It is basically an online gateway for teachers and students to login to the portal that is the website and see the information accordingly.

Based on the study's objectives and the results of testing and evaluation, the following conclusions were reached:

1. The Development of Online Student Portal for Tagaytay City National High School- Integrated Senior High School; was designed such that;

- a. It provides data through online
 - b. Using the system, it would improve the manual system into a computerized program;
 - c. It provides a system that will help the teachers manage and trace student information
 - d. The system allows the teacher to post a grade online and send an SMS message to the student's guardian.
2. The system was developed through the use of website development tools such as HTML, CSS, and Bootstrap.
3. The system was tested in different testing procedures, such as unit, integration, and system testing, and the modules used were working properly.
4. The system was evaluated through the use of ISO9126 standards, and the mean average number of points acquired was 3.97. This shows that the system fully meets and exceeds all expectations, and
5. The proponents wrote a letter stating that the system was finished and fully functional, and that it would be deployed to Tagaytay City National High School-integrated Senior High School to determine whether or not the system would be used.

According to the gathered data, the developed study would be useful and beneficial for all users. It saves a lot of time as it allows

The developed system would solve the associated problems with the traditional methods. With the development of an online student portal for

Tagaytay City National High School-Integrated Senior High School, it is possible to generate the data for the students.

The developed system has the advantage of being easy to administer. Apart from helping academics, it can also assist management with a variety of tasks. To name a few, reaching out to students and teachers.

Recommendations

Based on the findings of the study, the following are recommended for the future enhancement of the Development of Online Student Portal for Tagaytay City National High School- Integrated Senior High School

1. . Provide more enhancements in the systems GUI
2. Adding of archive (which deletes the files automatically if not been recovered by the user Ex. 3 months) instead of delete so if the user mistakenly delete the file, the user can recover the file.
3. Add User Manual so the new users will become aware.
4. Always encrypt the password and require for strong combination of characters, can also add password expiration so users will be required to change the password on a certain period. Incorrect login should have limit, after the limit, the account should be suspended.
5. Data would be more secured and protected thru system generated timestamp and record monitoring to prevent unauthorized changes. Data audits would be great to ensure data integrity and validation.

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https://d1wqxts1xzle7.cloudfront.net/56215851/4-shobha_bharamaoudar-WEB_BASED_STUDENT_INFORMATION-with-cover-page-

v2.pdf?Expires=1632667727&Signature=CE2XfdN8vDNLKrBPg6h7ehtDuKaWb
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Appendices

Appendix A. Summary of Evaluation

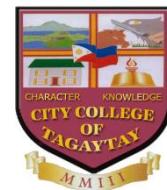
Indicators	IT Professionals	Students	Mean Average	Descriptive Rating
FUNCTIONALITY				
Suitability	3.67	4.21	3.94	Very Good
Accuracy	3.79	4.15	3.97	Very Good
Interoperability	3.75	4.19	3.97	Very Good
Compliance	3.67	4.17	3.92	Very Good
Security	3.58	4.14	3.86	Very Good
Average:			3.93	Very Good
RELIABILITY				
Maturity	3.67	4.17	3.92	Very Good
Fault Tolerance	3.71	4.11	3.91	Very Good
Recoverability	3.54	4.19	3.86	Very Good
Average:			3.9	Very Good
USABILITY				
Understandability	3.71	4.3	4.01	Very Good
Learnability	3.75	4.29	4.02	Very Good
Operability	3.63	4.21	3.92	Very Good
Attractiveness	3.88	4.22	4.05	Very Good
Average:			4	Very Good
EFFICIENCY				
Time Behavior	4.08	4.2	4.14	Very Good
Resource Behavior	3.83	4.18	4.01	Very Good
Average:			4.08	Very Good
MAINTAINABILITY				
Analyzability	3.63	4.26	3.94	Very Good

Changeability	3.58	4.16	3.87	Very Good
Stability	3.83	4.21	4.02	Very Good
Testability	3.83	4.29	4.06	Very Good
Average:			3.97	Very Good
PORTABILITY				
Adaptability	3.63	4.2	3.91	Very Good
Instability	3.79	4.21	4	Very Good
Conformity	3.71	4.26	3.98	Very Good
Replaceability	3.83	4.25	4.04	Very Good
Average:			3.98	Very Good
OVERALL MEAN AVERAGE		3.73	4.21	3.97
				Very Good

Appendix B: Sample Evaluation Sheet



Republic of the Philippines
 City of Tagaytay
CITY COLLEGE OF TAGAYTAY
 Akle St., Kaybagal South, Tagaytay City 4120
 Tel. Nos. (046) 483-0470 / (046) 483 -0672



SCHOOL OF COMPUTER STUDIES

Title: DEVELOPMENT OF ONLINE STUDENT PORTAL FOR TAGAYTAY CITY NATIONAL HIGH SCHOOL - INTEGRATED SENIOR HIGH SCHOOL

Proponents: Walter Jude Bautista, Jiniel Batara, Ramir malto, John briks Quiacos, Mc Darren Rocillo

Evaluator Name:

Type of Evaluator:
 Student

IT Professional

Client/Instructor

Instruction: Please kindly evaluate the software material by using the given scale and placing a checkmark (✓) under the corresponding numerical rating.

NUMERICAL RATING	INTERPRETATION	DEFINITION
5	Excellent	The system fully meets and far exceeds the most expectations.
4	Very Good	The system fully meets all and exceeds

		several expectations.
3	Good	The system fully meets all expectations.
2	Fair	The system does not fully meet all expectations.
1	Poor	The system fails to meet expectation to a significant degree in several areas.

INDICATORS	5	4	3	2	1
A. FUNCTIONALITY (capability of the software product to provide functions which meet stated and implied needs).					
1. Suitability (appropriateness to specifications of the function of the software).					
2. Accuracy (correctness of the functions).					
3. Interoperability (ability of the software to interact with other components or system).					
4. Compliance (compliant capability of software in terms of laws and guidelines).					
5. Security (this relates to unauthorized access to the software).					
B. RELIABILITY (capability of the software product to maintain a specified level of performance).					
1. Maturity (this concern with the frequency of failure of the system).					
2. Fault-tolerance (ability of the software to withstand and recover from component or environmental failure).					
3. Recoverability (ability to bring back the failed system to full operation including data needed).					
C. USABILITY (capability of the software product to be understood, learned, used and attractive to the user).					
1. Understandability (determines the ease of which the system functions can be understood).					
2. Learnability (learning effort for different users).					
3. Operability (ability of the software to be easily operated by a given user in a given environment).					
4. Attractiveness (attribute of software that has the capability of the software product to be attractive to the user).					
D. EFFICIENCY (capability of the software product to provide appropriate performance, relative to the amount of resources used).					
1. Time behavior (characterized response times for a given throughput).					
2. Resource behavior (characterizes resources used).					
E. MAINTABILITY (capability of the software product to be modified. Modifications may include corrections, improvements or adaptation of the software to changes in					

environment, and in requirements and functional specifications)					
1. Analyzability (ability to identify the root cause of a failure within the software).					
2. Changeability (amount of effort to change a system).					
3. Stability (sensitivity to change of a given system).					
4. Testability (effort needed to verify/test a system change).					
F. PORTABILITY					
1. Adaptability (ability of the system to change new specification or operating environments).					
2. Instability (the effort required to install the software).					
3. Conformity (relates to portability of database used).					
4. Replaceability (plug and play aspects of software components).					

- *Based on ISO 9126*

Findings:

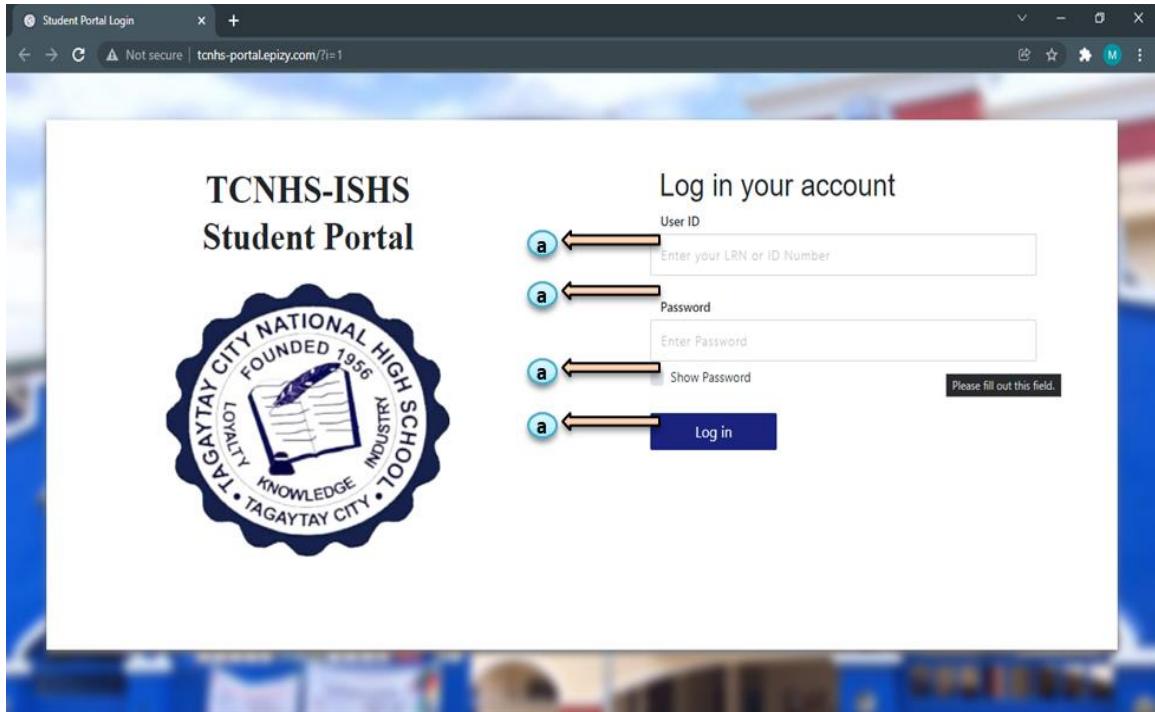
1. _____

Recommendations:

1. _____

_____ Signature

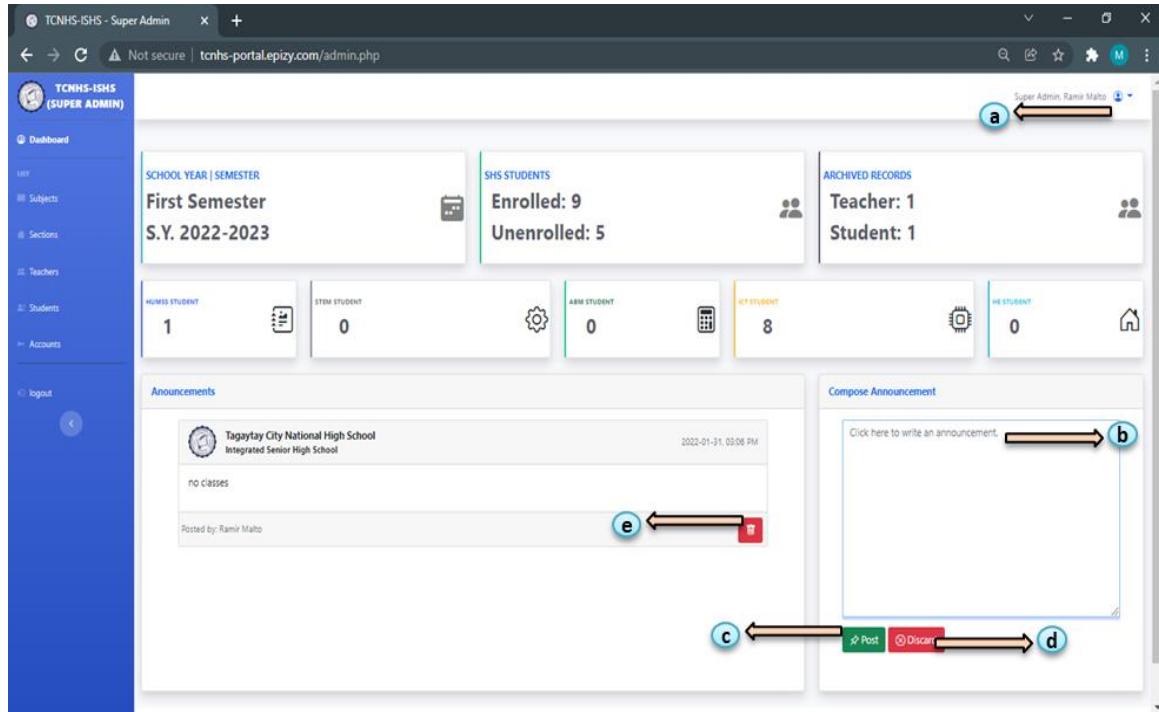
Appendix C: Operations Manual / User's Guide



Login Form

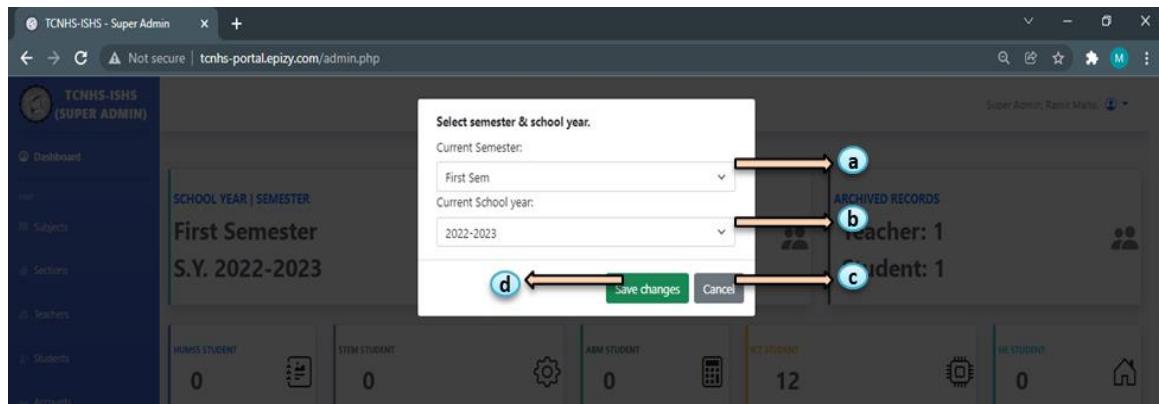
- a. Text form field - Here, the user can enter their User ID.
- b. Text form field - Users can input their password
- c. Check box - The user can display their password
- d. Log in button - Users can log into their accounts.

System Administration



Super Admin Dashboard

- Drop down button - Click to see the setting and long Analysis Button
- Text box - Enter the announcement here.
- Post button - To display the announcement
- Cancel button - Disregard the changes.
- Delete button - This button removes the previously posted announcement.



Setting Button: Set School Year and Semester

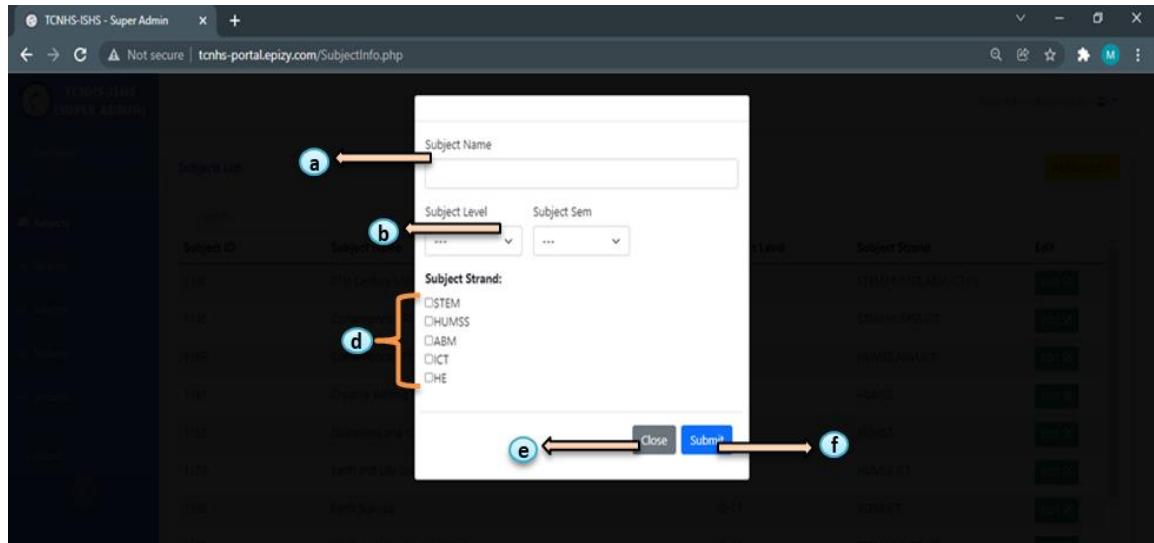
- a. Drop down button - Admin can select the semester
- b. Drop down button - Admin can select the school year
- c. Save button - This button saves the changes.
- d. Cancel button - Close the modal.

Subject ID	Subject Name	Subject Level	Subject Strand	Edit
1110	21st Century Literature from the Philippines and the World	G-11	HUMSS, CT	
1145	Contemporary Philippine Arts from the Regions	G-12	STEM/HUMSS, CT	
1165	Contemporary Philippine Arts from the Regions	G-11	HUMSS, ABACUS, CT	
1181	Creative Writing (Oil)	G-12	HUMSS	
1182	Disciplines and Ideas in the Applied Social Sciences	G-12	HUMSS	
1170	Earth and Life Science	G-11	HUMSS, CT	
1138	Earth Science	G-11	STEM, CT	
1188	Educational or pop popularize	G-11	STEM/HUMSS, CT	
1153	Empowerment Technologies	G-11	STEM/HUMSS	
1150	English for Academic and Professional Purposes	G-12	STEM	
1173	English for Academic and Professional Purposes	G-11	HUMSS	
1181	General Biology 1	G-12	STEM	

Subject ID	Subject name	Subject level	Subject Strand	Edit
1112	21st Century Literature from the Philippines and the World	G-11	HUMSS, CT	
1156	Basic Cal	G-12	STEM, CT	
1186	Community Engagement, Solidarity and Citizenship	G-12	HUMSS, CT	
1183	Creative Nonfiction: The Literary Essay	G-12	HUMSS	
1187	Culminating Activity	G-12	HUMSS	
1144	Disaster Readiness and Risk Reduction	G-11	STEM, CT	
1177	Disciplines and Ideas in the Social Sciences	G-11	HUMSS, CT	
1183	Entrepreneurship	G-12	STEM/HUMSS	
1166	General Biology 2	G-12	STEM	
1157	General Chemistry 1	G-11	STEM	
1167	General Chemistry 2	G-12	STEM	
1165	General Physics 2	G-12	STEM	

Subject List Page

- a. Active 1st semester tab - View the first semester subject list.
- b. Active 2nd semester tab - View the second semester's subject list.
- c. Add Button - To add a subject from the list
- d. Search bar - Use this to find specific information.
- e. Edit button - Modify the Subject Information.



Add Subjects Modal

- a. Text field - Enter the subject's name here.
- b. Subject level drop-down - Select the subject level.
- c. Subject Semester Drop Down - Choose a subject for Sem.
- d. Check box strand - Click on the assigned strand.
- e. Close button: This closes the modal
- f. Submit button—Submit the subjects you've created.

Section Name	Section Strand	Section Grade	Adviser	Edit	Delete	Download
RESPONSIBILITY	ICT	11	Jiniel T. Baguilat	b EDIT	c DELETE	d MASTERLIST
GENEROSITY	ICT	12	Daniel M. Barrientos	e EDIT	f DELETE	g MASTERLIST

Section List Page

- Add button - This button is used to create a section.
- Edit button - Use this button to change the information.
- Delete button - Removes the item from the table
- Master list button – Download the list of all students in a section.

The modal window displays the following fields and controls:

- a**: Text input field for Section Name.
- b**: Text input field for Adviser.
- c**: Drop-down menu for Strand.
- d**: Drop-down menu for Grade.
- e**: Close button.
- f**: Submit button.

Add Section Modal

- Text field- Enter the subject name.

- b. Adviser drop-down - Choose an Adviser
- c. Strand drop-down - Choose a strand.
- d. Grade level drop-down - Choose a grade level from the drop-down menu.
- e. Close Button - Exit modal
- f. Submit button - this button submits the created section

ID	Full Name	Position	Section Handle	Subject	Edit	Archive
4343434	Jiniel T. Batara	Master Teacher II	RESPONSIBILITY	119	d	ARCHIVE
987523453	Daniel M. Barrientos	Teacher III	-	-	e	ARCHIVE

Teacher Page List

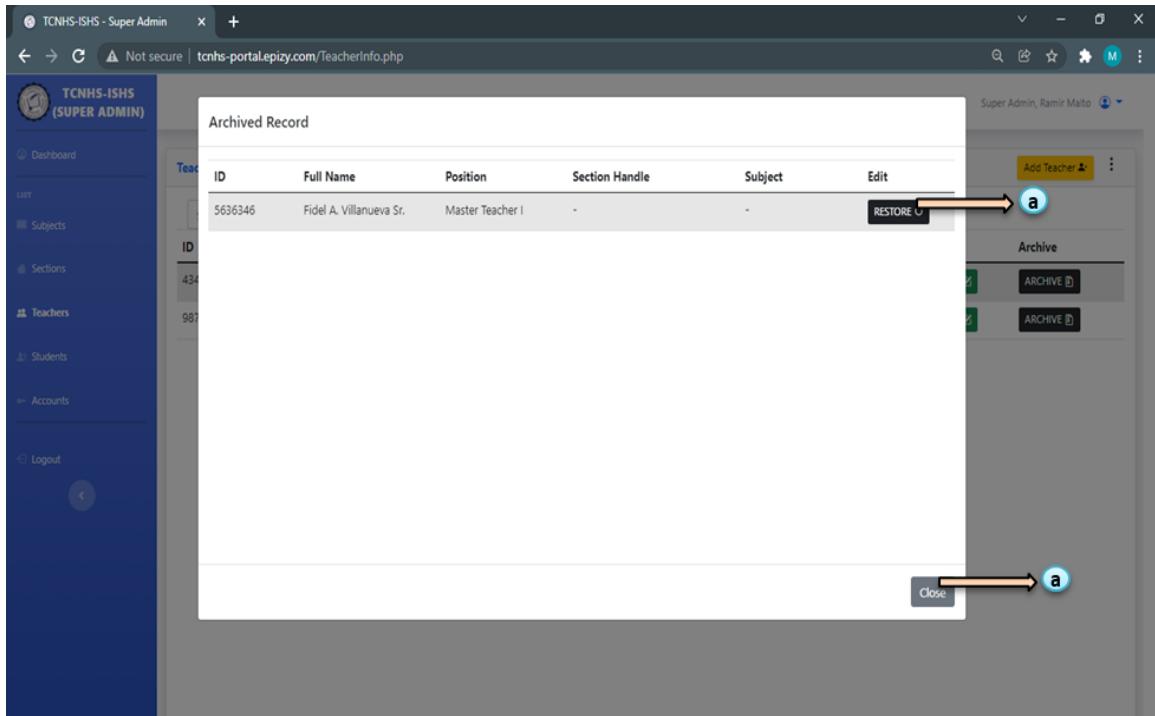
- a. Teacher list table - This table contains a list of all teachers.
- b. Menu button - This button is used to see if the achieved data has been archived.
- c. Search Bar - Search for the teacher's information.
- d . Add Button - This button is used to create a teacher account.
- e. Edit Button - This allows you to change the information.

Add Teachers Account

- Input ID number – Text field ID number
- Text Field Last Name – Enter your last name here.
- Text field first name – Enter your first name here
- Text field middle – Enter your middle name here.
- Text field suffix – Input suffix
- Date picker - Use the mouse to select a date.
- Position drop-down- Choose a position
- Text field address – Enter your home address.
- Email Address in text field – Enter email address
- Phone Number text field - Enter cell phone number
- Close button – Exit from modal.
- Next button – Go to the next form modal
- Section assigns check Box – Navigate to the assigned section.
- Back button – To go back to the previous page

o & p. Check box – Click to assigned subjects for Grade 11 or Grade 12..

q. Submit button – Submit the information.



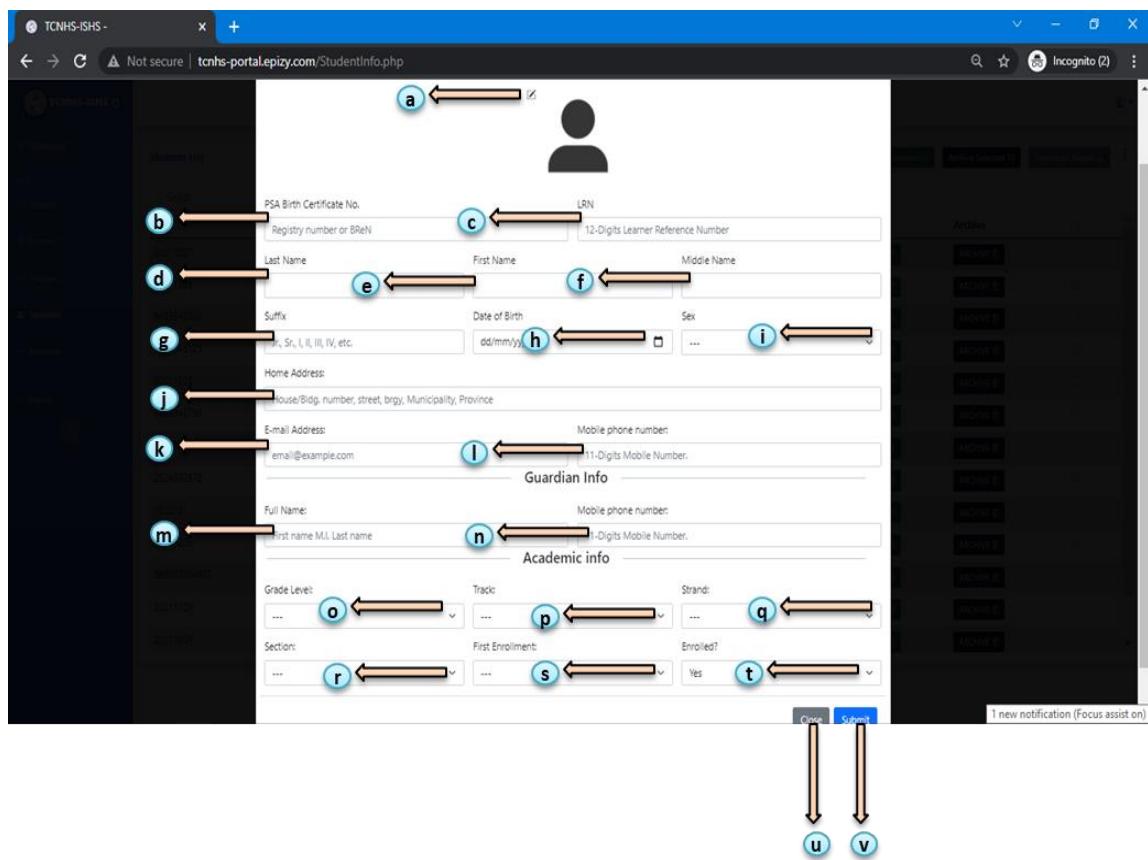
Teacher Archive Record

- a. Archived Modal - display the list of archived records.
- b. Archived Button - Restore the data.
- c. Delete Button -Delete the data from the list.
- d. Close Button - To exit the modal.

LRN	Full Name	Enrolled	Track/Strand Grade Section	Edit	Archive
20211207	Aileen A. Alegero	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211201	Mulat D. Biglang	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345820	John D. Cruz	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345123	Steve S. Flores	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211202	Mary R. Fresto	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345756	Gavin M. Meme	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
84735645646	Mae D. Mendoza	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
2524572572	Jake F. Mercado	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211206	Monique B. Reyes	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
385927384937	Jerico A. Robles	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211209	Mc darren b. Rocillo	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211203	Reign O. Santos	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>

Student List Page

- a. Option button - Click to view the archive button
- b. Download report button - Download the list by name and make ascending or descending
- c. Add student button - Add the student.
- d.. Search bar - Use this to look up information in the table.
- e. Check selected box – The check box is used to select multiple rows for editing and for archiving.
- f. Edit button - Use this to change the information.
- g. Archive button - The data will be saved in an archive folder.



Student Information Modal

- Pencil square icon – used to upload the profile of the student, Click the button, choose a file, and upload it.
- Text field PSA number - Enter the PSA number here.
- Text field LRN - Input the LRN.
- Text field Last Name - Enter your last name here.
- Text field first name - Enter your first name here.
- Text field middle name - Enter your middle name here.
- Text Field Suffix - Input suffix its a optional.
- Date picker - Click to set a date.
- Drop-down Sex - Select your gender identity.

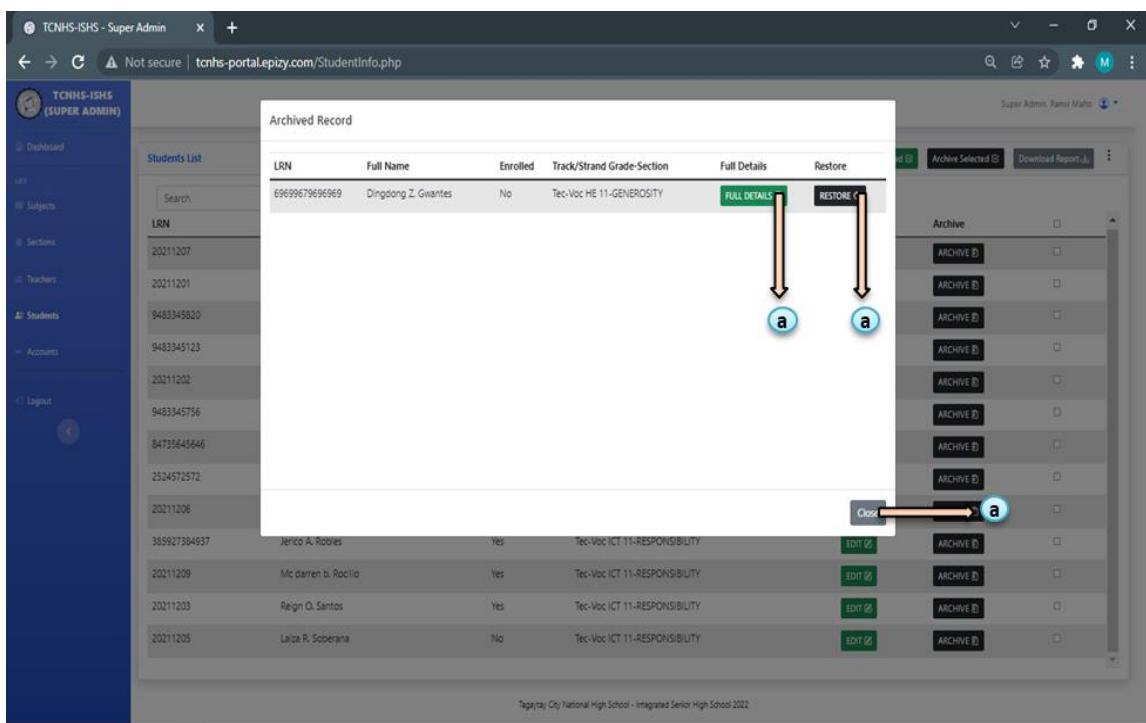
- j. Text field address - Enter your home address here.
- k. Email address text field - Enter email address
- l. Phone number in text field - Enter cell phone number
- m. Text field name - Input parent's full name
- n. Text Field phone number - Enter the parent's cell phone number.
- o. Grade level drop-down - Choose your grade level.
- p. Drop-drown track - Choose academic track
- q. Drop-down strand - Choose a strand.
- r. Drop-down section - Choose Your Option
- s. Drop-down first enrolment—Select yes or no.
- t. Drop-down enrolled—Select the status of the students.
- u. Close Button—Exit modal.
- v. Submit button – submit and save the information.

The screenshot shows the 'Edit Student Info' modal window open over a 'Students List' table. The modal contains fields for Academic Info: Enrolled? (Yes), Track, Strand, Grade Level, and Section. It also features a 'Close' button and a 'Submit' button. The table below lists student details such as LRN, Full Name, Enrolled?, Track, Strand, Grade Level, Section, and various edit/archive options.

LRN	Full Name	Enrolled?	Track	Strand	Grade Level	Section	Edit	Archive
20211207	Aileen A. Alegero	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211201	Mulat D. Biglang	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345820	John D. Cruz	No	Academic HUMSS 12-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345123	Steve S. Flores	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211202	Mary R. Fresto	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
9483345756	Gavin M. Meme	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
84735645646	Mae D. Mendoza	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
2524572572	Jake F. Mercado	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
1212121	Briks B. Quilacos	Yes	Academic HUMSS 12-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211206	Monique B. Reyes	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
385927384937	Jerico A. Robles	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211209	Mc darren b. Rocillo	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>
20211203	Reign O. Santos	Yes	Tec-Voc ICT 11-RESPONSIBILITY	<input type="button" value="EDIT"/>	<input type="button" value="ARCHIVE"/>

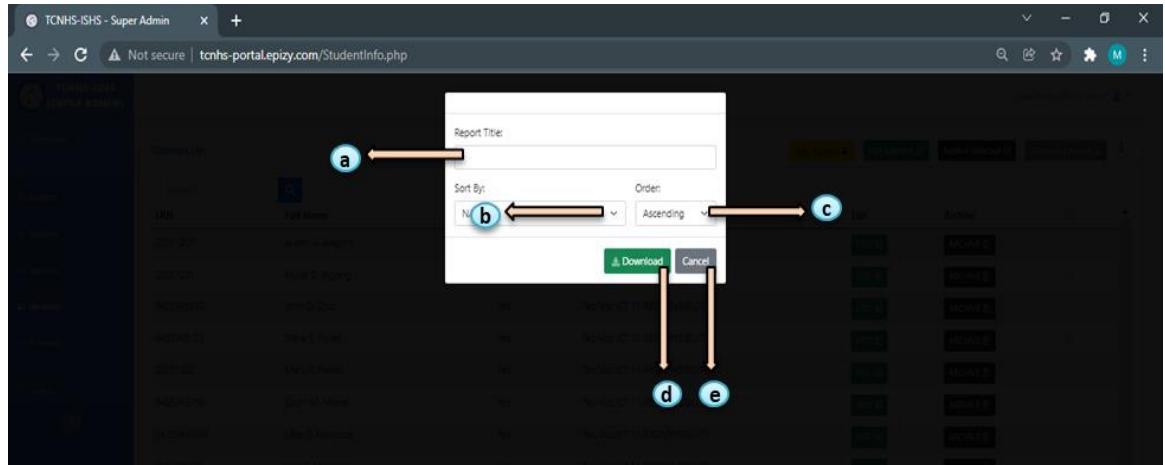
Edit Multiple Student Modal

- a. Drop-down enrolled - by selecting yes or no for the student's enrollment status.
- b. Track drop-down - Select your academic track identity.
- c. Strand drop-down - Choose your strand.
- d. Drop-down grade level - Select your grade level from the drop-down menu.
- e. Section drop-down - Choose your section.
- f. Close button - Exit the modal window.
- g. Submit button - submits and saves the entered data.



Student Archive Record Modal

- a. Full details button - This button is used to view the student's complete information.
- b. Restore button - This button is used to restore data.
- c. Close button - Exit the modal window.



Download Report Modal

- a. Text field - type your title for your report
- b. Sort drop - down button- used to select by name, strand, grade or selection that you want to download
- c. Order button – used to make your data arrange by ascending or descending
- d. Download button – used to download the report as PDF file.
- e. Close button – exit from the modal.

Full Name	User ID	Password	Pin Code
Mary C. Spring	2021-001	Show Password	321
Vany R. Flores	2021-002	Show Password	322
Regina O. Serrato	2021-003	Show Password	323
Liza R. Serrano	2021-005	Show Password	325
Monique S. Reyes	2021-006	Show Password	326
Allen A. Aligas	2021-007	Show Password	327
Mcander S. Rojo	2021-008	Show Password	328
Jeff F. Velasco	2021-009	Show Password	329
Denie V. Ginting	2021-010	Show Password	320

Account Page table

- a. Student list tab - View student accounts.
- b. Teacher list tab - View teacher accounts on the table.
- c. Search bar - Students, teachers, and admins can search for data from the table.
- e. Reset Button - Reset and generate a new pin code for students to access grades.
- f- Show password button - to view and hide the password from account list.

The screenshot shows a web browser window titled "TCNHS-ISHS - Super Admin". The URL is "tchns-portal.epizy.com/accounts.php". The left sidebar has a "TCNHS-ISHS (SUPER ADMIN)" header and links for Dashboard, User, Subjects, Sections, Teachers, Students, Accounts (which is selected), and Logout. The main content area is titled "Accounts List" and shows a table with columns: Full Name, User ID, Password, and Delete. A single row is visible for "John Bricks" with User ID "99441189". There are four numbered callouts: (a) points to the "Admin" tab at the top of the table; (b) points to the "ADD ADMIN ACCOUNT" button; (c) points to the "Show Password" link; and (d) points to the "DELETE" button.

Super Admin Account Tab

- a. Admin tab- Accounts in the admin tab can be viewed.
- b. Add admin button - Create a new administrator account.
- c. f- Show password button - to view and hide the password from account list.
- d. Delete Button - Removes data from the list.

An admin cannot add another admin, whereas a super admin can add multiple admins, but the super admin and admin have the same functionality.

Admin

The screenshot shows a web browser window titled 'TCNHS-ISHS - Admin' with the URL 'tchns-portal.epizy.com/accounts.php'. The page is titled 'Accounts List' and displays a table of user accounts. The table has columns for 'Full Name', 'User ID', and 'Password'. Three rows are listed: Jiniel T. Batara (User ID 4343434, Password 45491536), Fidel A. Villanueva Sr. (User ID 5636346, Password 57530381), and Daniel M. Bariantos (User ID 987523453, Password 31901041). On the left, a sidebar menu includes 'Dashboard', 'Subjects', 'Sections', 'Teachers', 'Students', 'Accounts' (which is selected and highlighted in blue), and 'Logout'. At the top right, it says 'Admin, John Bricks'. Three arrows point to specific elements: arrow 'a' points to the 'Teacher' tab in the header, arrow 'b' points to the 'Teacher' column in the table, and arrow 'c' points to the search bar.

Full Name	User ID	Password
Jiniel T. Batara	4343434	45491536
Fidel A. Villanueva Sr.	5636346	57530381
Daniel M. Bariantos	987523453	31901041

Admin Account Page

- a. Student Accounts - View student accounts.
- b. Teacher Accounts - View teacher accounts.
- c. Search bar - Students, teachers, and admins can search for data from the table.

Teacher

The screenshot shows the TCNHS-ISHS Teacher Dashboard. On the left, a sidebar menu includes Dashboard, Sections, Modules, Schedule, and Logout. The main area displays the following information:

- SCHOOL YEAR & SEMESTER:** First Semester S.Y. 2022-2023
- MY SUBJECTS:** 1
- MY SECTIONS:** 1
- Announcements:** Welcome to our online student portal.
- My Subjects List:** 21st Century Literature from the Philippines and the World
- My Sections List:** RESPONSIBILITY (ADVISORY CLASS)

Teacher Dashboard

- a. Dashboard is to view the semester, number of subjects, number of sections, the posted announcement, list of subjects, and the respective section list.

The screenshot shows the TCNHS-ISHS Teacher Dashboard with the Sections tab selected. The sidebar menu is identical to the previous dashboard. The main area displays a table of sections:

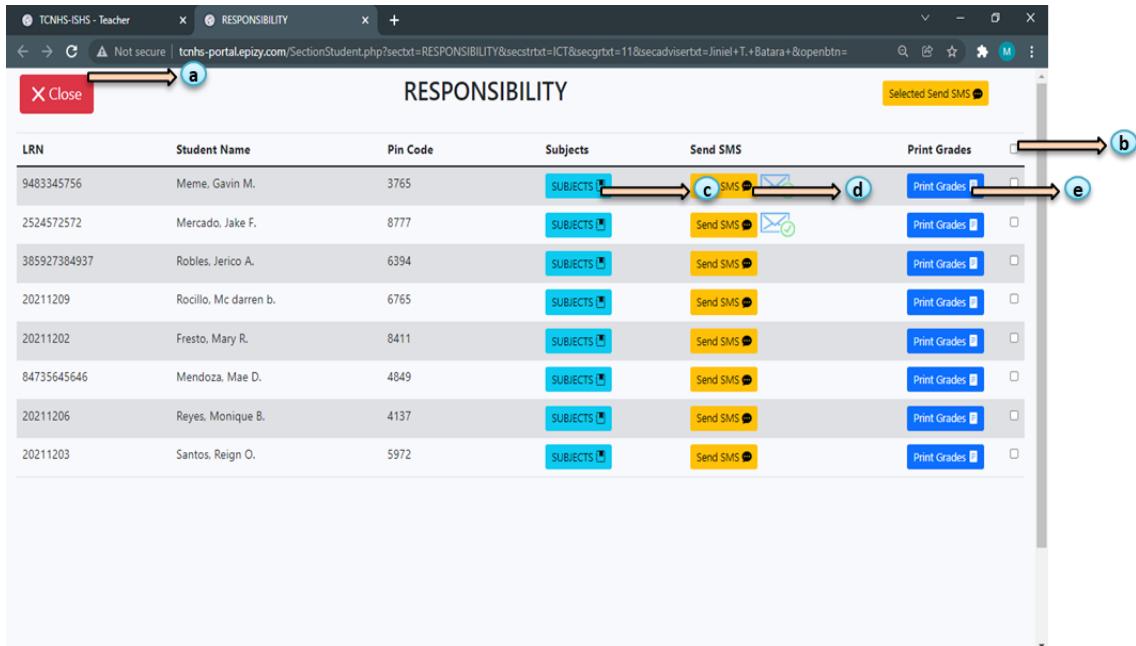
Section Name	Section Strand	Section Grade	Show Students	Download
RESPONSIBILITY	ICT	11	Open in new tab	MASTERLIST

Two arrows point to specific buttons: arrow 'a' points to the 'Show Students' button, and arrow 'b' points to the 'Download' button.

Section Page

- a. Open a new tab - To view the student list, press the button.
 - b. Master list- A teacher can download a report for the class list.

close



Section Tab List

- a. Close button – to bring back to the section list page
 - b. Check box - Check selected box – The check box is used to select multiple rows to send the sms.
 - c. Subject button - Activate and display the list of all subjects
 - d. Send SMS button - Enable to edit text for the concern and for sending grades
 - e. Print grades button - Allows to download the grades of the students for printing

Subject Name	1st Quarter	2nd Quarter	Action
Earth Science	88	86	b UPLOAD GRADES ↴
Contemporary Philippine Arts from the Regions	78	90	UPLOAD GRADES ↴
Earth and Life Science	87	87	UPLOAD GRADES ↴
Edukasyon sa pag papakatao	90	89	UPLOAD GRADES ↴
21st Century Literature from the Philippines and the World	98	99	UPLOAD GRADES ↴

Subject Grades Table

- a. Back button - allows an teacher to navigate to a previously viewed Web page.
- b. Upload Button - Allows you to upload the grade of the students.

To: krisca roollo (09127102485)

Dear Mr/Mrs. krisca roollo, The Grades of your son Mc darren b. Rocillo has been uploaded for this quarter. Here is the code (6109) to access the grade of your son. Thank you!

Concern:
None/

Send SMS Cancel

LRN	Student Name	SUBJECTS	Send SMS	Print Grades
20211201	Biglang , Mutat D.			
9483345820	Cruz, John D.			
9483345123	Flores, Steve S.			
9483345756	Meme, Gavin M.			
2524572572	Mercado, Jake F.			
385927384937	Robles, Jerico A.			
20211209	Rocillo, Mc darren b.			
20211207	Alegro, Aileen A.			
20211202	Fresto, Mary R.	3857		
84735645646	Mendoza, Mae D.	5330		
20211206	Reyes, Monique B.	7401		
20211203	Santos, Reign O.	3074		

Send SMS Modal

- a. Text box - Allows you to customize a message for the issue and grades.

b. Send button - This button allows you to send the message you created.

C. Cancel button- used to undo all changes made by the user.

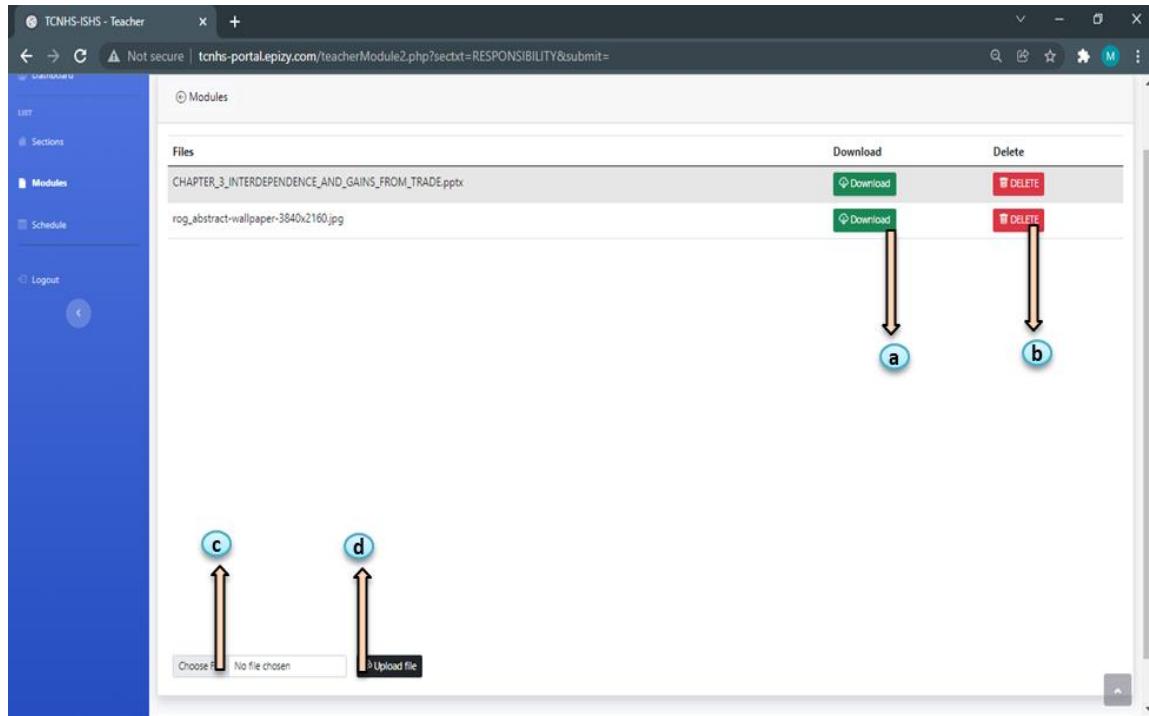
The screenshot shows a web browser window titled "TCNHS-ISHS - Teacher". The URL is "Not secure | tcnhs-portal.epizy.com/teacherModule.php". The page displays a table with one row under the heading "Sections". The table columns are "Section Name", "Section Strand", "Section Grade", and "Modules". The data in the table is:

Section Name	Section Strand	Section Grade	Modules
RESPONSIBILITY	ICT	11	Modules

The left sidebar contains navigation links: Dashboard, Sections, Modules (which is currently selected), Schedule, and Logout. The top right corner shows the user information: Jiniel T. Batara, Master Teacher II.

Module List Page

a. Module button – to direct to the module list



Module Page View

- a. Download button - Allows you to download the learning materials that you have uploaded.
- b. Delete button - Deletes the learning materials that have been uploaded.
- c. Choose file button - pick the file you would like to upload.
- d. Upload file button - Click on Upload selected file to begin the file upload.

Schedule: RESPONSIBILITY

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 - 8:30 AM					
8:30 - 9:30 AM					
9:30 - 10:00 AM				Recess	
10:00 - 11:00 AM					
11:00 - 12:00 PM					
12:00 - 1:00 PM				Lunch Break	
1:00 - 2:00 PM					
2:00 - 3:00 PM					
3:00 - 3:30 PM				Recess	
3:30 - 4:30 PM					

Scheduling Page

- a. Option button - Allows the teacher to edit the schedule table.

STUDENT PORTAL

Home a

**Mc darren b.
Rocillo**
LRN: 20211209
Grade 11 - RESPONSIBILITY
Tec-Voc - ICT

SCHOOL YEAR | SEMESTER
First Semester
S.Y. 2022-2023

ENROLLMENT STATUS
Enrolled

Module Files

Filename	Download
CHAPTER_3_INTERDEPENDENCE_AND_GAINS_FROM_TRADE.pptx	Download b
rog_abstract-wallpaper-3840x2160.jpg	Download

Announcements

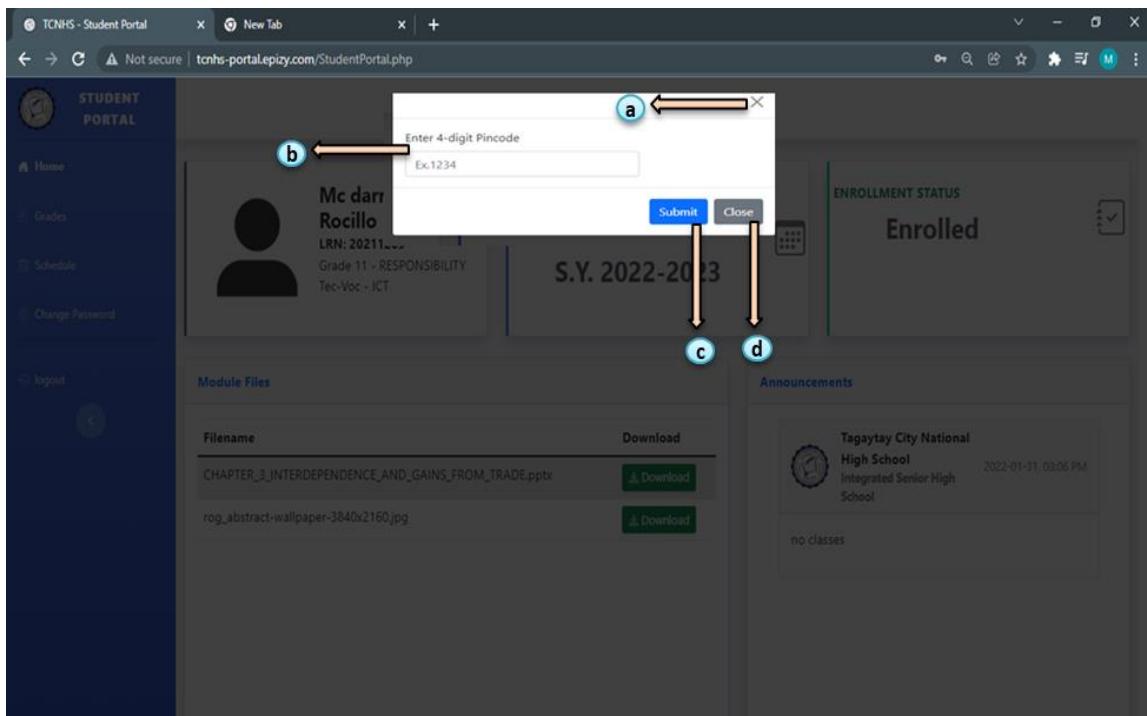
Tagaytay City National High School
Integrated Senior High School
2022-01-05, 08:31 AM

Welcome to our online student portal.

Student Home Page

a. Homepage - Display a student's information, including the name, LRN, year level, and the strands of the student, the semester, and the academic year, to see whether the student is enrolled or not. It also allows students to view the posted announcement.

b. Download button - Enables the student to download the learning materials that have been uploaded.



Pass Code Modal

- a. Close icon – used to exit the modal
- b. Student text box - Allows the student to enter the pin code from the message to the parents so that they are able to view their grades.
- c. Submit button - Submit the data that has been entered.
- d. Close button - Exit modal.

Subject	1st Quarter	2nd Quarter	Average
Earth Science	88	87	88
Contemporary Philippine Arts from Regions	78	91	85
Earth and Life Science	87	87	87
Edukasyon sa pag papakatao	90	89	90
21st Century Literature from the Philippines and the World	98	99	99
General Average:	89.40		

Grades Page View

a. First quarter grade active tab - Displays the students' grades in all subjects for the first quarter, as well as the average.

b. Second quarter grade tab - Shows the students' grades in all subjects for the second quarter.

c. Filter menu button - Students can filter all grades from the previous year and semester using the Filter menu.

Inside of Filter Menu:

c1. Grade drop-down button - To choose what grade you want to set

c2. The school year drop-down button - Allows you to select which year you want to view.

c3. Apply button - Allows the user to apply the current settings to all of the tables in the list

Schedule

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 - 8:30 AM	Earth Science				
8:30 - 9:30 AM		Contemporary Philippine Arts from the Regions			
9:30 - 10:00 AM			Recess		
10:00 - 11:00 AM				Earth and Life Science	
11:00 - 12:00 PM					
12:00 - 1:00 PM			Lunch Break		
1:00 - 2:00 PM					
2:00 - 3:00 PM					
3:00 - 3:30 PM			Recess		
3:30 - 4:30 PM					

Student Schedule

- a. Schedule navigator button- Display the table with time and the subjects that the students are going to take every day.

Change Password

a
Enter your old password:

b
Enter new password: (minimum of 8 characters)

c
Re-enter new password:

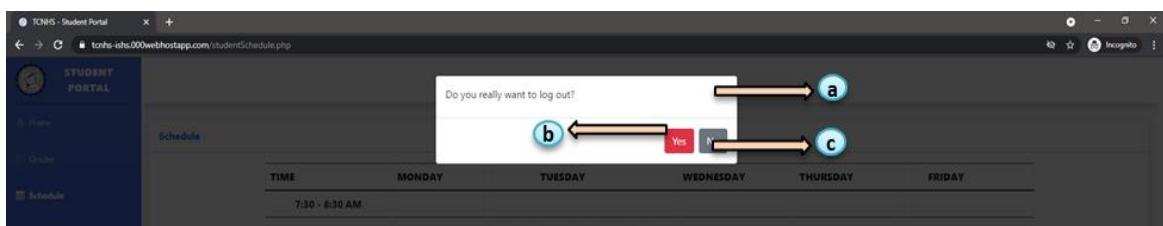
d
Submit

e
Cancel

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 - 8:30 AM					
8:30 - 9:30 AM					
9:30 - 10:00 AM					
10:00 - 11:00 AM					
11:00 - 12:00 PM					
12:00 - 1:00 PM			Lunch Break		
1:00 - 2:00 PM					Introduction to the Philosophy of the Human Person
2:00 - 3:00 PM					Pre-Calculus
3:00 - 3:30 PM			Break		
3:30 - 4:30 PM					Empowerment Technologies (ETech): ICT for Professional Tracks

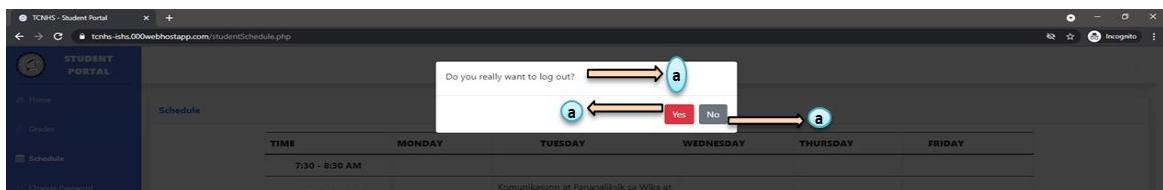
Changing Password Modal

- a. Text field for the old password - Where the user can enter the previous password.
- b. Text field for new password - Where the user enters the new password.
- c. Text field for matching the new password - Where the user needs to repeat the new password.
- d. Submit button - Save the changes.
- e. Close button - To exit from the modal.



Changing Password Notification

- a. Notification modal - the modal shows the notification if you want to log out after changing the password.
- b. Yes button - Going back to the login form
- c. No button - To exit from the modal.



User Logout Modal

- a. Log modal - Display a message for signing out of the account.
- b. Yes button - The user wishes to exit the website.
- c. No button - the user has the option to cancel the logout.

Appendix D. Test Results

UNIT TESTING

System Administrator		
Functionality	Passed/Failed	Remarks
Account Management Module		
Login User	Passed	ok
Add,edit and delete Teacher Information	Passed	ok
Add,edit and delete student Information	Passed	ok
Add/Delete Account With Assigned Role	Passed	ok
Set School Year and Semester	Passed	ok
Add and delete Announcement	Passed	ok
Reset Password	Passed	ok
<hr/>		
Student Management Module		
Add School data	Passed	ok
View announcement	Passed	ok
View Student Information	Passed	ok
<hr/>		
Report Management Module		
Request data	Passed	ok
Manage and Download Report	Passed	ok

Teacher		
Functionality	Passed/Failed	Remarks
Account Management Module		
Login User	Passed	ok
<hr/>		
GradeBook Management Module		
Add Student Grades	Passed	ok
Print Grades	Passed	ok
Send SMS	Passed	ok
Receive SMS with concern	Passed	ok
View Grades with GPA	Passed	ok
<hr/>		
Student Management Module		
Add module	Passed	ok
View module	Passed	ok
View List student	Passed	ok
<hr/>		
Report Management Module		

Request data	Passed	ok
Manage and Download Report	Passed	ok

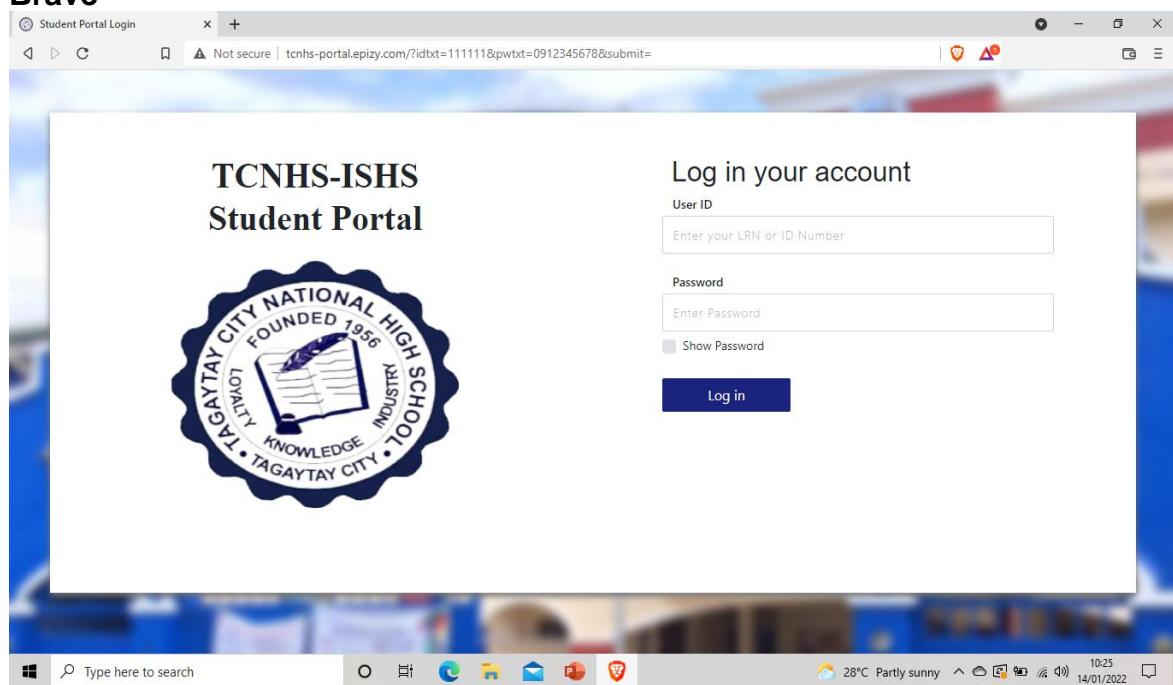
Student		
Functionality	Passed/Failed	Remarks
Account Management Module		
Login User	Passed	ok
Change Password	Passed	ok
Update password	Passed	ok
GradeBook Management Module		
Parent Receive SMS with concern	Passed	ok
View Grades with GPA	Passed	ok
Student Management Module		
View module	Passed	ok
Download Module	Passed	ok
View announcement	Passed	ok
View Student Information	Passed	ok

PERFORMANCE TESTING

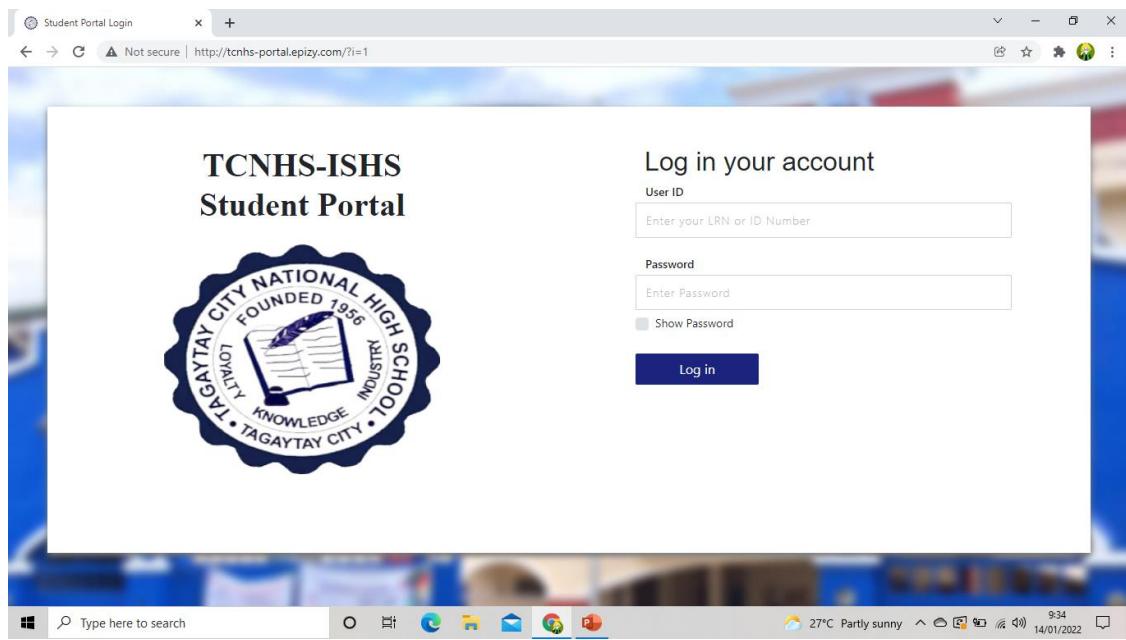
Performance Testing		
Browser	Findings	Date
Brave	In Brave the system works fast and all the function and features works correctly and there is no bug while the system is running in this browser and the system works properly	01/14/22
Google Chrome	On Google Chrome the system work fast and all the function and features works correctly and there is no bug on the system while it's running on this browser..	01/14/22
Internet Explorer	On Internet Explorer there is no bug and all the function are running correctly but the system running to slowly in this browser	01/14/22
Fire Fox	On this Firefox the system is running a little bit slowly but all the function and features is running correctly there is no bug while the system is running in this browser.	01/14/22
Microsoft Edge	On Microsoft Edge the system is running fast and all the function and features is working properly same thing on Google Chrome	01/14/22
Opera Mini	In Opera Mini there is a bug in loading the system but after of how many trial the system works and the	01/14/22

	function and features works properly	
Mobile Device	Findings	Date
iPhone Huwei Android phone	The website is responsive and works properly.	01/14/22
	The website is responsive and works properly.	01/14/22

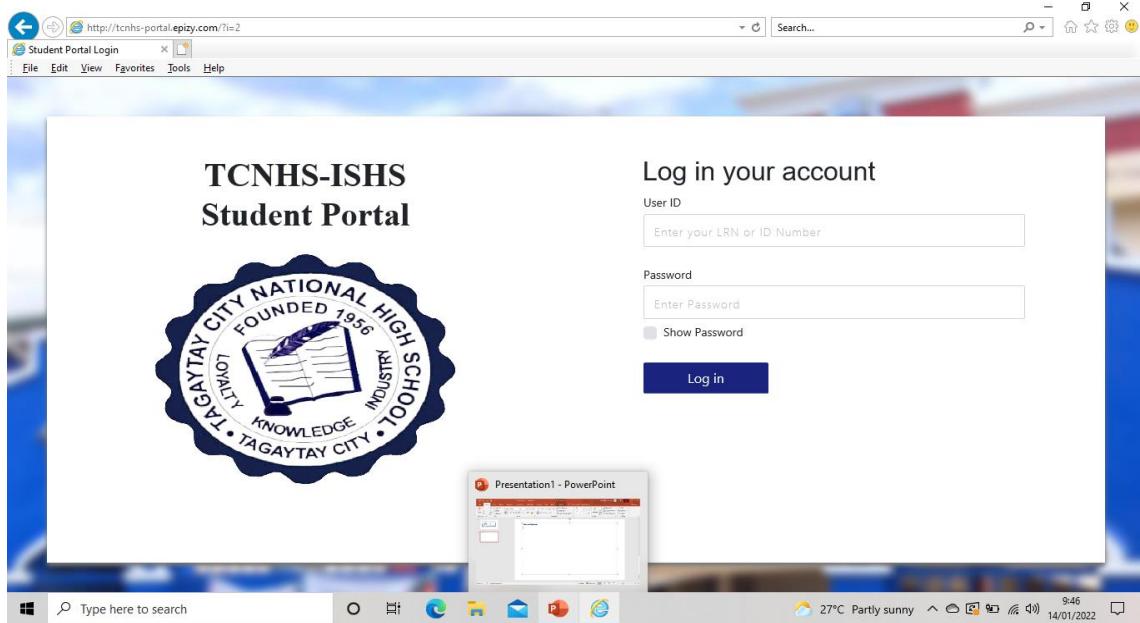
Brave



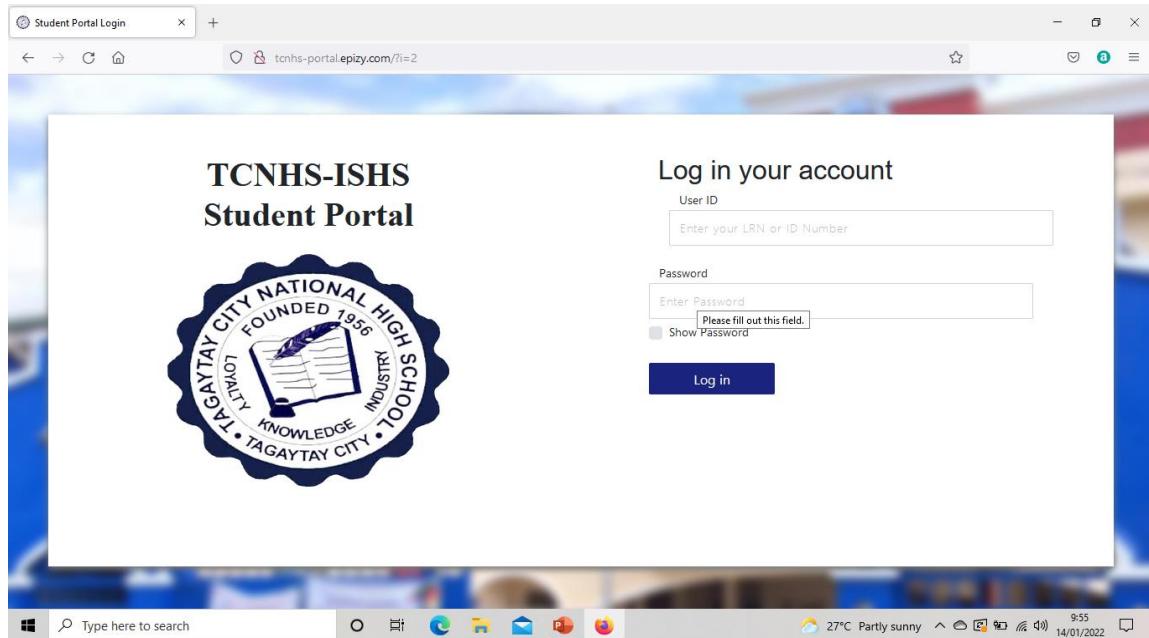
Google Chrome



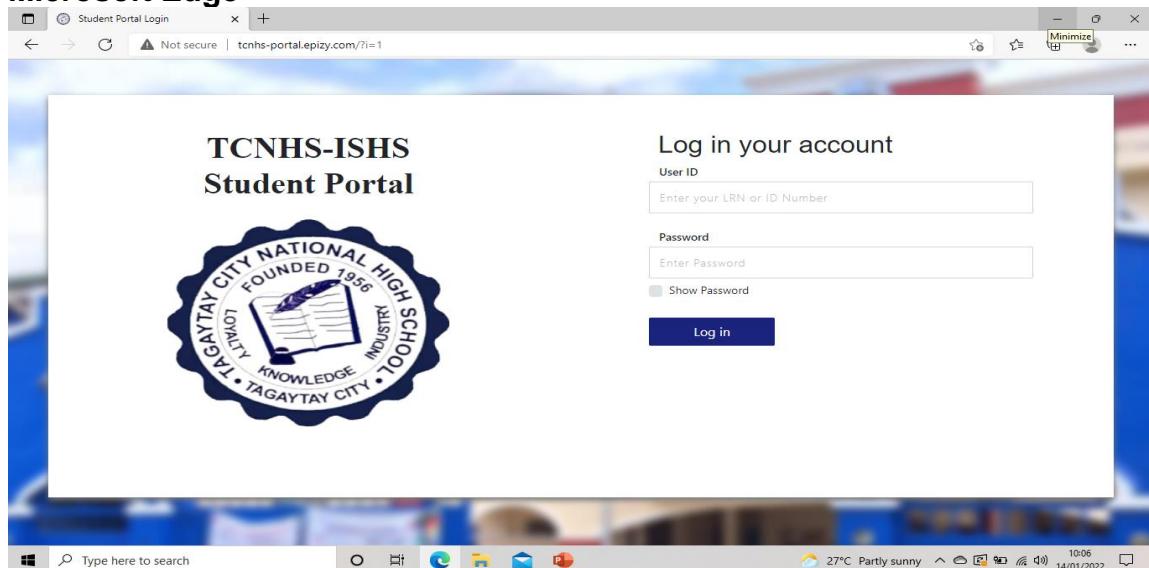
Internet Explorer



Fire Fox



Microsoft Edge



Opera Mini

Iphone

Huawei Phone Android

