

	<div data-bbox="542 457 1167 567" data-label="Section-Header"><h2>CHAPTER I</h2><h3>THE PROBLEM AND ITS BACKGROUND</h3></div> <div data-bbox="277 674 474 714" data-label="Section-Header"><h4>Introduction</h4></div> <div data-bbox="277 747 1445 1228" data-label="Text"><p>The lack of accessible online educational materials has created significant challenges for students and educators. Many learners struggle to find the resources they need for their studies, especially when physical libraries have limited availability or materials are outdated. This problem is more evident in schools that do not yet have systems in place to provide digital resources, which can hinder the learning process and limit students' ability to complete research and assignments efficiently.</p></div> <div data-bbox="277 1333 1445 1814" data-label="Text"><p>At ACLC College of Taytay, this issue is particularly pressing for senior high school students, who require diverse and updated resources to support their academic development. The absence of an online library system often leaves students relying solely on textbooks or other limited materials, which may not be enough to meet their needs. Addressing this gap is crucial to ensure that students have the tools required to achieve their educational goals and engage in self-directed learning.</p></div>	

#### Introduction

The lack of accessible online educational materials has created significant challenges for students and educators. Many learners struggle to find the resources they need for their studies, especially when physical libraries have limited availability or materials are outdated. This problem is more evident in schools that do not yet have systems in place to provide digital resources, which can hinder the learning process and limit students' ability to complete research and assignments efficiently.

At ACLC College of Taytay, this issue is particularly pressing for senior high school students, who require diverse and updated resources to support their academic development. The absence of an online library system often leaves students relying solely on textbooks or other limited materials, which may not be enough to meet their needs. Addressing this gap is crucial to ensure that students have the tools required to achieve their educational goals and engage in self-directed learning.

	<p>Online library systems streamline the process of obtaining academic resources by eliminating the need for physical materials. Students can access a broad collection of books, research papers, and other learning materials in a few clicks. This digital approach reduces dependency on traditional libraries and ensures that resources remain accessible, even outside school hours.</p> <p>For students, online library systems provide opportunities to explore subjects in depth at their own pace. These platforms often include search tools and categorized collections, making it easier to locate specific materials. With these features, students can focus more on their studies rather than spending time searching for resources manually.</p> <p>The implementation of an online library system at ACLC College of Taytay aligns with its mission to improve IT-based educational tools. By integrating this technology, AMA can address challenges such as the limited availability of physical library materials and ensure that all students have equal access to the resources that they need for their academic work. This system serves as a step forward in equipping students with tools to succeed in an evolving educational landscape.</p>	

## **Background of the Study**

The use of technology in education has changed how students access learning materials. Traditional libraries often face issues such as limited hours of operation and the availability of books. These challenges can make it harder for students to find the materials they need for their studies. To address these issues, schools are now using online library systems to provide students with access to digital learning materials at any time. Online library systems have become a practical tool for many schools. They allow students to access books, research articles, and other materials in digital format. These systems reduce the need for physical copies of materials and make learning resources more available to students. By adopting such systems, schools can better support the needs of students in modern education.

Providing an online library system would support students' ability to study independently. This system would allow students to access resources conveniently, regardless of location or time. It would also simplify the process of finding learning materials, helping students focus more on their studies.

This study focuses on creating an online library system for senior high school students at ACLC College of Taytay. The system is designed to make educational resources more accessible and provide students with the tools they need to meet their academic requirements. By introducing this system, the

school seeks to improve the availability of learning materials and support students in their educational journey.

### **Statement of the Problem**

This study aims to assist students with their studies by providing reliable sources and unconstrained access in order to ease the learning process of users.

Specifically, this study attempts to answer the following:

1. How will the online library affect students?
2. Will the system be easy to use for both librarians and students?
3. How will the system make learning materials more accessible?
4. Will it be efficient for admins and students?

### **Objectives of the Study**

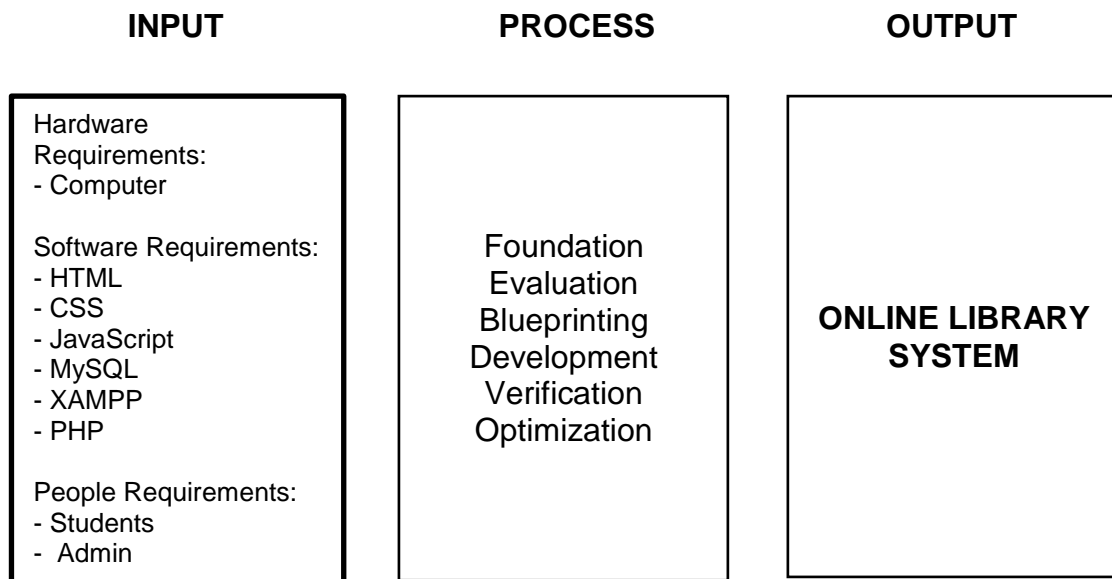
The main objective of this study is to create an online library system that revolves around posting free modules, an account system to show suitable learning materials, and categorizing them by the user's need/s.

Specifically, this study to satisfy the following objectives:

1. Evaluate how the online library improves student learning and access to resources.

2. To assess how the system enhances students' access to reading resources and necessary books.
3. To assess the system's ease of use for both librarians and students.
4. To investigate the e-library's overall effectiveness in serving the needs of administrators and students.

### Conceptual Framework



**FIGURE 1. Research Paradigm of the Study**

As illustrated in the table above, the input consists of the hardware, software, and people needs required to construct the Online Library System. Users will access the online library via computers, tablets, or smartphones as

their hardware input. The software input includes HTML, CSS, JavaScript, and MySQL, which are used to generate, design, and save book data in the system. People requirements include students, teachers, and librarians, who will be the key users and facilitators of the online library.

The process is divided into six key stages that are specific to the development of this system: foundation, where the goals and requirements are established; evaluation, where needed resources and features are assessed; blueprinting, where the design layout and system structure are defined; development, which includes coding and integration; verification, for functionality testing; and optimization, where improvements are made based on user feedback.

The output is an Online Library System that provides students and teachers with accessible digital resources, so creating a single system for convenient access to learning material.

## **Significance of the Study**

### **Researchers**

This study serves as a resource for understanding how an online library system can be developed and applied in a senior high school setting. It provides practical information on the process and the possible effects on access to educational materials.

### **Future Researchers**

The study offers a foundation for future research on online library systems. It can guide others in improving or expanding similar projects and exploring new ideas for technology-based solutions in education.

### **Students**

The online library system is intended to make learning materials more accessible to students. It supports their academic work by providing a way to access resources needed for research, assignments, and other school activities.

### **Teachers**

Teachers can use the system to suggest and provide relevant materials to their students. This can assist them in delivering

	<p>lessons and ensuring that students have the resources they need for classroom activities and assignments.</p> <p><b>Scope and Delimitation</b></p> <p>This study focuses on the development of an online library system for senior high school students at ACLC College of Taytay. The system will primarily cater to students of AMA, providing them with easy access to digital learning materials. The system will offer a variety of resources, including books, articles, and other educational content, to support students in their studies. The system will incorporate a user account system, allowing students to securely register, log in, and log out. After logging in, users will have access to an open-access e-library where they can browse and download e-books and other learning resources for academic purposes. In addition, a login for the administrator will be added to the system to manage and preserve the library's digital resources. Admins will be able to add, edit, and remove books, as well as customize or delete user accounts, to ensure the system runs smoothly and efficiently.</p> <p>The online library system will only be accessible when students are connected to the internet. Offline access to the library will not be available.</p>	



However, students can download learning materials for offline use, allowing them to access the content without needing an internet connection once it has been downloaded.

### **Definition of Terms**

**Online Library System** – our proposed system; it aims to provide learning materials through online means.

**Resources** – learning materials.

## **CHAPTER II**

### **REVIEW OF THE RELATED LITERATURE**

This chapter mainly provides an overview of the various researchers and other works from local and international researchers that have a significant impact on the variables that determine the research.

#### **Foreign Study**

This paper examined the adoption and access of E-library services in University library of North west zone of Nigeria. Survey research method was adopted to carry out the study using descriptive research methodology. The population used under this study comprised all the state federal, state and private universities in North–West Geo-political zone of Nigeria, comprises of seventeen (17) studied universities, the population considered to be subject of the study includes other professional and non-professional staff in the Nigerian university libraries on the position of university librarian circumstantially. The sample size depends on the nature of the research of the study. It is however proposed to have a sample of seventeen (17) universities, therefore the number of the universities is manageable, and therefore no sampling is required. The instruments used data collection is questionnaire. Stratified sampling technique

	<p>was used in selecting the secondary population of the study. Data was also analyzed using descriptive analysis using frequency tables and percentages. Stratified sampling technique was used in selecting the secondary population of the study. The administration of the questionnaire was carried out by the co researchers and assisted by three (3) research assistants. The study found that, adoption and accessing of the electronic library services and resources in Nigerian university libraries of North-west Geo-political Zone are basically for the purpose of effective, reliable, and adequate library information dissemination. The study has also identified that some universities have for long adopted and established the electronic unit earlier than other university libraries in the North-west Geo-political Zone of Nigeria. Consequent to that, it has been identified that all the sampled university libraries have established the electronic unit for the purpose of information dissemination via electronic devices for rapid and speedy information services. The study has further revealed that majority of the electronic unit or managers of the electronic section are specialists in the area of library and information science. The study recommends that encouragement from the government will give enough room and opportunity to provide adequate transformation of information electronically in Nigerian University libraries of north-west geo-political zone. There is the need for the university libraries to concretely form a consortium for the formation of unified electronic services and electronic resource sharing e.g. Universities library consortium, Hinary, Lefel, etc.</p>	

	<p>One of the greatest challenges or threats to the adoption and accessing or sustainability of using the electronic resources in Nigeria is the issue of power supply. Efforts should be made by the authority concern to provide alternative in case of power failure during the transformation services. The alternative probably might be the provision of solar power or standby generator in order to alleviate the challenge of inadequacy or none supply of electricity power supply. University libraries being an academic institution library should try by all means to promote their electronic resources and services for the university community members to be aware of their availability and existence. (Dawakin Kudu et al, 2020)</p> <p>This study talks about information dissemination using electronic gadgets in the country of Nigeria. The reliability and efficacy of information sharing among students will be improved if ACLC College of Taytay implements an online library system akin to those of the Nigerian universities under study. The prescence of a specialized electronic unit, as observed in Nigeria, indicates that infrastructure and organizational support are essential to the effective deployment of such systems.</p> <p>Within the academic landscape, distance education is progressively gaining global attention and recognition, and many institutions are committing</p>	

	<p>resources to make it a success. Global enrollments show a steady increase in distance learning. However, the availability of support services and students' technological competence are critical to the success of distance education. One of the important support systems for maintaining effective online education is libraries and information services. As a result, this study investigated the acceptance of e-library and support services. The study was led by the UTUAT model and its accompanying theories, such as the innovation diffusion theory and the theory of planned behaviour. The census technique was used to sample 2003 graduate distance students. The data was examined using multivariate structural equation modeling approach. The study found a negative association between strategic and operational skills and students' intents to use the e-library and support services. However, students' inclination to use the e-library and support services was found to be strongly predicted by social influence. The study concludes by underlining the necessity for distance education institutions to host courses that increase students' operational and strategic skills so that they can properly utilise e-library services. (barfi et al, 2023).</p> <p>This study shows how distance education has been trending over the past few years. It focuses on how students' intent to use the e-library was more on the negative side. Students of all skill levels will be more likely to use the online</p>	

	<p>library system if ACLC College of Taytay encourages its use through social influence and support initiatives. This study suggests that awareness campaigns and teacher endorsements could encourage usage even in a developing academic environment because social influence has a greater impact on usage intent than technical skills.</p> <p>This study has been undertaken to investigated the secondary school science student's awareness, of online resources for learning in Niger State Nigeria. Specifically, the study: determined secondary school science students' awareness of online resources for learning, A descriptive research design of the survey type was adopted for the study. One research questions were used in-line with the purpose of the study, 600 respondents were randomly sampled from the six- science secondary school in Niger State. Frequency and percentage were used to answer the research question Findings of the study revealed that science students were aware of online resources for learning and it was recommended that, orientation program should be organized for students in the school on how to download and access online Resources. (Uwaechia et al, 2023).</p> <p>This study was undertaken to investigate the secondary school science students' social awareness in Niger. Recommended that orientation programs on</p>	

	<p>how to download and access online resources should be provided for students. Students at ACLC College of Taytay will be more knowledgeable about and able to use online learning resources if orientation programs are implemented concurrently with the online library system. The Niger State study suggests that even if the technology is available, appropriate introduction and training are necessary for successful adoption, demonstrating that awareness is crucial to usage.</p> <p>Electronic library (E-library) is a form of computer mediated system that uses electronic media, such as Web/internet devices and distributes resources to improve on the quality of teaching and learning. Students' use of e-library for learning is essential and as such the government has invested hugely into its subscription for several university libraries in Ghana. However, most university students feel reluctant to use the e-library resources for their studies. The purpose of this paper is therefore to examine the factors that influence students' intention to use e-library resources for their studies. Questionnaire was used to collect data from 200 students from one Technical University in Ghana. Structural equation modeling (SmartPLS) was used to analyze the data. The study found that accessibility, attitude, perceived ease of use, perceived usefulness and relevance to studies have positive significant effect on students' attitude to use e-</p>	

	<p>library. In addition, self-efficacy, subjective norm and attitude have positive significant influence on students' intention to use e-library. Although the sample frame used for this study may be unique, but the total amount of data collected was limited to providing the general representative of the Ghanaian students in one particular university. Other researchers may consider collecting data from other universities to extend the sample frame for a larger sample size of students. Academic administrators need to organize training and workshops on how to use the e-library portal for their search and other didactic assignments. Most importantly, students should be given IT or internet tutorials as foundation for the use of the e-library portal. Universities have to provide internet access such as hotspot and network routers at the labs, classrooms and other vantage points. It is believed that with these in place, adequate access to the internet would promote students' engagement on the e-library facility. The study examines the factors that influence students' intention to use e-library resources for their studies in Ghana. (Okyere-Kwakye, E. and Md Nor, K, 2020).</p> <p>This study investigates the factors influencing university students' intention to use e-library resources for their studies in Ghana, focusing on data collected from 200 students at a Technical University. E-libraries, as computer-mediated systems leveraging electronic media, are pivotal in enhancing teaching and</p>	



	<p>learning. Despite substantial government investment in university e-library subscriptions, student engagement remains low. Students will have a positive attitude and intend to use the online library system at ACLC College of Taytay if it is designed with accessibility, perceived usefulness, and curriculum relevance in mind. This is consistent with the Ghanaian study's findings, which highlight how crucial user perception and usability are in promoting e-library use.</p> <p>Purpose This study investigates the effectiveness of problem-based learning (PBL) in information literacy curricula using library e-resources to enhance information literacy self-efficacy (ILSE) of students in two universities in Indonesia, in Java Island (University A) and Sumatra Island (University B).</p> <p>Design/methodology/approach A comparison of the effectiveness of the approach in the two universities forms the focus of the study, which has adopted a single group quasi-experimental design which was conducted in one online teaching-learning session. The authors compared the pre-test and post-test scores of 65 library and information science (LIS) students from both universities.</p> <p>Findings The results show that the treatment enhanced ILSE effectively. After the treatment, University A students performed better than those at University B.</p> <p>Research limitations/implications The factors which affected the success of PBL using library e-resources have not been identified in this study, a task for a future</p>	

	<p>qualitative research study. Practical implications This study will both inspire the use of library e-resources in learning activities and promote ILSE. Originality/value Integrating PBL with library e-resources provides opportunity to identify the advantages of library e-resources in supporting student ILSE, resulting a better learning achievement. (Prabowo et al, 2024)</p> <p>This study examines the effectiveness of problem-based learning (PBL) in enhancing information literacy self-efficacy (ILSE) through the use of library e-resources. Conducted in two Indonesian universities—University A (Java Island) and University B (Sumatra Island)—the research aims to highlight the role of e-resources in improving students' information literacy skills. Students at ACLC College of Taytay will exhibit greater information literacy self-efficacy if problem-based learning (PBL) techniques are incorporated into their use of the online library system. This implies that utilizing active learning strategies could optimize the e-library platform's educational impact in addition to granting access to resources.</p>	

### **Foreign Literature**

Although critical information literacy, critical pedagogy, and online library instruction are commonly discussed in the library and information science literature, they are rarely discussed together. This qualitative interview study with academic librarians conducted in 2022 identifies opportunities and challenges of teaching critical information literacy online. Findings suggest that critical information literacy and critical pedagogy can be integrated into online library instruction through online workshops, digital learning objects, and online credit-bearing courses. However, librarians face challenges implementing critical pedagogy online related to the lack of dialogue and co-creation of knowledge between students and instructors, limitations of the one-shot model of library instruction, which is often replicated online, limited engagement during asynchronous learning, and limitations of educational technology. Additional research is needed to establish frameworks and best practices for teaching critical information literacy and implementing critical pedagogy in online library instruction. (Withorn, T 2023)

This explores how critical information literacy (CIL) and critical pedagogy (CP) can be integrated into online library instruction, addressing both opportunities and challenges. Despite frequent individual discussions in library

	<p>and information science literature, the intersection of these concepts in an online context has been underexplored. Students will acquire more sophisticated research and critical thinking abilities if critical pedagogy (CP) and critical information literacy (CIL) are incorporated into ACLC College of Taytay's online library system. Asynchronous workshops and digital learning modules could improve students' engagement with material beyond cursory comprehension, despite possible difficulties in promoting discussion in an online environment.</p> <p>The main purpose of the research is to examine the interaction of electronic library sites as an element of the information resource management system based on local and foreign experience. It consists of defining the location of electronic sites of libraries and information centers as an element of information resource management, interpreting information resources as a system, analyzing their logistics capabilities. In the digital environment, place of library sites is in the management of information resources. The article examines the characteristics of electronic sites, which form the main interface structure of library systems. Predicated on the experience of specific libraries, the requirements for the use of the electronic resource database are highlighted. Information resources published on domestic and foreign electronic library sites used by academic users and general reader groups were analyzed and their</p>	

	<p>relevant search capabilities were explicated. The article also examines the interaction of the Azerbaijan Diplomatic Academy-ADA Library and The US Library of Congress website with the electronic library and electronic catalog interface as an example of domestic and foreign electronic library experience. (Sismayilov, N., &amp; Khalafova, S.2022).</p> <p>Conducted by (Sismayilov and Khalafova, 2022), this examines the role of electronic library sites as key components of information resource management systems, drawing on both local (Azerbaijan) and foreign experiences. The study explores how these electronic sites are positioned within the broader landscape of managing information resources and investigates the logistics of information resources in digital environments. A scalable, sustainable, and research-driven digital infrastructure will be produced if ACLC College of Taytay bases the development of its online library on previously successful digital library initiatives (like the Digital Library Federation and Mercury Electron Library). Long-term system success and relevance may be ensured by taking inspiration from international best practices and digital policy frameworks.</p> <p>The dream of digitizing the vast knowledge of mankind, and making it available online through institution repositories (IRS) and library website has now</p>	

become a realizable goal for information professionals in Academic libraries. Digital libraries depend on digital content. There are information resources which are born digital, having created by computational technologies and never existing in analogue format, but the majority of holding offered by digital libraries according Tollee (2020) in Okeke, Udem, Onuwrah (2019) were created through the process of digitization, that is, the conversion of an analogue signal or code into a digital signal or code. (Okeke, Udem, Onuwrah (2019)

Digital libraries have made vast knowledge more accessible by relying on both born-digital content (created in digital form) and digitized content (converted from physical formats). The digitization process, where analog resources are transformed into digital formats, is a key component of expanding access to information in academic libraries. This shift enables easier storage, preservation, and global sharing of materials such as books and research papers. As noted by Tollee (2002) and others, this technological advance is essential for modern libraries to support education and knowledge dissemination in the digital age.

If we approach the article from the historical context, we can record that the electronic library activity which began to enlarge in the 1990s, has been

enriched functionally and practically as a result of both implementation of digitalization projects and the creation of new documents directly in digital format.

In the history of digital libraries, one of the first attempts in the history of digital libraries was the Mercury Electron Library project, which was implemented at Carnegie Mellon University from 1989 to 1992 (Norton, 2010). Since all of those years, digital library projects have continued to grow speedily due to professional interests and research efforts of various scales. For example, the Digital Library Initiative, a multi-stage Digital Library Initiative funded by the US National Science Foundation, is an example of a digital library project implemented in the 1990s through the joint efforts of national government agencies and large-scale cooperation. e-Lib program developed by the Joint Information Systems Committee of the United Kingdom, the Digital Library Research Program of the Joint Information Systems Committee and the National Science Foundation, the Digital Library Federation of the United States, Australia Distributed The Center for Distributed Systems Technology, the Canadian Initiative on Digital Libraries, the Nordic Council for Scientific Information (NORDINFO), and the Information and Mathematics A DELOS Working Group of the European Research Consortium, etc. (Schwartz, 2000, p. 388).

The historical development of digital libraries has progressed significantly since the 1990s, driven by both national and international collaborative projects. One of the earliest major initiatives was the Mercury Electron Library project at Carnegie Mellon University from 1989 to 1992, which set the stage for subsequent digital library efforts. Following this, a series of large-scale projects helped shape the digital library landscape, including the Digital Library Initiative funded by the U.S. National Science Foundation. This initiative played a crucial role in developing digital systems for scientific disciplines.

It has been a rewarding year for libraries and anyone who uses them. Sure, there have been some hiccups along the way, but 2023 proved that libraries are thriving. Ultimately, one of the time-tested institution's most important roles is as a hub for *community engagement*, which the ALA defines as "the process of working collaboratively with community members — be they library customers, residents, faculty, students or partner organizations— to address issues for the betterment of the community. According to the ALA website, "As champions of lifelong learning, libraries are a place to quench curiosity, access technology, and explore new ideas, hobbies, and careers. Increasingly, libraries also offer patrons a welcoming space to meet their neighbors to discuss and resolve important issues."



	<p>This is a role that libraries will continue to play in 2024 — and beyond.</p> <p>In 2023, libraries proved to be vital community hubs, continuing to thrive despite some challenges. As defined by the American Library Association (ALA), libraries serve as spaces for lifelong learning, where people can quench their curiosity, explore new interests, and access technology. In addition, libraries offer a welcoming environment for community members to come together, discuss important issues, and collaborate on solutions. This role of fostering community engagement is set to continue into 2024 and beyond, cementing libraries' relevance in the modern world. Their ongoing commitment to supporting education, digital access, and social interaction makes them essential to community growth and connection.</p> <p><b>Local Study</b></p> <p>The extent to which students are able to maximize the potential benefits of information from the online world depends, in great measure, on the development of a set of skills that would make them effective users and decision-makers. While previous studies have revealed the role of prior knowledge, availability of ICT resources and infrastructure in the development of information-type skills, the identification of other unexplored variables remains important in</p>	

information science. This paper seeks to ascertain the moderating role of mindfulness on digital literacy and online information searching strategies on a select group of university students in the Philippines. Structural equation modeling was used to test a hypothesized model and explore the factors affecting the information-seeking behavior of 321 students from the largest comprehensive university in the Philippines. A multi-aspect instrument, consisting of a robotfoto, and three scales such as the Langer Mindfulness Scale (LMS), Internet Skills Scale (ISS), and Online Information Searching Strategies Inventory (OISSI), was used in this study. Results revealed that digital literacy had a direct positive relationship with the online information searching strategies of students. Surprisingly, mindfulness did not moderate the relationship between digital literacy and online information searching strategies. Further, digital literacy was found to be a mediating factor to university students' information searching strategies. Implications of these for library practice and policy are discussed in this paper. (Atoy, M. B., Garcia, F. R. O., Cadungog, R. R., Cua, J. D. O., Mangunay, S. C., & de Guzman, A. B, 2020).

This study explores the role of mindfulness in the relationship between digital literacy and online information searching strategies among university students in the Philippines. It aims to identify factors influencing students'

	<p>information-seeking behavior, focusing on digital literacy and mindfulness as potential moderators. Students' information-seeking behavior will improve if the online library system at ACLC College of Taytay encourages the growth of digital literacy through integrated tutorials and guided search techniques. A well-designed, interactive interface can still promote deeper engagement and responsible use of digital resources, even though mindfulness may not directly mitigate the effects of digital literacy.</p> <p>This descriptive study determined the learning tools and e-learning resources, learning platform and online learning systems, skills towards learning platform and online learning systems, and learning engagements of students of Cavite State University - Silang Campus amidst the new normal setting of learning. Using stratified random sampling, there were 364 student-respondents represented by four departments answered the structured questionnaire online using Google form. The findings revealed that smartphones and mobile applications were the most utilized educational tool and e-learning resources. Google classroom was the most widely used as online learning system during asynchronous class, while Google Meet as a meeting platform during synchronous scheduled classes. It was found that students' skills towards online learning systems and meeting platforms were proficient. During flexible learning,</p>	

	<p>Facebook was on top of the most convenient, followed by Google and Zoom as perceived by students as accessible, equitable, communicative, monitorable and sustainable to use. Consequently, it was found that students strongly agreed on preparedness as the most vital to engagement in online learning. Accordingly, findings suggest that strengthening online teaching and delivery of methods by creating contents tailored to the needs of the students during flexible learning will propel to ensuring the efficacy of teaching and learning processes. (Santiago, C. J., Ulanday, M. L., Centeno, Z. J., Bayla, M. C., &amp; Callanta, J, 2021).</p> <p>This descriptive study aimed to assess the learning tools, e-learning resources, learning platforms, and online learning systems used by students at Cavite State University - Silang Campus in the context of the new normal learning environment. A total of 364 student respondents from four departments participated, completing a structured questionnaire online via Google Forms. Students will be more engaged and satisfied if the ACLC College of Taytay's online library system is mobile-friendly and incorporates well-known platforms like Google Classroom and Google Meet. The system's function in adaptable learning environments can be strengthened by offering easily navigable, student-centered tools.</p>	

	<p>This paper seeks to characterize the maturity of digital initiatives in Philippine academic libraries, focusing on the sustainability of digitization activities. For its literature review, this paper presents local digitization initiatives, guidelines, standards, and good practices on digitization as presented in research, and prevailing digital library services during the COVID-19 pandemic. It employed a descriptive-comparative research design to obtain information on digitization programs implemented in higher education and research-producing institutions. Five of the 12 verified institutions with digitization programs were engaged for further interviews. The respondents cited the lack of staff, dedicated physical space, and inadequate equipment and funding as barriers to implementing a digitization program. Most of the respondents' digitization initiatives began in response to external triggers rather than as a part of a comprehensive strategy to provide digital library services. The project-based approach to these activities affects the sustainability of digitization programs. The study recommends organizing more consultancy programs in digitization, teaching digitization ICT applications in LIS schools, information companies offering digitization services, digitization communities of practice, and consortia for sharing facilities and expertise. With the requirements of a more robust digital framework to provide flexible access, Philippine academic libraries must review their short- and long-term goals and figure out where digitization can be integrated within said goals. (Lagas, S., &amp; Isip, J, 2023).</p>	

This paper examines the maturity of digital initiatives in Philippine academic libraries, focusing on the sustainability of digitization efforts. The study looks at local digitization projects, guidelines, standards, and best practices, as well as digital library services during the COVID-19 pandemic. The online library system will be more robust and scalable if ACLC College of Taytay adopts a strategic and sustainable approach to digitization, guided by the lessons learned from academic libraries in the Philippines. The system's long-term efficacy in delivering digital resources will be ensured by making plans for sustainability through partnerships, training, and funding.

As Information and Communications Technology (ICT) has already become an integral aspect of an academic library, e-resources have also aided for wider and easier access of technical information. Relatively, the study aimed to assess the utilization and perception of college students, faculty, and staff in Camarines Norte State College – College of Trades and Technology (CNSC-COTT), a higher education institution in the province of Camarines Norte, Philippines in the use of e-resources which will be a basis for inputs towards its digitalization. A quantitative research design was used to which a survey was deployed via google forms. The consolidated data shows that 82% of the

respondents were already aware of the e-resources provided by the library. However, considerations may still be taken into accounts to improve statistical results such as strengthening information dissemination, improvement of the internet subscription and likewise, improve the skills of the clientele when it comes to using the facilities. Likewise, it was also noted that among the respondents, faculty members were the most satisfied with a mean score of 4.56 whereas students and staff were at a satisfactory level. In determining the satisfaction level of the respondents, demographics of the respondents were taken into consideration and determined its influence. Relatively, it was noted that role of the respondent (be it student, faculty, or staff) and the year level of the respondents has great influence in the determination of satisfaction level over the sex of the respondents. Statistics show that p value for both variables was at - 0.158 and -0.088 that was greater than ( $\alpha = 0.05$ ) validating the influence of the said variables. (Puse Jr, P. J., Maceda, M. A. B., & Balada, G, 2023.)

This study assessed the utilization and perception of e-resources among college students, faculty, and staff at Camarines Norte State College – College of Trades and Technology (CNSC-COTT), in the Philippines, aiming to provide inputs for the institution's digitalization efforts. User satisfaction and efficient use of e-resources will rise if ACLC College of Taytay takes user demographics into

	<p>account when designing the online library system, such as year level and user role. A more efficient and individualized digital library experience may result from user profile-based interfaces and content customization.</p> <p>This descriptive research determined the extent of implementation of the guidelines on digitization of resources in the libraries of HEIs in La Union along selection, technical requirement and implementation, legal aspects, budget, human resource planning, development and maintenance, preservation of digital content and project management; and the strengths and weaknesses on digitization of resources. Data gathered using the validated and pretested questionnaire was treated using percentage, ranking, and weighted mean. A total of 40 library personnel participated in the study. The implementation of the guidelines on digitization of resources in the libraries of HEIs in La Union, Philippines was found to be moderately implemented and is relatively weak. A Digitization Manual Model was formulated to address the identified weaknesses. Through these guidelines and procedures, library personnel will have clear guidelines as to how digitization activities must be done. It will serve as a framework that will provide effective and efficient digitization. (Lacuata, A, 2020).</p>	



This descriptive research aimed to assess the extent of implementation of the guidelines on digitization of resources in the libraries of Higher Education Institutions (HEIs) in La Union, Philippines. ACLC College of Taytay will standardize processes, increase efficiency, and improve the quality of digitized content if it implements a structured digitization manual or framework for its online library system. Consistency in digital collection building and resource management can be enhanced with the aid of a clear, institution-specific guide.

### **Local Literature**

Due to the global pandemic, Silliman University was temporarily closed, and on-campus visits were discontinued. The library established a remote virtual library to ensure continuous operations and fulfill its mission. This paper describes the experiences in managing the virtual library of Silliman University during the lockdown brought on by the pandemic. Specifically, it details the design process and the development of the virtual spaces of the library. The study utilized a mixed-method approach, incorporating qualitative and quantitative research designs. The qualitative aspect delved deep into the lived experiences and firsthand observations of the Ad-hoc Committee members, comprising nine seasoned librarians, library advocates, and experts in information technology who were fully immersed in developing online platforms.

	<p>To measure the satisfaction levels of library users with the online services and databases, a random survey (quantitative) was conducted from May 18 to 24, 2020, through the ePoll. Data gathered yielded a wealth of insights into the effectiveness and overall reception of the virtual services and resources delivered during the pandemic. Descriptive statistics (mainly percentages) were used to analyze data. Results showed that the Library's transformation project, which started before the pandemic, facilitated library services' transformation during the lockdown. With the insights gained during the pandemic, the Library realized that it is important for virtual reference services to be implemented step-by-step, taking into consideration the librarians' and library staff's training and how much these have enhanced their capacities as some library personnel were not physically, mentally, and technically ready. Regarding user satisfaction, most respondents expressed satisfaction with the mySOUL Virtual Library Services, although some areas need continued development. In addition, while the respondents were pleased with the availability of subscribed databases and probably with their features and functionalities, subscribing to additional databases is expected to boost user satisfaction. (Villanueva, M. &amp; Marcial, D 2023).</p>	

This explores the experience of managing the virtual library of Silliman University during the global pandemic when the campus was temporarily closed, and on-campus visits were suspended. The university library created a remote virtual library to continue fulfilling its mission and serving its users. The online library system at ACLC College of Taytay will improve user satisfaction and guarantee more seamless transitions during disruptive events like pandemics if it includes a phased implementation plan, sufficient librarian training, and ongoing database expansion.

Libraries are the support system for the academic success of students and teachers. These have been proven when libraries were greatly affected during the COVID-19 pandemic. There was a shift from on-site to online library services, and various library innovations were implemented to support the academic community despite the COVID-19 pandemic challenges. This study examined the online library information resources and services at Carlos Hilado Memorial State University in terms of users' awareness, utilization, and satisfaction. A researcher-made questionnaire was used, validated by five (5) experts in research and library and information science, and 374 students participated. The instrument's reliability was strong, with a Cronbach's alpha coefficient of 0.910. Descriptive and inferential statistics were employed in data analysis. Mean,

standard deviation, t-test, ANOVA, and Pearson's  $r$  were the statistical tools used. The results showed a high level of awareness of online library information resources and services, and the users often utilized these resources and services. Users were very satisfied with the resources and services, indicating that their needs were effectively met. Furthermore, there is a significant difference in the users' level of awareness and satisfaction when grouped according to age, year level, campus, and frequency of library usage, and no significant difference when grouped according to their sex. However, there is no significant difference in the users' extent of utilization when grouped according to age, sex, year level, campus, and frequency of library usage. As to the correlation, there is a significant relationship between users' level of awareness and their extent of utilization of online library information resources and services. (Panhilason A. P, 2023).

The findings highlight that increasing awareness of online library resources is important, as it directly affects how much students use these services. It also shows that students were satisfied with the library's support for their academic work during the pandemic. Students' use and satisfaction with the ACLC online library system will rise dramatically if awareness campaigns and

	<p>orientations are given top priority. Because awareness and utilization are directly correlated, knowledgeable patrons are more likely to gain from library services.</p> <p>An E-library is an electronic or online library where one can access books, journals, novels, articles, or any other information over the net. Library planners must acknowledge that the availability of space (or lack of it) is not the sole reason for examining physical facilities. If your library emphasizes current material and best sellers and encourages browsing use of the collection, fewer seats are needed, and the projection should be adjusted downward. If your library emphasizes research material and encourages long-term use by students and scholars, additional seats may be needed, and the projection should be adjusted upward. The study aims to assess the space and facilities of the newly constructed E-library of the University on Main Campus from the perspective of the university librarians. A survey research method using the combination of ocular inspections of the e-library and survey questionnaire was adopted for the study to adequately assess the opinion of the university librarians at Bulacan State University. Findings show that 81% of the respondents strongly agreed with the building's state-of-the-art character. 64% of the respondents strongly agree that the E-library creates a sense of arrival. It is welcoming and has an accommodating atmosphere, and there is enough staff work area and enough</p>	

available collection spaces. 54.54% of the respondents agreed that the E-library has the projection of service population for the next 20 years. (Cruz, M. A. D., Albino, M. G., Moraña, D. M., Bachillar, D. A., & Dullas Jr, F. M, 2021)

This study assesses the space and facilities of the newly constructed E-library at Bulacan State University from the perspective of university librarians. The research used a combination of ocular inspections and a survey questionnaire to gather feedback from the librarians. Users will be more engaged and satisfied if ACLC College of Taytay makes sure that its online library system provides a friendly digital interface, sufficient technical support, and a collection space that can grow with the needs of the future.

This study assessed the customer satisfaction of the clients of a public library in the Philippines. This descriptive-quantitative research used a questionnaire to measure the respondents' satisfaction on the e-resources of the public library in terms of accessibility, user-friendliness, and relevance. The data were gathered from 100 respondents. The findings revealed that the clients gave an excellent rating to the e-resources of a public library. Accessibility received the general weighted mean of 4.24, equivalent to Excellent while user-friendliness received the general weighted mean of 4.33, which is also equivalent

	<p>to Excellent. On the other hand, relevance received the general weighted mean of 4.34, also equivalent to Excellent. The findings revealed that the aspect of accessibility received the lowest rating among the three; hence, the researchers recommend that the public library should work on providing better offline access and e-print of the repository services. On the other hand, the researchers also propose that they continue to update and provide relevant e-resources to the clients to get high ratings on relevance and retain its interface continuously. (Dahuya, R., Cadeliña, E., de Jesus, H., &amp; Briones, J, 2023).</p> <p>This study evaluated customer satisfaction with the e-resources at a public library in the Philippines. A descriptive-quantitative approach was used, with a questionnaire to measure satisfaction in terms of accessibility, user-friendliness, and relevance. Data was gathered from 100 respondents. Overall customer satisfaction with the system will increase if ACLC College of Taytay's online library makes its e-resources more accessible, especially offline access and print options, while preserving their relevance and usability.</p> <p>The research study aimed to create a system that could help future researchers of PRMSUCCIT in their respective fields. The study used the quantitative method and ISO/SEC 25010:2015 Software Quality Metrics to</p>	

	<p>evaluate the system. The study found that CCIT Faculty and CCIT Students can use the system and even the other schools who seek studies related to the computer field. Also, the respondents assessed the E-Library for CCIT Theses and Capstone Projects in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability as excellent. The respondents assessed the E-Library for CCIT Theses, and Capstone Projects in the Level of Acceptability was Highly Acceptable, indicating that the developed system could respond to the users' needs to provide research information. The researchers recommended that functional suitability and usability evaluation be conducted to enhance the system further. The E-Library for CCIT Theses and Capstone Projects should be implemented in the college to have an electronic application for theses and capstone projects. (Cruz, M. A. D., Albino, M. G., Moraña, D. M., Bachillar, D. A., &amp; Dullas Jr, F. M, 2021)</p> <p>This research aimed to develop a system to support future researchers at PRMSUCCIT by providing access to an E-library for CCIT Theses and Capstone Projects. The study used a quantitative method and evaluated the system using ISO/SEC 25010:2015 Software Quality Metrics. Students will find an online library system developed by ACLC College of Taytay that complies with ISO/IEC 25010:2015 quality standards—which address functionality, usability, and</p>	



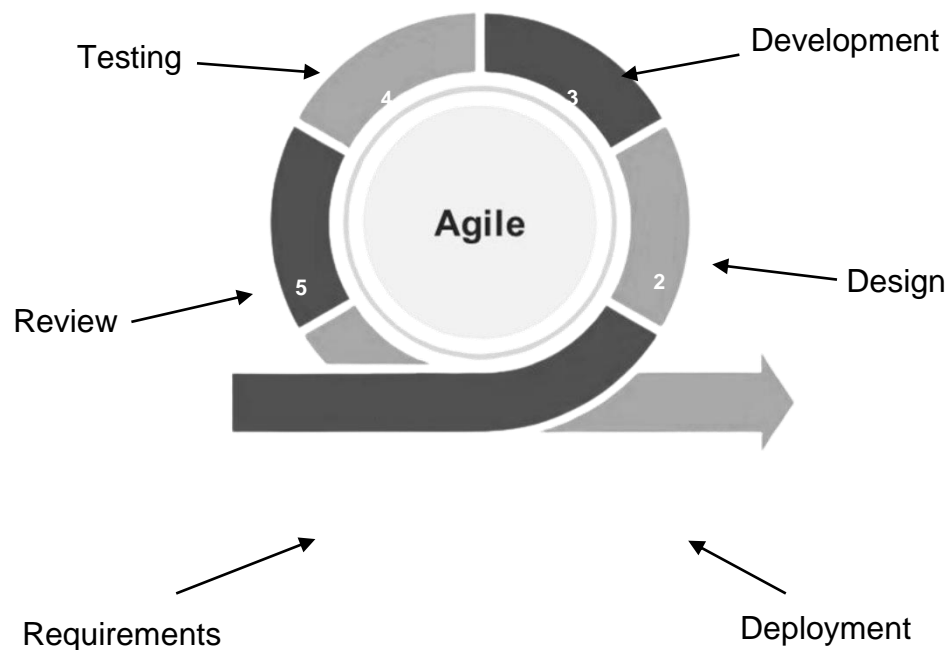
	<p>security—to be very effective and acceptable, particularly when it comes to accessing research materials like theses and capstone projects.</p>	

	<div data-bbox="721 386 989 508" data-label="Section-Header"><h2>CHAPTER III</h2><h3>METHODOLOGY</h3></div> <div data-bbox="277 642 1445 829" data-label="Text"><p>In this chapter, the researchers will indicate the method, techniques, and analysis used to gather the data to develop a library management system that can enhance the current system.</p></div> <div data-bbox="277 961 548 1003" data-label="Section-Header"><h4>Research Design</h4></div> <div data-bbox="277 1050 1443 1234" data-label="Text"><p>This study will include both a descriptive and quantitative approach. The researchers will use the descriptive method to collect data regarding the ACLC College of Taytay Online Library System.</p></div> <div data-bbox="277 1367 1443 1701" data-label="Text"><p>The study used a questionnaire to collect data and feedback from participants, who were expected to complete the survey. All of the information gathered from respondents was organized, followed, arrange, and displayed in a series of tables and graphs. The data were analyzed and interpreted using frequency counts, percentage weight values, and weighted mean.</p></div>	

## Research Development

In the development of the Library Management System, an agile diagram was chosen to be constructed and tested, which included a completely isolated frame in this study.

### AGILE DIAGRAM



**Figure 3.1 System Development Life Cycle**

## **Planning**

Developing an Online Library System requires an organized approach to ensure that it fits the needs of users. The researchers will begin by learning about the needs of students, instructors, and librarians through discussions, surveys, and observations of present library operations. During the planning phase, a detailed table will be prepared to explain the system's features and components, with a focus on easy navigation and accessibility. The system will use programming languages such as HTML, CSS, JavaScript, and MySQL to provide a responsive and functional platform for accessing digital content.

Once a prototype is complete, it will be tested by users to discover flaws and gain feedback for improvements. A design will be established to guarantee that the system is straightforward and accessible on all devices, including PCs, tablets, and smartphones. Researchers will continue to interact with users, utilizing their feedback to improve and optimize the system. By following this procedure and prioritizing security and functionality, the online library system will be a dependable and efficient resource for the school community.

Information	Software	Hardware	User
1. Planning	7. HTML	12. Portable	13. Students
2. Analysis	8. CSS	Computer	14. Admin
3. Designing Code	9. JavaScript		
4. Implementation	10. XAMPP		
5. Testing	11. PHP		
6. Revision			

### Designing

The researchers aimed to create an Online Library System that is both efficient and simple to use, with the goal of providing simple access to digital library resources. The system provides a single platform for students, teachers, and librarians to access and operate digital books and materials. Users can browse, search, and view content, and librarians can organize and update the database to keep resources current and accessible. The design also contains responsive layouts to enable compatibility with multiple platforms, such as

computers, tablets, and smartphones. By emphasizing accessibility and simplicity, the system aims to improve the overall user experience and effectively support the educational community.

### **Developing**

This phase is where the actual development starts with code based on the design. It contains creating the user interface, connecting the database, and implementing the system's software. Developers create code to implement fundamental features, which ensures functionality and usability. Additionally, the system's server is configured to manage data and handle user interactions.

### **Testing**

The main purpose of the testing phase in designing the Online Library System is to confirm that the platform performs properly and meets the requirements. This step assesses the system's accuracy to ensure that it fulfills the required requirements for functionality, security, device compatibility, usability, and overall performance. Thorough testing will be performed to identify and fix problems while assuring the system's dependability and efficiency for users. By resolving these problems, the testing process ensures that the online

library system provides a consistent and secure experience for students, teachers, and librarians.

### **Evaluation**

The Online Library System's evaluation phase focuses on determining its effectiveness, performance, and usability. Using surveys, interviews, and group discussions, researchers are going to gather feedback from students, teachers, and librarians in order to assess the system's usability and functional capabilities. These responses will assist identify parts where the system succeeds and areas where it needs to improve. The evaluation procedure is continuing to ensure that the system evolves to successfully fulfill the needs of its users. The insights obtained will inform future updates and changes to ensure a high level of quality and customer fulfillment.

### **Implementation**

The Online Library System is implemented by combining a relational database to handle the structure and accessibility of digital resources. The system's front-end, built using HTML, CSS, and JavaScript, will provide users with an easy way to interact with the platform. Key features include resource browsing, search functionality, and user account management to enable easy

access to digital information. An authentication system will be created to protect identities of users and provide secure access to system features. The system will be thoroughly tested, both manually and automatically, to guarantee that it works as designed. Once completed, the system will be deployed, allowing students, instructors, and librarians to use it. Continuous monitoring and updates will be carried out to improve the system's performance and address any issues that emerge.

### **Respondents of the Study**

The respondents of the study were sixty (60) individuals consisting of twenty (20) ICT students, twenty (20) STEM students and twenty (20) ABM students from ACLC College who are educated about Online Library Systems and are willing to engage in the evaluation process.

### **Data Gathering Instruments and Techniques**

In this study, we use a variety of data gathering instruments and techniques to ensure thorough and trustworthy data collection. Questionnaires and interviews are among the devices used to collect quantitative and qualitative data. The procedures involve creating, administering, and organizing these



instruments in an organized way in order to collect the data required to effectively address the study objectives.

**Questionnaire.** The questionnaire is a series of survey questions posed to respondents with the goal of gathering particular information about how the online system operates and how it may benefit the users.

**Interview.** The researchers will conduct interviews and ask questions to acquire information. An interview is a conversation among one or more individuals in which the interviewer asks questions to gather information or statement from the respondents.

### **Data Gathering Procedure**

Researchers provided questionnaires to respondents in order to examine ACLC College of Taytay's planned Online Library System. To acquire information, an organized approach was taken, which included designing and evaluating research tools, distributing questionnaires to designated respondents, conducting interviews, and thoroughly compiling and documenting the data for analysis.

### **Statistical Treatment of Data**

The statistical method is important when examining obtained data. Data are summarized using descriptive statistics such as frequencies and percentages. In addition, the weighted mean is used to analyze With responses replies, resulting an average score that reflects the general assessment of the system's usability, accessibility, and functionality.

**Statistical Tools.** The study utilizes statistical tools to process and interpret the data effectively. The weighted mean is a key tool in analyzing responses to questions with varying levels of agreement or satisfaction. This approach allows us to assess the overall trends and identify specific areas requiring attention.

**Weighted Mean.** To find the weighted mean for each response, multiply the scale value by the total number of responses. This generates the total weighted points, which are then divided by the total number of responses. The mean is used to describe the vital a pattern. It represents the question set in which the majority of respondents answered.

**Formula:**

$$\bar{x} = \frac{\sum fx}{n}$$

**Where:**

$$\sum fx = \text{The sum of all products}$$

**n=Total number of participants**

**Table 3.2: Likert Scale**

Verbal Interpretation	Scale	Mean Rating Score
Strongly Agree	5	4.20-5.00
Agree	4	3.40-4.19
Neutral	3	2.60-3.39
Disagree	2	1.8-2.59
Strongly Disagree	1	1.00-1.79

**Table 3.2** shows the Likert scale of weighted mean. The weighted mean is categorized into five weighted points. The table displays the range and the verbal interpretation for the four points.

## CHAPTER IV

### RESULTS AND DISCUSSION

This chapter includes the data collection for the study, the interpretation of the results from the questionnaires given to the respondents, and the analysis of the data.

**Presentation of Objective no. 1:** To evaluate how the online library improves student learning and access to resources.

Home Lesson Logout

Lesson

#	Grade level	Title	Action
11		INTRODUCTION TO JAVA	<a href="#">View File</a>
11		JAVA basics	<a href="#">View File</a>
12		INTRODUCTION TO HTML	<a href="#">View File</a>
12		INTRODUCTION TO ORACLE	<a href="#">View File</a>
12		INTRODUCTION TO CSS	<a href="#">View File</a>
12		INTRODUCTION TO JAVASCRIPT	<a href="#">View File</a>

**Figure 4.1 LIST OF BOOKS**



**Figure 4.2 BOOK DOWNLOAD**

**Figure 4.1** shows the book selection page, it is where the user can download their desired books (example shown in **Figure 4.2.**) The books are accessible anytime because it is downloaded in the user's device.

**Presentation of Objective no. 2:** To assess how the system enhances students' access to reading.

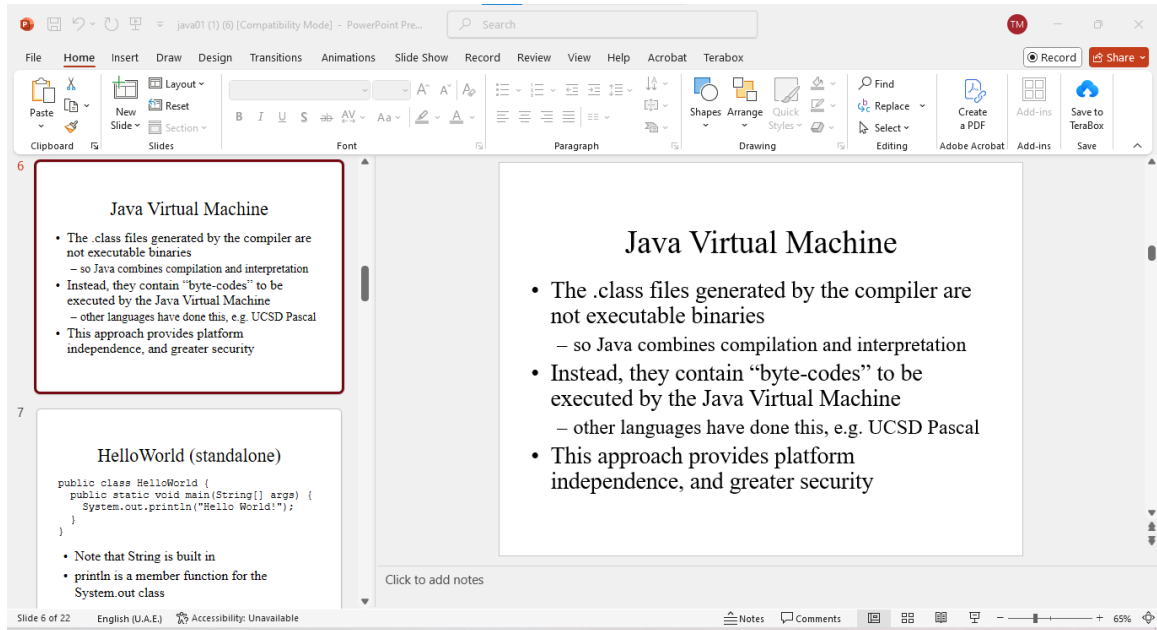


Figure 4.3 BOOK EXAMPLE

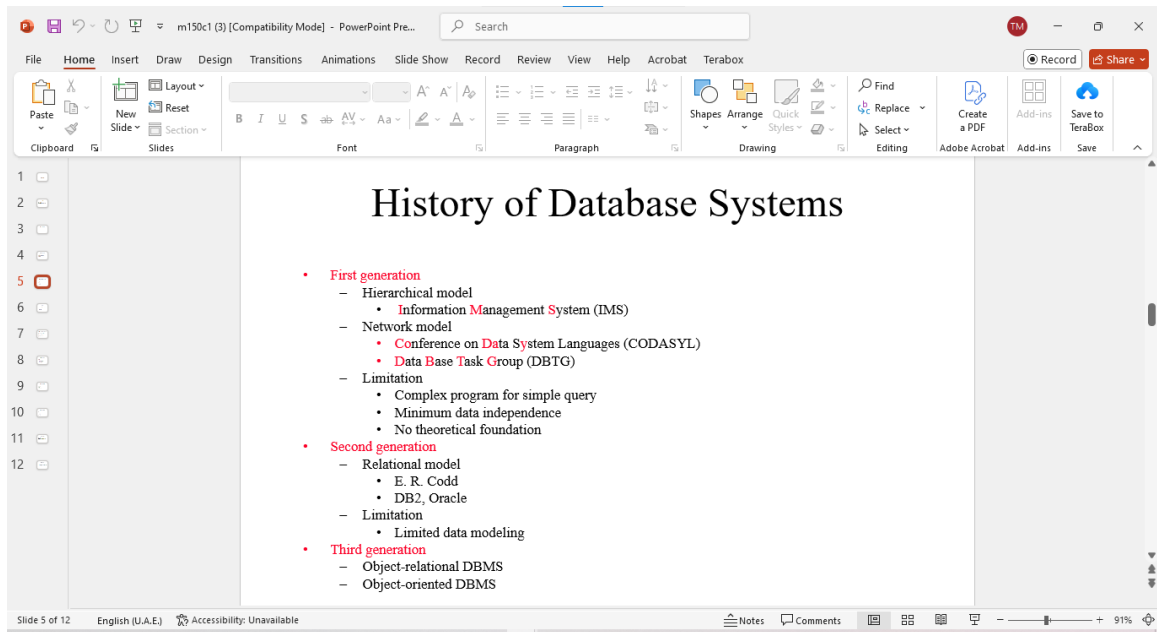
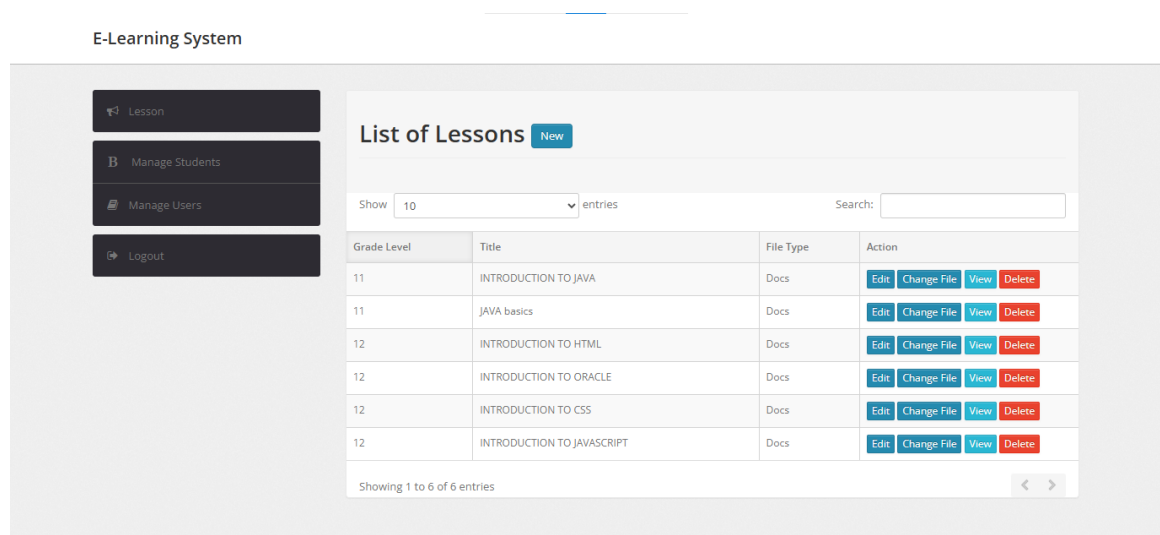


Figure 4.4 BOOK EXAMPLE

**Figure 4.3** and **Figure 4.4s** shows an example of the books included in the e-library system.

**Presentation of Objective no. 3:** To assess the ease of use for both the librarians and the students.



**Figure 4.5 ADMIN PANEL**

**Figure 4.5** Presents where the admin can upload, view, update, and delete books. A search feature can also be seen here to access books easily.

**Presentation of Objective no. 4:** To investigate the library's overall effectiveness in serving the needs of both administrator and students.



Deprecated: \_\_autoload() is deprecated, use spl\_autoload\_register() instead in C:\xampp\htdocs\le-learning\system\include\function.php on line 37

## E-Learning System

Lesson

Manage Students

Manage Users

Logout

### Update Lesson

Title:

Grade level:

Select File Type:

Save

Figure 4.6 UPDATE LESSON MENU

## E-Learning System

Lesson

Manage Students

Manage Users

Logout

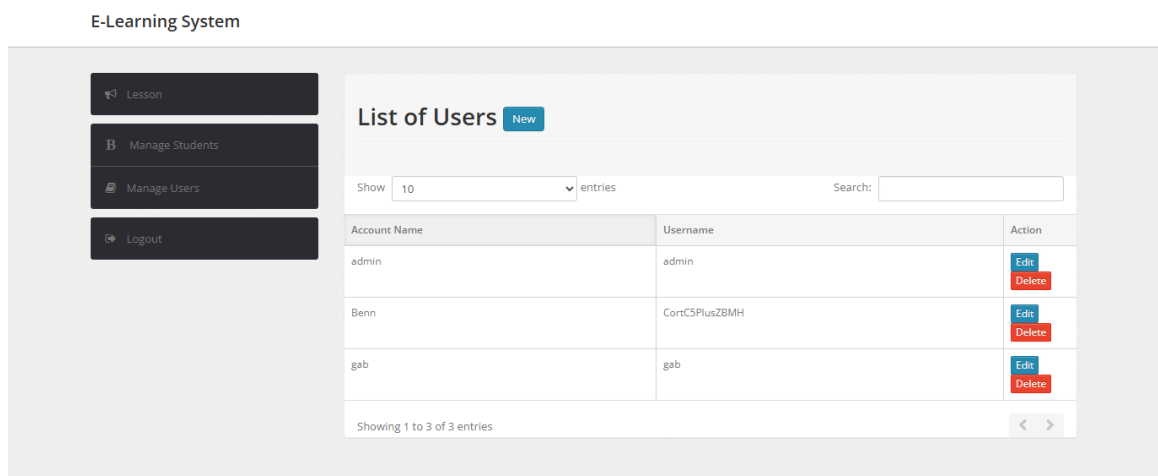
### List of Student

Show  entries Search:

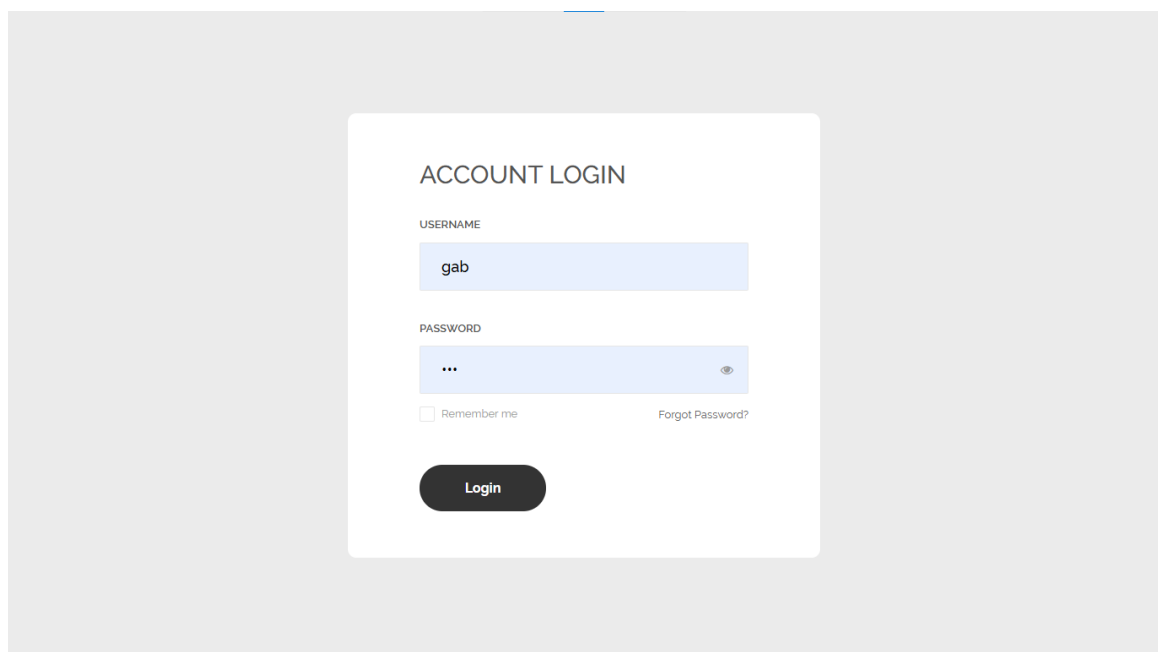
Name	Address	Contact#
Gabriel Mendoza	bernardgabrielmendoza@gmail.com	09701524133
Lukas Uzumaki	tzuyoda.121006@gmail.com	09154612228

Showing 1 to 3 of 3 entries

Figure 4.7 LIST OF STUDENTS



**Figure 4.8 LIST OF USERS**



**Figure 4.9 ADMIN LOGIN PAGE**

E-Learning System

Lesson

Manage Students

Manage Users

Logout

### Add New User

Name:

Username:

Password:

Retype Password:

**Figure 4.10 ADMIN NEW USER CREATION PAGE**

In **Figure 4.6**, the update lesson page is shown. The admin can change several information about the book there. In **Figure 4.7** and **Figure 4.8**, the list of students and users are shown respectively. The login page is shown in **Figure 4.9** where admins can log onto their accounts. **Figure 4.10** shows where new admin accounts can be created.

**Table 1**

Questions	Mean	Verbal Interpretation
1. I appreciate reading more because the online library is simple to use and accessible. (Pinahahalagahan ko ang pagbabasa nang higit pa dahil ang online library ay simpleng gamitin at maa-access.)	4.48	Strongly Agree

**Table 1** shows a mean score of 4.48 which is verbally interpreted as strongly agree. It shows that most of the participants prefers to read more through the e-library because of its simplicity.

**Table 2**

2. Using the online library has helped me enhance my study habits and research abilities. (Ang paggamit ng online library	4.44	Agree
---	------	-------

ay nakatulong sa akin na mapahusay ang aking mga gawi sa pag-aaral at mga kakayahan sa pananaliksik.)		
---	--	--

**Table 2** shows a mean score of 4.44, equivalent to a verbal interpretation of agree. This indicates that respondents agree that the system helps them enhance their learning habits.

**Table 3**

3. I may use the online library at any time, allowing me to study on my own schedule. (Maaari kong gamitin ang online library sa anumang oras, na nagpapahintulot sa akin na mag-aral sa aking sariling iskedyul.)	4.52	Strongly agree
--	------	----------------

**Table 3** displays a mean score of 4.52, which corresponds to a verbal interpretation of “Strongly agree.” This suggests that respondents strongly agree

with the statement that they are able to access the available books through the e-library at any given time.

**Table 4**

4. The system influences me to read more regularly than before. (Ang sistema ay nakakaimpluwensya sa akin na magbasa nang mas regular kaysa sa dati.)	3.94	Agree
--	------	-------

**Table 4** displays a mean score of 3.94, which corresponds to a verbal interpretation of agree. This suggests that respondents agree that the e-library influences them to read more often.

**Table 5**

5. A feature for searching the system. is both user-friendly and effective. ( Isang tampok para sa paghahanap ng system. ay	4.1	Agree
---	-----	-------

parehong user-friendly at epektibo.)		
--------------------------------------	--	--

**Table 5** indicates a mean score of 4.1, which corresponds to a verbal interpretation of strongly agree. This suggests that most participants believe that the system allows the user to navigate effectively.

**Table 6**

6. The online library makes it easy for me to find different kinds of books and reading materials. (Ginagawang madali ng online library para sa akin na makahanap ng iba't ibang uri ng mga libro at mga materyales sa pagbasa.)	4.46	Strongly Agree
--	------	----------------

**Table 6** shows a mean score of 4.46, which is verbally interpreted as strongly agree. This indicates that the majority of participants strongly believe that the system allows the user to easily find books and reading materials.

**Table 7**

7. The online library allows me to find lessons much quicker than traditional libraries. (Pinapayagan ako ng online library na makahanap ng mga aralin nang mas mabilis kaysa sa tradisyonal na mga aklatan.)	4.48	Strongly Agree
--	------	----------------

**Table 7** shows a mean score of 4.48, which is verbally interpreted as "Strongly Agree." This indicates that most participants strongly believe that the system effectively allows the user to find books quicker than in traditional libraries.

**Table 8**

8. The online library has plenty of learning materials that are related to my strand.( Ang online library ay may maraming mga materyales sa pag-aaral na	4.14	Agree
--	------	-------



nauugnay sa aking strand.)		
----------------------------	--	--

**Table 8** displays a mean score of 4.14, which corresponds to a verbal interpretation of agree. This suggests that the majority of participants agree that the system has books related to their selected strand.

**Table 9**

9. The broad selection of books available in the online library encourages me to research topics that I am unfamiliar with. (Ang malawak na pagpili ng mga libro na magagamit sa online library ay naghihikayat sa akin na magsaliksik ng mga paksa na hindi ako pamilyar.)	4.08	Agree
---	------	-------

**Table 9** gives a mean score of 4.08, which corresponds to the verbal interpretation of agree. This suggests that the majority of participants believe that the abundance of books in the system encourages critical studying.

**Table 10**

10. I prefer reading from the online library rather than borrowing physical books. (Mas gusto ko ang pagbabasa mula sa online library kaysa sa paghiram ng mga pisikal na libro.)	3.94	Agree
---	------	-------

**Table 10** shows a mean score of 3.94, which corresponds to the verbal interpretation of agree. This indicates that the majority of participants would rather read from the online library than to borrow from a traditional library.

**Table 11**

11. The user interface is intuitive (Madaling maintindihan at gamitin ang user interface)	4.14	Agree
---	------	-------

**Table 11** shows a mean score of 4.14, which corresponds to the verbal interpretation of agree. This indicates that the majority of participants find the user interface relatively easy to use.

**Table 12**

12.The functions are straight to the point (Ang mga gamit ay direktang gumagana)	4.2	Agree
--	-----	-------

**Table 12** shows a mean score of 4.2, which corresponds to a verbal interpretation of agree. This suggests that the majority of participants believe the e-library requires minimal effort to operate.

**Table 13**

13.The books are easily accessible (Madaling magamit ang mga libro)	4.42	Agree
---	------	-------

**Table 13** shows a mean score of 4.542, which corresponds to the verbal interpretation of agree. This indicates that the majority of participants believe that the system allows for an easier way to access books.

**Table 14**

14.(For Admin Only) The admin panel is easy to control (Madaling paganahin ang admin panel)	3.52	Agree
---	------	-------

**Table 14** shows a mean score of 3.52, which corresponds to the verbal interpretation agree. This finding clearly suggests that majority of the respondents agree that the admin panel easy to control.

**Table 15**

15.t is easy to add, edit, or remove books in the admin panel (Madaling mag dagdag, mag iba, o mag bawas ng mga libro sa admin panel)	3.6	Agree
---	-----	-------

**Table 15** reveals a mean score of 3.6, which corresponds to the verbal interpretation of agree. This suggests that the majority of respondents agree that the admin panel allows for an easy way to add, modify, or delete books.

**Table 16**

16.The E-library System effectively allow user to get books or learning materials (Ang E-library System ay nag bibigay ng epektibong paraan para magamit ng mga users ang learning materials)	4.52	Strongly Agree
---	------	----------------

**Table 16** gives a mean score of 4.52, which corresponds to the verbal interpretation of strongly agree. This means that the majority of participants believe the system allow users to attain books and learning material effectively.

**Table 17**

17.The E-library System provides administrators with an easy-to-use admin panel (Ang Elibrary System ay nagbibigay sa mga administrators ng madaling gamitin na admin panel)	4.54	Strongly Agree
--	------	----------------

**Table 17** gives a mean score of 4.54, which corresponds to the verbal interpretation of strongly agree. This implies that people are assured in the ability of the system to make the admin panel easy to use.

**Table 18**

18. The instructions or guidelines for using the library system are clear and easy to understand. (Ang mga tagubilin o patnubay para sa paggamit ng sistema ng aklatan ay malinaw at madaling maunawaan.)	4.5	Strongly Agree
---	-----	----------------

**Table 18** shows a mean score of 4.5 which is verbally interpreted as strongly agree. It shows that most of the respondents understood the instructions provided during the survey and testing phase.

**Table 19**

19.Users and administrators can log in and out easily (Ang mga user at administrator ay madaling nakakapag log in at log out)	4.5	Strongly Agree
---	-----	----------------

**Table 19** shows a mean score of 4.5, which is verbally interpreted as strongly agree. It indicates that the respondents strongly agreed that the e-library system demonstrates efficiency in logging in and out.

**Table 20**

20. (For Admins only). Administrators can update old books and learning materials with ease (Madaling i-update ng administrator ang mga lumang libro at learning materials)	3.6	Agree
---	-----	-------

Table 20 gives a mean score of 3.6, which corresponds to the verbal interpretation of agree. It shows that the respondents agreed that admins can easily update outdated books.

### **Presentation of Objectives**

**Objective No. 1:** To evaluate how the online library improves student learning and access to resources.

**Table 21**

Question	Mean	Verbal Interpretation
1. I appreciate reading more because the online library is simple to use and accessible. (Pinahahalagahan ko ang pagbabasa nang higit pa dahil ang online library ay simpleng gamitin at maa-access.)	4.48	Strongly Agree
2. Using the online library has helped me enhance my study habits and research abilities. (Ang paggamit ng online library ay nakatulong sa akin na mapahusay ang aking mga gawi sa pag-aaral at mga	4.44	Agree



kakayahan sa pananaliksik.)		
3. I may use the online library at any time, allowing me to study on my own schedule. (Maaari kong gamitin ang online library sa anumang oras, na nagpapahintulot sa akin na mag-aral sa aking sariling iskedyul.)	4.52	Strongly Agree
4. The system influences me to read more regularly than before. (Ang sistema ay nakakaimpluwensya sa akin na magbasa nang mas regular kaysa sa dati.)	3.94	Agree
5. A feature for searching the system. is both user-friendly and effective. (Isang tampok para sa paghahanap ng system. ay parehong user-friendly at epektibo.)	4.1	Agree
<b>General Weighted Mean</b>	<b>4.296</b>	<b>Agree</b>

The mean value of Questions 1 to 5 is 4.296, which corresponds to a verbal interpretation of "Agree" (A). This indicates that, on average, respondents

felt that the online library system improves access to learning resources. The weighted mean also reflects the effectiveness of the system in helping students study.

**Objective No. 2:** To assess how the system enhances students' access to reading.

**Table 22**

Question	Mean	Verbal Interpretation
6. The online library makes it easy for me to find different kinds of books and reading materials. (Ginagawang madaling online library para sa akin na makahanap ng iba't ibang uri ng mga libro at mga materyales sa pagbasa.)	4.46	Strongly Agree
7. The online library allows me to find lessons much quicker than traditional libraries. (Pinapayagan ako ng online library na makahanap ng mga aralin nang mas mabilis kaysa sa tradisyonal	4.48	Strongly Agree

na mga aklatan.)		
8. The online library has plenty of learning materials that are related to my strand. (Ang online library ay may maraming mga materyales sa pag-aaral na nauugnay sa aking strand.)	4.14	Agree
9. The broad selection of books available in the online library encourages me to research topics that I am unfamiliar with. (Ang malawak na pagpili ng mga libro na magagamit sa online library ay naghihikayat sa akin na magsaliksik ng mga paksa na hindi ako pamilyar.)	4.08	Agree
10. I prefer reading from the online library rather than borrowing physical books. (Mas gusto ko ang pagbabasa mula sa online library kaysa sa paghiram ng mga pisikal na libro.)	3.94	Agree

<b>General Weighted Mean</b>	<b>4.22</b>	<b>Agree</b>
------------------------------	-------------	--------------

Based on Table 4.223, the weighted mean presents the results of a survey valued Questions 6-10 is 4.2256 with a verbal interpretation of "Strongly Agree (SA)." The strong agreement across multiple questions, particularly those related to system accessibility, user-friendliness, smooth operation, and accurate record-keeping, suggests that the e-library system is well-received by its users. The general weighted mean of 4.56 further reinforces this positive feedback, indicating overall satisfaction and effectiveness of the e-library system among respondents.

This data can be used to highlight the strengths of the e-library system, demonstrating its success in meeting user needs and expectations. It also provides valuable insights for any potential areas of improvement, even though the current feedback is predominantly positive. Such as those related to the respondents' preference in using the E-Library over traditional libraries show that the system can serve users' needs generously.

**Objective No 3:** To assess the ease of use for both the librarians and the students.

**Table 23**

11. The user interface is intuitive (Madaling maintindihan at gamitin ang user interface)	4.14	Agree
12. The functions are straight to the point (Ang mga gamit ay direktang gumagana)	4.2	Agree
13. The books are easily accessible (Madaling magamit ang mga libro)	4.42	Agree
14. (For Admin Only) The admin panel is easy to control (Madaling paganahin ang admin panel)	3.52	Agree
15. (For admin only). It is easy to add, edit, or remove books in the admin panel (Madaling mag dagdag, mag iba, o mag bawas ng mga libro sa admin panel)	3.6	Agree
<b>General Weighted Mean</b>	<b>3.976</b>	<b>Agree</b>

According to **Table 23**, the average score (General Weighted Mean) for Questions 11 to 15 regarding the effectiveness of the e-library for both librarians and users is 3.976, indicating a consensus among respondents that they “Agree” suggesting that the majority of respondents find the e-library to be effective for all users. This positive perception is crucial as it indicates that users perceive the e-library as meeting their needs and expectations.

**Objective No. 4:** To investigate the library's overall effectiveness in serving the needs of both administrator and students.

**Table 24**

16. The E-library System effectively allow user to get books or learning materials (Ang E-library System ay nag bibigay ng epektibong paraan para magamit ng mga users ang learning materials)	4.52	Strongly Agree
17. The E-library System provides administrators with an easy-to-use admin panel (Ang Elibrary System ay nagbibigay sa mga administrators ng	4.54	Strongly Agree

madaling gamitin na admin panel)		
18. The instructions or guidelines for using the library system are clear and easy to understand. (Ang mga tagubilin o patnubay para sa paggamit ng sistema ng aklatan ay malinaw at madaling maunawaan.)	4.5	Strongly Agree
19. Users and administrators can log in and out easily (Ang mga user at administrator ay madaling nakakapag log in at log out)	4.5	Strongly Agree
20. (For Admins only). Administrators can update old books and learning materials with ease (Madaling i-update ng administrator ang mga lumang libro at learning materials)	3.6	Agree
<b>General Weighted Mean</b>	<b>4.332</b>	<b>Agree</b>

Based on **Table 24**, the general weighted mean for questions 16-20 is 4.332, which means that the respondents generally agree that the system allows

all users—both admins and students, to effectively use the system. This positive perception is crucial as it indicates that users perceive the e-library as meeting their needs and expectations.

**Table 25**  
**Computed Weighted Mean of the User Distribution**

Questions	Mean	Verbal Interpretation
1. I appreciate reading more because the online library is simple to use and accessible. (Pinahahalagahan ko ang pagbabasa nang higit pa dahil ang online library ay simpleng gamitin at maa-access.)	4.48	Strongly Agree
2. Using the online library has helped me enhance my study habits and research abilities. (Ang paggamit ng online library ay nakatulong sa akin na mapahusay ang aking mga gawi sa pag-aaral at mga kakayahan sa	4.44	Agree



pananaliksik.)		
3. I may use the online library at any time, allowing me to study on my own schedule. (Maaari kong gamitin ang online library sa anumang oras, na nagpapahintulot sa akin na mag-aral sa aking sariling iskedyul.)	4.52	Strongly Agree
4. The system influences me to read more regularly than before. (Ang sistema ay nakakaimpluwensya sa akin na magbasa nang mas regular kaysa sa dati.)	3.94	Agree
5. A feature for searching the system. is both user-friendly and effective. (Isang tampok para sa paghahanap ng system. ay parehong user-friendly at epektibo.)	4.1	Agree
6. The online library makes it easy for me to find different kinds of books and reading materials. (Ginagawang madali	4.46	Strongly Agree

ng online library para sa akin na makahanap ng iba't ibang uri ng mga libro at mga materyales sa pagbasa.)		
7. The online library allows me to find lessons much quicker than traditional libraries. (Pinapayagan ako ng online library na makahanap ng mga aralin nang mas mabilis kaysa sa tradisyonal na mga aklatan.)	4.48	Strongly Agree
8. The online library has plenty of learning materials that are related to my strand. (Ang online library ay may maraming mga materyales sa pag-aaral na nauugnay sa aking strand.)	4.14	Agree
9. The broad selection of books available in the online library encourages me to research topics that I am unfamiliar with. (Ang malawak na pagpili ng mga libro na magagamit sa online library ay naghihikayat sa akin	4.08	Agree

na magsaliksik ng mga paksa na hindi ako pamilyar.)		
10. I prefer reading from the online library rather than borrowing physical books. (Mas gusto ko ang pagbabasa mula sa online library kaysa sa paghiram ng mga pisikal na libro.)	3.94	Agree
11. The user interface is intuitive (Madaling maintindihan at gamitin ang user interface)	4.14	Agree
12. The functions are straight to the point (Ang mga gamit ay direktang gumagana)	4.2	Agree
13. The books are easily accessible (Madaling magamit ang mga libro)	4.42	Agree
14. (For Admin Only) The admin panel is easy to control (Madaling paganahin ang admin panel)	3.52	Agree
15. (For admin only). It is easy to add, edit, or remove books in the admin	3.6	Agree

panel (Madaling mag dagdag, mag iba, o mag bawas ng mga libro sa admin panel)		
16. The E-library System effectively allow user to get books or learning materials (Ang E-library System ay nag bibigay ng epektibong paraan para magamit ng mga users ang learning materials)	4.52	Strongly Agree
17. The E-library System provides administrators with an easy-to-use admin panel (Ang Elibrary System ay nagbibigay sa mga administrators ng madaling gamitin na admin panel)	4.54	Strongly Agree
18. The instructions or guidelines for using the library system are clear and easy to understand. (Ang mga tagubilin o patnubay para sa paggamit ng sistema ng aklatan ay malinaw at madaling maunawaan.)	4.5	Strongly Agree

19. Users and administrators can log in and out easily (Ang mga user at administrator ay madaling nakakapag log in at log out)	4.5	Strongly Agree
20. (For Admins only). Administrators can update old books and learning materials with ease (Madaling i-update ng administrator ang mga lumang libro at learning materials)	3.6	Agree
<b>General Weighted Mean</b>	<b>4.206</b>	<b>Agree</b>

**Table 25** shows the overall computed weighted mean distribution of the data gathered for the Online Library System. Based on the gathered results, the respondents rated all indicators with the computed weighted mean with an overall weighted mean of 4.206, which is verbally interpreted as Agree.

In addition, majority of the students who responded in our survey believed that the system was efficient and user-friendly. Through the results, we can see that the Online Library System is preferred over traditional libraries. Furthermore, a large percentage of respondents were satisfied with the performance of the Online Library System

	<div>CHAPTER V</div> <div>SUMMARY, CONCLUSION AND RECOMMENDATIONS</div> <div><p>This chapter presents the summary and the findings, the conclusions drawn, and the recommendations made as an outgrowth of this study for future researchers.</p><div>Summary</div><p>The aim of this study is to design and develop an Online Library System for the Senior High School students of ACLC College of Taytay. The said online library provides organized and accessible digital learning materials which can be used by the students to work on their academic tasks especially during this time when traditional libraries are difficult to physically access.</p><p>The study utilized quantitative and descriptive approaches in collecting data from 60 Senior High School students from the ICT, STEM, and ABM strands using questionnaires and interviews, and focused on assessing the usability, accessibility, efficiency, and usefulness of the Online Library System in the students' academic experience.</p><p>This online library system was developed using HTML, CSS, JavaScript, PHP and MySQL and agile development methodology for the engineering and testing and evaluation, and has gone through testing and evaluation phases, is</p></div>	

responsive, and can be accessed using devices, PC, tablet, and smartphone from the students.

### **Conclusion**

The conclusion drawn from the analysis of the study "Online Library System For Senior High School Students At ACLC College Of Taytay" found the system to be efficient, was user-friendly, and fulfilled all the educational needs of both students and administrators. Job knowledge from the preceding initial survey of applied learning can conclude that the online library system is meeting its original intention of providing greater access to learning materials and improving reading with the ultimate goal of fulfilling the digital learning objectives of the school.

1. Evaluate how the online library improves student learning and access to resources.

The data findings suggest that the library was indeed beneficial in student learning. It was rated as a positive influence on student academic performance based their timely, systematic, availability of academic materials. The response rate to that statement was good, and a good number responded strongly agreed that they become more engaged in reading and studying due to the availability

	<p>and flexible resources which allowed self-directed learning and independence for students.</p> <p>2. To assess how the system enhances students' access to reading resources and necessary books.</p> <p>The findings demonstrate that the system has a wide variety of relevant (digital) books and modules availability. The result shows that students were more engaged because it was easy to search, browse and download any learning materials as needed. This expedient led to not only developing their reading interests but providing the students with an assortment of background knowledge and strategies that supported their academic tasks.</p> <p>3. To assess the system's ease of use for both librarians and students.</p> <p>According to the study's findings, the system was considered user-friendly and intuitive by both administrators and students. Administrators found it easy to upload, update, and organize resources, and students found the interface easy to use. This system's ease of use encouraged users to keep using it and raised satisfaction levels.</p> <p>4. To investigate the e-library's overall effectiveness in serving the needs of administrators and students.</p>	



The system's ability to effectively satisfy the demands of administrators and students is supported by the data. While administrators have access to methods for effectively managing users and materials, students are getting quick, free access to the information they need. With high ratings for dependability, usability, and usefulness, the system is a long-term resource for students participating in academic programming.

Overall, the study concludes that the Online Library System improves access to educational resources, promotes autonomous learning, and minimizes the burden of resource management. It represents an effective method for linking traditional librarianship to the demands of online learning in today's academic setting.

### **Recommendation**

Based on the findings and conclusions, the researchers recommend:

1. Incorporate a Personalized Recommendation System Develop this system further by incorporating a function that will recommend books or resources to a student, based on their strand, topics frequently accessed and previous searches. This would facilitate students in locating relevant materials more quickly and enhance their productivity.

2. Create a Feedback and Rating System Users should be able to rate a resource or material in the system and provide feedback. This would allow the most helpful resources to begin to stand-out and assist administrators in developing an insightful process to curate and enhance the quality of content to be offered in the library.

3. Incorporate Live Chat or Messaging Support Having a live chat or messaging feature integrated where students can directly ask librarians or IT support for help, in real-time, would be seamless. This could help with smoother navigation, quicker assessment of troubleshooting issues, and better overall satisfaction associated with both the individual navigational experience as well as objects (e.g. links, articles) while returning to your work (especially for those less skilled in technology).

4. Create a Resource Bookmarked and Downloaded History to Be Accessed Let users be able to create bookmarks for their favourite and most used resources and also access their downloaded history. This not only enhances the user experience, but also helps students manage their references and study materials.

5. Develop a Digital Resource Contribution System Open a moderated tool for teachers or selected students to upload and share their learning materials (e.g. their reviewers, projects, notes, etc.) Once a process of approval is created,

	<p>this Collected process will enhance the library's content and promote collaborative learning</p>	