

ResearchHive: A Mobile-Based Research Repository Application

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Abstract - This research aimed to develop "ResearchHive: A Mobile-Based Research Repository Application" and evaluate its usability. Using a descriptive-developmental method, the study was conducted at Iloilo State University of Fisheries, Science and Technology - San Enrique Campus, from August to November 2025. The study employed a System Development Life Cycle - Waterfall Model. The mobile application was developed using Android Studio with Java and XML, and the web application was created in Visual Studio Code using HTML, CSS, and JavaScript, with Supabase functioning as the database. The system allows users to add, update, store, manage, and generate analytics and reports of research studies, as well as browse, search, and download research documents anytime and anywhere. The study utilized a standardized questionnaire checklist designed by John Brooke (1986) to assess its usability. The respondents were four (4) research coordinators from the four (4) departments, the librarian, and two hundred fifty-seven (257) third-year and fourth-year students, forty (40) from the College of Education, forty-five (45) from the College of Computer Studies, seventy-five (75) from the College of Agriculture, and ninety-seven (97) from the College of Management, randomly selected students of ISUFST-SEC. The data gathered was tabulated and analyzed using the System Usability Score (SUS). The system got an SUS score of 96.16, denoting an "A+" grade and within the 96-100 Percentile. It can be described as 'Best Imaginable' and 'Acceptable' as to its acceptability, and having a Net Promoter Score described as "Promoter." Based on the results, the study recommends integrating a chatbot for user assistance, including faculty research, and expanding the system to other campuses for a unified repository.

Index Terms - Research Repository, Mobile Application, Digital Library

I. INTRODUCTION

1.1 Background of the Study

Mobile applications and digital technologies have made practical solutions for communication, education, business, and information management. The rapid rise of smartphones has transformed the way people access services and data, making mobile-based platforms more convenient, accessible, and widely adopted. In recent years, academic institutions have also integrated mobile technologies to enhance operational efficiency and support on-the-go access to educational resources. Electronic libraries and institutional repositories have become essential infrastructures for storing, archiving, and retrieving research documents, ensuring the long-term preservation and accessibility of academic outputs.

At ISUFST-SEC, the research office and library maintain hundreds to thousands of printed research papers that serve as important references for students, faculty, and researchers. However, the traditional system of accessing these materials requires physical visits, which can be inconvenient for individuals with limited time. Printed documents may also be misplaced, damaged, or not returned, resulting in gaps within the research collection. Manual searching further creates inefficiencies due to disorganized storage and the limited number of available copies, often causing delays for researchers who must wait until documents are accessible.

With these challenges at hand, the researchers proposed ResearchHive, a mobile-based research repository application designed to modernize the storage and retrieval of academic studies. The system offers a centralized, user-friendly platform that allows users to browse, search, and

download research documents directly through their smartphones. ResearchHive aims to eliminate the inefficiencies of the traditional record-keeping process, ensure continuous remote access to research materials, and provide ISUFST-SEC with an organized and efficient digital solution for managing academic resources.

1.2 Objectives of the Study

The study aimed to develop the ResearchHive: A Mobile-Based Research Repository Application and determine its acceptability.

Specifically, this study aimed to:

1. design the ResearchHive: A Mobile-Based Research Repository Application; and
2. determine the acceptability of ResearchHive in terms of its usability.

1.3 Conceptual Framework

The conceptual framework of this study used the Input-Process-Output (IPO) Diagram. The researchers gathered data to identify the problems to be addressed. Using the Waterfall Methodology within the System Development Life Cycle (SDLC), the researchers were able to define, design, construct, and evaluate a system that addressed the problems identified during the data gathering phase. The inputs included user requirements such as research title, authors, year, research adviser, abstract, and supporting documents; software requirements including Android Studio, Java, XML, Visual Studio Code, HTML, CSS, JavaScript, and Supabase; and hardware requirements consisting of a smartphone with Android OS version 7 or higher and a minimum of 3 GB RAM, and a laptop or computer with at least 4 GB RAM and an Intel Core i3 processor. Using these inputs and processes, the researchers

developed ResearchHive as the output. The system was then evaluated for usability and was found to meet the required standards.

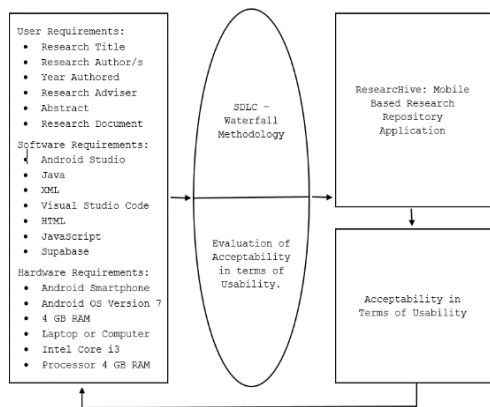


Figure 1. Input Process Output (IPO) Diagram

1.4 Significance of the Study

The ResearchHive benefited the following groups:

ISUFST-SEC Students. ResearchHive minimizes student hassle by removing physical transactions and providing a centralized, secure, and convenient way to access research documents.

Academic and Research Communities. ResearchHive supports scholarly work by offering insights that can guide future studies in information technology, education, and digital resource management.

Researchers. The study strengthened the researchers' development skills and gave them valuable insights during ResearchHive's creation and evaluation.

Future Researchers. The study served as a valuable reference for future researchers, providing a foundation for enhancing and updating ResearchHive.

1.5 Scope and Limitation

This study aimed to develop a mobile-based research repository application entitled ResearchHive. The researchers employed a descriptive-developmental research approach incorporated with the Waterfall methodology. The study involved two hundred sixty-two (262) participants, consisting of two hundred fifty-seven (257) students, four (4) research coordinators of the four (4) departments, and the university librarian, selected through simple random and purposive sampling. This study utilized the standardized questionnaire checklist developed by John Brooke in order to determine the usability of the system. The data gathered from respondents will be tabulated and analyzed using the System Usability Score. Here's a slightly polished and concise version of your text: The study was limited to the development of ResearchHive to enhance the accessibility and management of student research at ISUFST-SEC. The system allows admins to add, update, store, manage, and generate lists of research studies, while users can browse, search, and download documents anytime. This study

was conducted at ISUFST-SEC, San Enrique, Iloilo, from August to November 2025.

1.6 Definition of Terms

The following terms used in this study are defined to ensure clarity and better understanding:

Android Studio. Android Studio is the official integrated development environment (IDE) for Android app development, offering tools for coding, debugging, and testing applications efficiently (Norbye, 2023).

In this study, Android Studio was the main development platform to build the ResearchHive mobile application.

HTML. Hypertext Markup Language is the foundational scripting language for displaying content on the web. (Hayes, 2025).

In this study, HTML was used to build the structure and layout of the admin webpage.

Input Process Output Model. The Input Process Output model is a widely used approach in systems analysis for describing the structure that outlines the relationship between inputs, processes, and outputs in a system (Braunschweig, 2018).

In this study, the IPO model represented the structured flow of user requirements, software processes, and the final output of ResearchHive.

ISUFST-SEC. Iloilo State University of Fisheries Science and Technology – San Enrique Campus (ISUFST-SEC) is a satellite campus of ISUFST committed to delivering quality education in science, technology, and innovation (ISUFST, 2024).

In this study, ISUFST-SEC is the institution where ResearchHive was implemented.

Java. Java is a widely used object-oriented programming language and software platform that runs on billions of devices (Augustyn, 2025).

In this study, it served as one of the primary programming languages for developing the functionalities of mobile application.

JavaScript. JavaScript is a computer programming language that serves as a mainstay of web development, enabling the creation of complex features and interactivity in websites and web applications (Munro, 2025).

In this study, it served as one of the primary programming languages used to implement the features of the admin webpage.

Mobile Application. A mobile application is a software program designed specifically to run on mobile devices (Wigmore, 2023).

In this study, the mobile application referred to ResearchHive that can efficiently access, search, and download research documents.

Research Manuscript. A research manuscript is an academic paper that presents research findings, usually required for degree completion (Merriam-Webster, 2024).

In this study, research documents referred to research papers that were stored and managed within ResearchHive.

ResearchHive. ResearchHive is a mobile-based research repository application originally named by the developers, combining “Research” and “Hive” to represent a structured and collaborative digital space for storing and organizing academic research materials.

Research Repository. A research repository is a digital platform for storing, managing, and providing access to research materials (Lynch, 2003).

In this study, ResearchHive served as a research repository for ISUFST-SEC.

Supabase. Supabase is an open-source backend-as-a-service (BaaS) platform that simplifies backend development (Dadhaniya, 2024).

In this study, Supabase served as the backend infrastructure for the ResearchHive.

Usability. Usability refers to how effectively and efficiently a system enables users to achieve their objectives with ease and satisfaction (Xie, 2016).

In this study, the usability of ResearchHive was evaluated to determine its acceptability and ease of use for students.

Visual Studio Code. Visual Studio is an integrated development environment (IDE) for creating programs, websites, web apps, and web services (Ydav, 2022).

In this study, Visual Studio was used to develop and manage the ResearchHive admin webpage.

Waterfall Model. The Waterfall model is a linear, sequential approach to the software development lifecycle (SDLC) where progress flows downward through distinct phases: Requirement Analysis, Design, Implementation, Testing, Deployment, and Maintenance (Kirvan, 2024).

In this study, the Waterfall model served as the development approach for ResearchHive.

XML. XML is a markup language based on Standard Generalized Markup Language (SGML) designed to store and transport data (Loshin, 2021).

In this study, XML was utilized for designing the user interface layouts of ResearchHive.

II. LITERATURE REVIEW

Android-Based Student Handbook

The advancement of mobile technology has enabled educational institutions to deliver essential academic information through digital platforms. The Android-Based Student Handbook was developed to provide students of Iloilo State College of Fisheries – San Enrique Campus (ISCOF-SEC) with convenient access to academic policies, student services, and campus guidelines using Android-based mobile devices. This system addressed the limitations of traditional printed handbooks, including limited availability, difficulty in updating content, and vulnerability to physical damage or loss. The

application was developed using Android Studio Arctic Fox 2020.3.1 Patch 3 and followed the SDLC–Agile methodology, which supported iterative development and continuous improvement. The study employed a descriptive-developmental research method and evaluated the application’s usability using John Brooke’s System Usability Scale (SUS). With its user-friendly interface and mobile accessibility, the Android-Based Student Handbook serves as an efficient and reliable alternative to printed materials, ensuring that important student information is readily accessible anytime and anywhere (Paclibar et al., 2021).

Android-Based Digital Library Application

The increasing integration of digital systems in higher education has reshaped the way academic information is organized, stored, and accessed. In response to this shift, the Android-Based Digital Library Application was designed to provide a digital platform for storing and processing academic information for the Department of Education Management at the State University of Surabaya. The development of the system was driven by the need to replace conventional information management practices with automated solutions that enhance efficiency and accessibility. The study emphasized that the use of modern technology enables the conversion of various types of information into digital formats, thereby improving the effectiveness of information management and dissemination. To achieve this objective, the researchers adopted the research and development methodology proposed by Borg and Gall, implementing nine structured stages throughout the system’s development process. The findings demonstrated that the digital library application improved information handling and accessibility, contributing to more efficient academic resource management within educational institutions (Haq et al., 2022).

Electronic Library Mobile Application for College of Computer Studies

The study by Dapitan et al. (2015) focused on developing an Electronic Library Mobile Application to provide a centralized digital platform for storing and accessing thesis materials using Android-based smartphones and tablets. This initiative was designed to address the challenges faced by faculty members, students, and researchers in locating specific research documents due to disorganized physical copies and limited availability of printed materials. The system aimed to enhance efficiency in academic research by reducing time spent searching for resources and providing instant access to updated materials. To overcome these challenges, the researchers applied the Agile Process methodology, encompassing the phases of Scope and Plan, Analysis and Design, Implementation and Verify, and Deploy and Support. The application features include a search function to quickly locate thesis titles, an updating mechanism to view newly added materials, and a user-friendly interface designed for easy navigation. By integrating these features, the Electronic Library Mobile Application provides a practical and reliable alternative to traditional library systems, allowing faculty, students, and researchers to access academic resources

anytime and anywhere, thereby supporting more effective research and learning practices.

III. METHODOLOGY

3.1 Research Design

The researchers utilized a descriptive-developmental research design to systematically assess and develop the system. The descriptive component focuses on evaluating the usability of the system in managing and storing research documents. The developmental aspect involved the design and implementation of the mobile application, ensuring that it met the specific requirements of users. To ensure a well-structured development process, the Waterfall Model was followed, consisting of requirement analysis, system design, implementation, testing, deployment, and maintenance. Each phase was systematically executed, ensuring that all necessary functionalities were integrated correctly and tested before moving to the next stage.

3.2 System Development Life Cycle – Waterfall Method

The researchers used the System Development Life Cycle, specifically the Waterfall Method, in developing the ResearchHive. The activities that the researchers performed in each stage are discussed in the following:

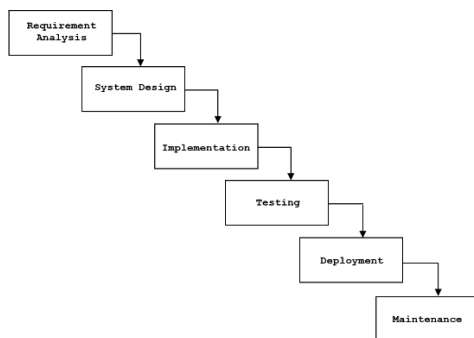


Figure 2. SDLC – Waterfall Method

3.2.1 Requirement Analysis

In this phase, the researchers held a group meeting to discuss the study and secured approval letters from the Campus Administrator, Capstone Adviser, and Dean, followed by permission from the four department offices and the campus librarian to interview faculty and students. The interviews identified challenges in accessing and storing research documents and helped determine the essential features for the system. The collected data were analyzed to define the main functionalities, and a Work Breakdown Structure (WBS) was created to guide task planning. The researchers also identified the user, hardware, and software requirements for developing the web and mobile application, collecting information such as research titles, authors, year, adviser, abstracts, and documents. Software requirements included Android Studio, Java, XML, HTML, CSS, JavaScript, and Supabase, while hardware requirements included Android smartphones and computers with specified configurations. Additionally, a Gantt chart was prepared to ensure the timely completion of activities, providing a structured and organized approach to project implementation.

3.2.2 System Design

This phase utilized the data gathered from the requirements analysis to create the logical design of ResearchHive, ensuring an efficient development process while maintaining a user-friendly system aligned with the application's requirements. A mobile and web application prototype was developed to illustrate the system's structure and provide a visual representation of its interface. Additionally, a Use Case Diagram was designed to depict the expected interactions between the system and users, and a sitemap was created to guide processes, ensuring they were implemented correctly and in the proper sequence.

3.2.3 Implementation

In this phase, the researchers implemented the planned design of the web and mobile applications using Android Studio and Visual Studio. Both front-end and back-end development were carried out, including coding the system's functionalities and integrating the database.

3.2.3.1 Initializing the Web Development Environment. Visual Studio Code was launched and configured as the primary platform for developing the web components of the system.

3.2.3.2 Creating the Admin Login Page. An Admin Login page was developed using LOGIN.html to provide secure authentication access for system administrators.

3.2.3.3 Connecting Supabase to the Login Page. The Supabase JavaScript client was integrated into the Login page using the project's API URL and key to enable secure admin authentication.

3.2.3.4 Creating the Dashboard Page. A Dashboard page was created to serve as the main control panel, displaying interactive cards for Department List, Program List, Research Profile, and Statistics.

3.2.3.5 Connecting Supabase to the Dashboard Page. The Dashboard page was connected to Supabase to retrieve and display real-time data such as department, program, research profiles, and statistics counts.

3.2.3.6 Creating the Sidebar Menu Section. A sidebar menu was developed and integrated across all pages to provide consistent navigation and improve user experience.

3.2.3.7 Creating the Department List Page. A Department List page was developed to display and manage department records, including a search function for easy retrieval.

3.2.3.8 Connecting Supabase to the Department Page. The Department page was linked to Supabase to enable real-time retrieval, insertion, and updating of department records.

3.2.3.9 Creating the Program List Page. A Program List page was developed to manage program records, including search and navigation features.

3.2.3.10 Connecting Supabase to the Program Page. The Program page was connected to Supabase to support real-time program data management.

3.2.3.11 Creating the Research Profile Page. A Research Profile page was developed to display and manage research studies with search functionality.

3.2.3.12 Connecting Supabase to the Research Profile Page. The Research Profile page was connected to Supabase to enable real-time retrieval, updating, and viewing of research data.

3.2.3.13 Creating the Statistics Page. A Statistics page was developed to present summarized research data using charts and visual indicators.

3.2.3.14 Connecting Supabase to the Statistics Page. The Statistics page was connected to Supabase to dynamically retrieve and visualize real-time research data.

3.2.3.15 Creating the Settings Page. A Settings page was developed to provide access to system support and administrative tools.

3.2.3.16 Initializing the Mobile Development Environment. Android Studio was launched and configured as the primary development platform for building the mobile application.

3.2.3.17 Creating a New Project. A new Android project was created by selecting the *Empty Views Activity* template in Android Studio.

3.2.3.18 Creating the Splash Screen Activity. A Splash Screen Activity was developed to display the application branding during startup before transitioning to the main interface.

3.2.3.19 Creating the Home Screen Activity. The Home Screen Activity was implemented as the main interface, featuring organized sections and a bottom navigation bar for smooth page transitions.

3.2.3.20 Connecting the App to Supabase. The Supabase API was integrated into the application to enable secure data retrieval from the database using authenticated requests.

3.2.3.21 Creating the Research Profile Screen Activity. A Research Profile Screen Activity was developed using a RecyclerView to efficiently display research data retrieved from Supabase, with a search bar for filtering results.

3.2.3.22 Creating the Study Details Screen Activity. A Study Details Screen Activity was implemented to display complete information about selected research studies, with a back navigation feature.

3.2.3.23 Creating the Settings Screen Activity. A Settings Screen Activity was developed to provide access to user guidance and application information, with bottom navigation integration.

3.2.3.24 Building an APK. An APK file was generated using Android Studio's build tools for application distribution.

3.2.3.25 Sharing the APK through Google Drive. The generated APK was uploaded to Google Drive to allow secure storage and easy sharing.

3.2.3.26 Generating a QR Code for Application Installation. A QR code was created using the APK's Google Drive link to simplify the installation process for users.

3.2.4 Testing

In this phase, the mobile and web applications underwent systematic error-checking and testing. Each feature was tested and retested to ensure proper functionality, guided by a Test Plan and a Features to Be Tested table that outlined module access for the Super Admin, Admin, and User roles. After completing functional testing, the application proceeded to Quality Assurance, where test cases were created to verify feature performance. User Acceptability Testing was then conducted to evaluate usability by allowing respondents to interact with the system. The System Usability Scale (SUS) questionnaire developed by John Brooke was administered, and the results were tabulated and analyzed to assess overall system usability.

3.2.5 Deployment

In this phase, the ResearchHive application was made accessible for official use. The mobile application was installed on users' smartphones, while the web-based admin system was deployed online for administrator access. System demonstrations were conducted to guide users and administrators on navigation, feature usage, research management, and report generation.

3.2.6 Maintenance

In this phase, faculty, students, and administrators were oriented on proper system use and security. User and admin manuals were also provided to support continued operation and maintenance of the application.

3.3 Locale of the Study

This study was conducted at Iloilo State University of Fisheries Science and Technology – San Enrique Campus.

3.4 Respondents of the Study

The respondents of this study, who thoroughly evaluated the system in terms of its usability, consisted of two hundred fifty-seven (257) third-year and fourth-year students, forty (40) from the College of Education, forty-five (45) from the College of Computer Studies, seventy-five (75) from the College of Agriculture, and ninety-seven (97) from the College of Management, together with four (4) research coordinators from the four (4) colleges and the university librarian, making a total of two hundred sixty-two (262) respondents selected through purposive and simple random sampling.

3.5 Sampling Technique

The researchers used purposive sampling to select the research coordinators from each college and the university librarian, while random sampling was applied to select 257 third- and fourth-year students from the four colleges of ISUFST-SEC. Slovin's formula was used to determine the number of student respondents for evaluating the system's usability.

3.6 Research Instrument

A standardized questionnaire-checklist authored by John Brooke was utilized in evaluating the system. The questionnaire-checklist was composed of ten (10) statements. The system usability was evaluated with a descriptive rating of strongly agree, agree, neutral, disagree, and strongly disagree. On the rating scale for items 1,3,5,7, and 9 the score contribution is the scale position minus 1. For items 2,4,6,8, and 10, the contribution is 5 minus the scale position.

Scale	Description	Numerical Rating
5	Strongly Agree	5 points
4	Agree	4 points
3	Neutral	3 points
2	Disagree	2 points
1	Strongly Disagree	1 point

Table 1. System's Usability Rating Scale

3.7 Data Gathering Procedure

Before developing the application, the researchers obtained approval from the Campus Administrator, followed by the Librarian's Office and the Deans of the four colleges. Preliminary data were collected through interviews on current research document storage, access challenges, and required functionalities, which guided the system's design, including the Gantt chart, Use Case Diagram, prototype, interface, and selection of development tools. After development, selected respondents, chosen through purposive and simple random sampling, evaluated the application's usability and functionality. The researchers demonstrated navigation and management before the respondents assessed the system, after which the data were collected, tabulated, and analyzed using the System Usability Scale.

3.7 Data Analysis Procedure

The data gathered was subjected to appropriate descriptive statistical tools. In evaluating the usability of the system, the gathered points were tabulated and analyzed using the System Usability Scale. The formula for computing the SUS is: $SUS = (X+Y) \times 2.5$

Where:

X= the points for odd-numbered questions minus 5

Y= 25 minus the points for even-numbered questions

In interpreting the results of the data gathered in evaluating the system's usability, the researcher determined the average score. Table 2 was used to interpret the SUS score.

Grade	SUS	Percentile Range	Adjective	Acceptable	NPS
A+	84.1-100	96-100	Best Imaginable	Acceptable	Promoter
A	80.8-84.0	90-95	Excellent	Acceptable	Promoter
A-	78.9-80.9	85-89		Acceptable	Promoter
B+	77.2-77.8	80-84		Acceptable	Promoter
B	74.1-77.1	70-79		Acceptable	Passive
B-	72.6-74.0	65-69		Acceptable	Passive
C+	71.1-72.5	60-64	Good	Acceptable	Passive
C	65.0-71.0	41-59		Marginal	Passive
C-	62.7-64.9	34-40		Marginal	Passive
D	51.7-62.6	15-34	OK	Marginal	Detractor
E	25.1-51.6	2-14	Poor	Not Acceptable	Detractor
F	0-25	0-13	Poor	Not Acceptable	Detractor

Table 2. System's Usability Scale

IV. RESULTS AND DISCUSSION

4.1 The Developed ResearchHive: A Mobile-Based Research Repository Application

ResearchHive: A Mobile-Based Research Repository Application was developed to provide a centralized, user-friendly platform for storing, managing, and accessing student research studies. The system allows users to browse, search, and download research documents remotely, eliminating traditional storage inefficiencies and streamlining record-keeping for the institution.

4.1.1 System Icon. The ResearchHive system icon, depicting a stack of books, serves as a convenient desktop shortcut for admins to quickly launch and access the system, as shown in Figure 3.

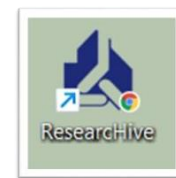


Figure 3. System Icon

4.1.2 The Admin Login Page. As shown in Figure 4, the page includes email and password fields and a Login button. Admins gain access upon entering the correct credentials.



Figure 4. The Admin Login Page

4.1.3 The Admin Dashboard Page. As shown in Figure 5, this page serves as the central interface and displays key sections such as the Department List, Program List, Research Profile, and Statistics through interactive cards with icons and counts. A sidebar appears when the menu next to the logo is clicked, and the Admin Icon at the top-right provides a Logout option.



Figure 5. The Admin Dashboard Page

4.1.4 The Department List Page. This page lists all departments with their names and descriptions in a table. It

includes a Search Bar, Add New Department button, an Edit option, a sidebar menu, and a Logout option via the Admin Icon.

#	Department Name	Description	Action
1	COM	College of Management	Action +
2	COAG	College of Agriculture	Action +
3	COED	College of Education	Action +
4	COB	College of Computer Studies	Action +

Figure 6. The Department List Page

4.1.5 The Program List Page. As shown in Figure 7, this page displays all programs with their departments, names, descriptions, and majors in a table. It includes a Search Bar, Add New Program button, Edit option, a sidebar menu, and a Logout option via the Admin Icon.

#	Department	Program Name	Description	Majors	Action
1	COAG	BBA	Bachelor of Business Administration	Crop Science, Animal Science	Action +
2	COM	BBA	Bachelor of Business Administration	English, History, Mathematics	Action +
3	COED	BSED	Bachelor of Secondary Education	English, History, Mathematics	Action +
4	COM	BSED	Bachelor of Secondary Education	English, History, Mathematics	Action +
5	COB	BST	Bachelor of Science in Information Technology	Computer Science, Mathematics	Action +
6	COED	BSED	Bachelor of Secondary Education	English, History, Mathematics	Action +

Figure 7. The Program List Page

4.1.6 The Research Profile Page. As shown in Figure 8 this page displays all research studies in a table with details such as title, authors, year, department, program, and documents. It includes a Search Bar, Add New Study button, and Action options for viewing and editing studies, along with a sidebar menu and a Logout option via the Admin Icon.

#	Title	Authors	Year	Department	Program	Abstract	Full Document	Supporting Documents	Study Image	Status	Action
1	Effect of... on... in... (2023)	John Doe, Jane Smith	2023	COM	BST	The study aims to...	Download	Download	Image	Published	Action +
2	Effect of... on... in... (2023)	John Doe, Jane Smith	2023	COM	BST	The study aims to...	Download	Download	Image	Published	Action +

Figure 8. The Research Profile Page

4.1.7 The Statistics Page. As shown in Figure 9, this page provides a research study overview by department, program, and year using visual charts. The System Logo redirects to the Dashboard, while the sidebar menu and Admin Icon for logout remain accessible.



Figure 9. The Statistics Page

4.1.8 The Settings Page. As shown in Figure 10, this page includes the Help and Support section with an Admin Manual dropdown containing a video tutorial and a downloadable PDF for system guidance. The System Logo redirects to the Dashboard, while the sidebar menu and Admin Icon for logout to end the session remain accessible.

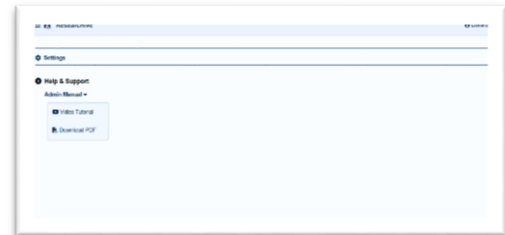


Figure 10. The Settings Page

4.1.5 The Application Icon. As shown in Figure 11, the ResearchHive application icon appears on the user's mobile screen after installation and launches the app when clicked.

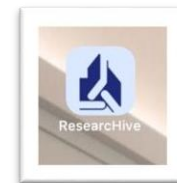


Figure 11. The Application Icon

4.1.6 The Splash Screen. As shown in Figure 12, the Splash Screen appears on launch for 2 seconds, displaying the ResearchHive name and logo.



Figure 12. The Splash Screen

4.1.7 The Home Screen. As shown in Figure 13, the Home Screen is the central overview page, featuring Suggested and Popular Studies, an Explore by Department section, and a bottom navigation bar for Home, Research Profile, and Settings.



Figure 13. The Home Screen

4.1.8 The Study Details Screen. As shown in Figure 14, this screen displays the study title, authors, year, department, program, adviser, status, abstract, viewable supporting documents, and a Download button for the full document.

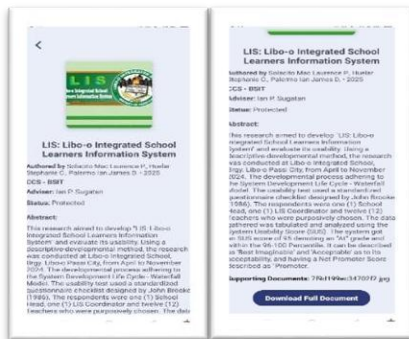


Figure 14. The Study Details Screen

4.1.9 The Research Profile Screen. As shown in Figure 15, this screen displays research studies with a Search Bar at the top, Study Cards showing titles and authors, and a bottom navigation bar for Home, Research Profile, and Settings.



Figure 15. The Research Profile Screen

4.1.8 The Settings Screen. As shown in Figure 16, the settings screen has a User's Manual with a video tutorial and PDF download, an About Us showing the development team, and a bottom navigation bar.



Figure 16. The Settings Screen

4.2 Evaluation on the Usability of the Developed ResearchHive: A Mobile-Based Research Repository Application

The ResearchHive: A Mobile-Based Research Repository Application was evaluated by the four (4) research coordinators from the four (4) departments, the librarian, and two hundred fifty-seven (257) third-year and fourth-year students, forty (40) from the College of Education, forty-five (45) from the College of Computer Studies, seventy-five (75) from the College of Agriculture, and ninety-seven (97) from the College of Management, randomly selected students of ISUFST-SEC based on their availability.

The system received a grand System Usability Mean Score of 96.16 indicating that it is graded A+, within the 96-100 Percentile Range, described as "Best Imaginable," "Acceptable" as to its Acceptability, and got a Net Promoter Score described as "Promoter" which means that the respondents will promote the evaluated system.

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This descriptive-developmental research aimed to develop "ResearchHive: A Mobile-Based Research Repository Application", and determine its usability. The system was developed using the SDLC Waterfall method, with the mobile application built in Android Studio using Java and XML, and the web application developed in Visual Studio Code using HTML, CSS, and JavaScript, with Supabase as the database. ResearchHive allows users to add, update, manage, and generate analytics for research studies, as well as browse, search, and download documents anytime.

A purposive sampling technique was used to select four (4) research coordinators and university librarian, while random sampling was employed to choose two hundred fifty-seven (257) third- and fourth-year students. Among the students, forty (40) were from the College of Education, forty-five (45) from the College of Computer Studies, seventy-five (75) from the College of Agriculture, and ninety-seven (97) from the College of Management. The System Usability Scale authored by John Brooke in 1986 was used to assess the system. The study was conducted at ISUFST – San Enrique Campus, San Enrique, Iloilo, from August to November 2025.

5.2 Findings

The study revealed the following:

1. The ResearchHive: A Mobile-Based Research Repository Application was developed using Waterfall Methodology.
2. The system successfully implemented features for adding, updating, storing, managing, and generating analytics and reports of research studies efficiently.
3. The ResearchHive's mobile functionality enables users to easily browse, search, and download research documents anytime and anywhere.

4. The system received a SUS score of 96.16, was graded A+, described as “Best Imaginable,” and considered “Acceptable” in terms of usability.

5.3 Conclusion

Based on the results of the study, it is concluded that ResearchHive: A Mobile-Based Research Repository Application, developed using the Waterfall Methodology, effectively allows users to add, update, manage, and generate analytics for research studies, as well as browse, search, and download documents anytime. The system meets ISUFST-SEC’s need for a centralized research platform, reflected in its SUS score of 96.16, graded A+, described as “Best Imaginable” and “Acceptable,” and achieving Promoter status in the Net Promoter Score, indicating high user recommendation.

5.4 Recommendations

Based on the results and findings of the study, the following recommendations have been formulated:

1. Integrate a chatbot into the system to provide users with instant assistance and simplify inquiries.
2. Include faculty research to enrich the research repository.
3. Extend the system’s implementation to other campuses to build a unified institutional research repository.

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