BUKIDNON STATE UNIVERSITY RESEARCH RECORD MANAGEMENT SYSTEM

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LIST OF TABLES AND FIGURES

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Abstract

Most students in every universities and college come in a point to come up with a research study as requirements to their degree. As time pass by, tracking and managing those files and data becomes an issue. At the same time, real-time collaboration between faculty researchers and Research Unit in finding research documents status, research created documents and research comments should be implemented. The purpose of this study is to identify the best and suitable methodology, components and algorithm that will aid the problem. Also, to produce a record management system for researches made by the students and the faculty of Bukidnon State University (BukSU) with real-time collaboration tools between faculty and the Research Unit. Bukidnon State University Research Record Management System was developed to address those problems. The waterfall SDLC model was used to develop the system. The system was implemented on Web Application using PHP as the back-end language, HTML and JQuery as the front-end language, FTP server as document storage and MySQL database as data storage. The finished system was put through hands on testing and evaluated by its target users. A total of 30 respondents from different groups of end users evaluated the system based on the system Usability, Functionality, Reliability, and Efficiency. The evaluation result yielded 97.90% of the overall acceptability of the system which shows that the Bukidnon State University Research Record Management System is highly accepted by its respondents.

Keywords: *Research Record Management System, Document Tracking, Real-Time Collaboration Tools*

Introduction

From the dawn of the civilization, the record management system already existed according to Adam, A. (2008). He demonstrated that even the caveman, our early ancestor have their documents and pictures painted on the wall, engraved in the steel or a stone tablet. The discovery of those documents brought ideas and clues for the researchers about the history, lifestyle, religion, and engineering of ancient civilizations like the Mayan and the Egyptian. Based on the properties of their documents, it is very sensitive and the environment obviously is hostile; keeping and tracking these records is a huge task.

As the world is changing and the development and modernization are unavoidable. In our modern generation, where most data stored electronically in a centralized storage machine, it gives us the ability to track and retrieve the documents in minimal time. These abilities are essential in the universities to track research paper made by the students and instructors.

An Assessment of the Effectiveness of Electronic Records Management at Africa University, Mutare, Zimbabwe is a study authored by Bigirimana, S. et.al (2015) which focuses on the effectiveness of the management of electronic records at Africa University. Destruction and retention policy was found in their Electronic Record Management System which is considered as the gap with regards in the proposed system BukSU Research Record Management System.

This study is for the students, alumni, and teachers of Bukidnon State University conducting a research paper. This is purposely implemented to give ease access of the research papers as reference to the student as a novice in the field of research writing. In addition, this study helps the research writers of Bukidnon State University to secure writings whether it is made a long time ago, in plagiarism issue. To make it possible,

conducting a system specifically a record management system that contains all the research paper made by the research writers of Bukidnon State University as a reference. At the same time, a system that can detect plagiarism locally to all the writings of the BukSUan's. The aim of the researchers is to develop a system that will store research documents for convenient tracking. The model used by the researchers is the Input-Process-Output (IPO) in describing the conceptual framework of the system. What goes in is the input; what causes the change is the process; what comes out is the output as stated by Armstrong (2001). The conceptual framework of the Bukidnon State University Research Record Management System. The input to the system by the users will be the Research Details, Research Document PDF Format, Research Related Documents, and the Authors' information. Then process by the system itself and the output will be provided as the Bukidnon State University Research Record Management System Web Application.

In the study Implementing Electronic Document Management System for a Lean Design Process by Giandon et al., (2002) analyzes how the implementation of the Electronic Document Management (EDM) can contribute for a lean management, particularly in the design process. According to Eleoranta et al., (2001), any kind of document is everything that must be stored in an accessible source. That's why all research papers made by the students and instructors of Bukidnon State University need to be filed in one system and must be easier to access but it should limit on its Portable Document Format (pdf). As stated by Haijar and AbouRizk (2000), the component of the overall project management which is essential is the construction document.

However, in research documents tracking, the book status is one of the issues should be addressed especially if the author is applying to publish his document. Storing the documents in the secured and encrypted location gives the ability to see the book details faster according

to Mastin (2013). However, accessing the unpublished book contents should ask the authors consent since his work was not copyright protected by the federal law. Sometimes, reaching the author is one of the difficult tasks. As a solution, the researcher comes up with the idea of building a profiler. This will help any user reach the authors for consent to access his work. Most Electronic Document Management System uses scanning technology to copy the documents before submitting into the database. But this approach will result in incapability to check the plagiarize content of research paper made by the BukSUans except using Optical Character Recognition (OCR) (Azad 2008). Using this component takes so much time and may affect system efficiency.

According to Kelemen and Mekovec (2007), Document Management System (DMS); a case study of Varazdin County commonly provides solutions for the access, review, upload and download of the documents and queering capabilities. The said system likely similar to the study of this paper, the researchers have created Bukidnon State University Research Record Management System for the safety of the studies of the students and some instructors who have conducted research of BukSU, also putted some functions to access, review, upload and download their different studies. By the help of this system, a process of some matter is done more easily and measurable benefits for users in terms of information availability when needed, benefits organization in terms of completing works quickly, and benefits for whole society in historical record is accessible and reliable (Johnston and Bowen 2005).

Unlike DMS, the users of Bukidnon State University Research Record Management System can upload research related documents like certificates from research paper awards. BukSU Research Record Management also have the unique features specifically the collaboration tools like real-time notification, real-time live chat between research instructor and the administrator, the step-by-step process on complying

all the research requirements, and the like that cannot be seen on all the system stated.

As stated by Lavrakas (2008), the random sampling method refers to a variety of selection techniques in which sample members are selected by chance, but with a known probability of selection. Bukidnon State University Research Record Management System used random sampling method as guided and stated by the statistician to conduct user assessment about the acceptability. There are 30 respondents composed of students, instructors, and research unit being considered in conducting a survey. This is the most widely used method for choosing a sample among the population for a wide range of purposes and remove bias from the selection procedure.

Method. The researchers used the method of "Waterfall Software Development Life Cycle Model" as the process model for the development of Bukidnon State University Research Record Management System. Figure 1 is a sequential software development process as stated by Bassil (2012). Bassil enumerated five phases of this model: Analysis, Design, Implementation, Testing and Maintenance in order to build successful computer software. Each of those phases must be completed one after another and can be repeated endlessly until it is perfected as he justified. The researchers adopt this development life cycle to accomplish the Bukidnon State University Research Record Management System. In order to achieve the objectives of this study, the researcher are using the developmental research design implemented by various existing systems and programing languages collaborated together. Prior to the development the researchers conducted interview and disseminated a survey questionnaire in order to identify the functional requirements of this system. After the data was evaluated and analyze the designing process took place. The researchers were able to formulate possible solutions illustrated in different diagrams.

Analysis. Data gathering was done through surveying and interviewing different students of Bukidnon State University, research instructors/faculty, and the research unit. This study is conducted in Bukidnon State University which is located at Malaybalay City, in the province of Bukidnon, Northern Mindanao, Philippines. The main target of this study is the Research Unit to compile all the research papers made by the alumni, students, and teachers of Bukidnon State University.

Design. This study made used of the research development design. This is in order to aid the problem in handling and tracking of digital research paper copies made by the students, instructors, and research writers of Bukidnon State University, developmental research design must use. According to Richey (1994), developmental research, as opposed to simple instructional development, has been defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of internal consistency and effectiveness. Developmental research design has contributed on making a successful system development. With the help of this research design, the researcher has the possibility to create various system designs, diagrams, and architectures; these were used for the development of the system.

Implementation. In this phase, the application design needs to be implemented to make a functional system. This phase included the specification of software and hardware requirements of the server and the client. In order to develop BukSU RRMS, the system minimum requirements for server were as follows:

- Microsoft® Windows® 10
- XAMPP version 5.6.30, PHP version 5.6.30, Google Chrome
- Intel Corei5 or higher
- 16 GB RAM or higher

- At least 1 TB Hard Drive
- 17" LCD Monitor

Testing. The implemented system was put through various testing environments to evaluate the system's acceptability, to find and fix errors and to ensure harmonious execution.

Maintenance. After fixing the errors encountered during the testing phase and the system achieved its expected functionality. The proponents was in charge of maintenance of the system, fix any minor bugs and errors that will come up during operation.

Evaluation. To access the user acceptability of BukSU RRMS, the system was tested and evaluated randomly by students, instructors, and the Research Unit of the office of the Vice President for Research, Extension, and International Affairs through the survey evaluation questionnaire disseminated by the researchers. There are a total of 30 respondents who completed the survey form based on the random sampling method used by the researchers during the 2-days evaluation period.

Results and Discussions

Results. The researcher produced a system that will serve as a tool for all the research papers made by the student and instructor/faculty researcher in Bukidnon State University. Results were gathered by the researchers thorough testing and evaluation made by the researcher.

Analysis. Table 1 shows the user type identity. The major respondents of the system were the students that represented the major groups of the user of the system. In the student groups, the researchers included non-4th year students as respondents since they would be the future user of the system. The faculty was second to largest number of user in this system. The least number was the Research and Development Unit specifically Dr. Beverly B. Bicar, the Research Director which is the main

stakeholder of the system. In order to measure the statistical significance of BukSU RRMS application, the researchers needed to measures the characteristics of the system in terms of Usability, Functionality, Reliability and Efficiency. The researchers adopted a scoring procedure (Table 2) from the research paper entitled, "Cognitive Computing Where Big Data Is Driving Us" authored by Bongor, et.al (2009). The acceptability range was divided into three: the acceptable, marginal, and not acceptable. The system would be acceptable if the agreed average range is from 70% to 100%. When the acceptability range is marginal, agreed average range is from 50% to 69% which means some requirements in the system were not met. Unfortunately, 49% below average range of the system means not acceptable.

Table 15 presents the overall acceptability evaluation conducted by the researchers on different characteristics of BuKSU RRMS. These revealed that the system is very acceptable with a total of 97.90 acceptability percentage.

Discussion. This research was able to develop the Bukidnon State University Research Record Management System in order to provide a functional system for all the researchers in Bukidnon State University which offers reliable data. Figure 2 is the BukSU Research Record Management System Use-Case Diagram; it shows the list of actions and events typically define the interactions between different users and the system to achieve a goal. It also shows the boundaries and limitations of the system administrator, researcher instructor or faculty, student researcher, and the user of the system itself. Figure 3 is the BukSU Research Record Management System Context Diagram which shows the endpoints lays the system boundaries. Figure 4 is the Adding of Research Papers Acivity Diagram which shows the flow on adding a research papers. Figure 5 is the Research Updating Profile Activity Diagram which shows the procedures on how to update profile in this system. Figure 6 is the

Activity Diagram for Dashboard Access (Admin and Faculty) which shows the how to access administrator and research instructors' dashboard. Figure 7 shows the series of action on how to access this features. Figure 8 shows the series of acts on updating list of department registered in the system. Figure 9 shows the activity diagram of updating research status by the administrator. Figure 10 shows the complete physical layout of the BukSU Research Record Management System and its components in a schema. Figure 11 shows the flow chart diagram of BukSU Research Record Management System.

The following figures also shows the user interface of Bukidnon State University Research Record Management System. Figure 12 shows the login page for the administrator, instructor/faculty, and student for them to access their account. Figure 13 shows the home page for admin of the BukSU Research Record Management System. Figure 14 illustrates all the function of administrator where can perform different task like: sending message, generate access key, verify the submitted research of instructor, etc. Figure 15 shows how the system performs changing or updating the Admin account and password. Figure 16 shows how to generate access key for the instructor account. Figure 17 shows how to create reports which can also prints custom list of data. Figure 18 shows how to perform the adding and deleting list of colleges if in case there are some changes in the near future. Figure 19 allows the user to create an account strictly for instructors only. Figure 20 shows the dashboard of instructor where it will display different functions of instructor. Figure 21 performs the generating of access codes for the student to activate their account. Figure 22 shows how to create reports and print the custom list of data that will be needed for reporting. Figure 23 illustrates the list of all finished research paper of an instructor. Figure 24 shows the complete list of on-process research paper of an instructor and its latest status. Figure 25 allows the instructors to add their own research paper. Figure 26 allows

the user to create an account strictly for students only. Figure 27 shows the home page for students of the BukSU Research Record Management System. Figure 28 allows the student to submit their research paper. Figure 29 allows the student to submit their own research paper. Figure 30 illustrates the second page of submitting research paper details. Figure 31 illustrates the third page of submitting research paper details. Figure 32 shows the details of specific research paper. Lastly, figure 33 illustrates the sequential steps of publishing a submitted research paper of an instructor.

Conclusion

The response from the end user of BukSU RRMS during the testing process was evaluated and produced good feedback which implied that the system has met its objectives. Based on the process of developing the system and data gathered during evaluation, the researchers concluded that the design and development of the Bukidnon State University Research Record Management System was developed and has complied with the expected functional requirements; the Bukidnon State University Research Record Management System can now be used by its end-users; and the overall average was 97.90% which means that all of the respondents accepted the system in terms of its Usability, Functionality, Reliability, and Efficiency.

Recommendations

This study has a number of limitations which are recommended for future enhancement and studies. Firstly, the system may need to give additional collaboration functionality between students and instructors. Secondly, the system may needed to be implemented on a bigger and faster server. And lastly, the system should implement content checking and comparison on every document.

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Table 1
User type identity

Type of User	Frequency	Percentage (%)
Research Unit	1	3.33%
Faculty / Researcher	14	46.67%
Student	15	50%

The researchers were able to identify different groups of respondents as shown in table 1. The major respondents of the system were the students that represented the major groups of the user of the system. In the student groups, the researchers included non-4th year students as respondents since they would be the future user of the system. The faculty was second to largest number of user in this system. The least number was the Research and Development Unit specifically Dr. Beverly B. Bicar, the Research Director which is the main stakeholder of the system.

Table 2
Scoring procedure

Agree Average Range	Acceptability Range	Quantitative Description
70% - 100%	Acceptable	The system is acceptable.
50% - 69%	Marginal	Some requirements of the system were not met.
49% below	Not Acceptable	The system is not acceptable.

The researchers adopted a scoring procedure (Table 2) from the research paper entitled, "Cognitive Computing Where Big Data Is Driving Us" authored by Bongor, et.al (2009). The acceptability range was divided into three: the acceptable, marginal, and not acceptable. The system would be acceptable if the agreed average range is from 70% to 100%. When the acceptability range is marginal, agreed average range is from 50% to 69% which means some requirements in the system were not met. Unfortunately, 49% below average range of the system means not acceptable.

Table 3

Student Assessment on Average of Usability

Usability	Agreed Frequency	Disagreed Frequency	Percentage
The system adopts proper labeling of buttons, links, and text fields.	15	0	100%
The menus and buttons are easy to understand.	15	0	100%
The menus and buttons perform its function properly.	14	1	93%
The combination of color used in the system is pleasant for the user.	12	3	80%
The system can perform its function easily.	15	0	100%
The instructions provided are easy to follow.	15	0	100%
The system is easy to operate and control by the user.	13	2	87%
Total Average Percentage (%)			94.29%

The table above presents the student assessment on average of usability which consists of the data gathered from different students on Bukidnon State University about the acceptability of the system. The total average percentage was 94.29% which is considered as acceptable by the students.

Table 4

Faculty Researcher Assessment on Average of Usability

Usability	Agreed Frequency	Disagreed Frequency	Percentage
The System adopts proper labeling of buttons, links, and text fields	14	0	100%
The menus and buttons are easy to understand.	14	0	100%
The menus and buttons perform its function properly.	14	0	100%
The combination of color used in the system is pleasant for the user.	14	0	100%
The system can perform its function easily.	14	0	100%
The instructions provided are easy to follow.	14	0	100%
The system is easy to operate and control by the user.	14	0	100%
Total Average Percentage (%)			100%

The table above presents the faculty researcher assessment on average of usability which consists of the data gathered from different students on Bukidnon State University about the acceptability of the system. The faculty researcher accepted the system with the total average percentage of 100%.

Table 5

Research Unit Assessment on Level of Usability

Usability	Agreed Frequency	Disagreed Frequency	Percentage
The System adopts proper labeling of buttons, links, and text fields.	1	0	100%
The menus and buttons are easy to understand.	1	0	100%
The menus and buttons perform its function properly.	1	0	100%
The combination of color used in the system is pleasant for the user.	1	0	100%
The system can perform its function easily.	1	0	100%
The instructions provided are easy to follow.	1	0	100%
The system is easy to operate and control by the user.	1	0	100%
Total Average Percentage (%)			100%

The table presents the data gathered from the Research Director of Research and Development Unit of Bukidnon State University about the acceptability of the system based on its usability. The Research Unit accepted the system with the total average percentage of 100%.

Table 6

Student Assessment on Average of Functionality

Functionality	Agreed Frequency	Disagreed Frequency	Percentage
The system provides information about research papers.	11	4	73%
The system provides access code to make you secured.	15	0	100%
The researchers can upload their research paper in the system.	14	1	93%
Total Average Percentage (%)			88.89%

The table 6 presents the student assessment on average of functionality. As presented in the table above, the total average percentage was 88.89% which is still considered as acceptable by the student based on functionality.

Table 7
Faculty Researcher Assessment on Average of Functionality

Functionality	Agreed Frequency	Disagreed Frequency	Percentage
The system provides information about research papers.	14	0	100%
The system provides access code to make you secured.	14	0	100%
The researchers can upload their research paper in the system.	14	0	100%
Total Average Percentage (%)			100%

The table 7 represents the faculty researcher assessment on average of functionality. There were fourteen (14) faculty researcher who agreed with those three (3) statements representing the functionality. As presented by the table above, the total average percentage was 100% which is obviously considered as acceptable by the faculty researcher.

Table 8

Research Unit Assessment on Average of Functionality

Functionality	Agreed Frequency	Disagreed Frequency	Percentage
The system provides information about research papers.	1	0	100%
The system provides access code to make you secured.	1	0	100%
The researchers can upload their research paper in the system.	1	0	100%
Total Average Percentage (%)			100%

Table 8 presents the Research Unit assessment on average of functionality. The Research Director of Research Unit and Development of Bukidnon State University accepted the system based on its functionality. As presented by the table above, the total average percentage was 100%.

Table 9
Student Assessment on Average of Reliability

Reliability	Agreed Frequency	Disagreed Frequency	Percentage
The system provides option whether the researcher restrict the user from downloading their works or not.	15	0	100%
The system provides accurate information.	15	0	100%
The system can generate accurate reports.	14	1	93%
The system processes the data accurately.	15	0	100%
Total Average Percentage (%)			98.33%

The table 9 above shows the data gathered from different students of Bukidnon State University. There were four (4) statements provided about the system to fifteen (15) different students of Bukidnon State University. The result came up to 98.33% total average which means that the BukSU Research Record Management System was acceptable by the students based on the systems' reliability.

Table 10

Faculty Researcher Assessment on Average of Reliability

Reliability	Agreed Frequency	Disagreed Frequency	Percentage
The system provides option whether the researcher restrict the user from downloading their works or not.	14	0	100%
The system provides accurate information.	14	0	100%
The system can generate accurate reports.	14	0	100%
The system processes the data accurately.	14	0	100%
Total Average Percentage (%)			100%

Table 10 above shows the data gathered from the different faculty researchers of Bukidnon State University. There were four (4) statements provided about their system to fourteen (14) faculty researchers of Bukidnon State University. As presented by the table above, the total average percentage was 100% which is obviously considered as acceptable by the faculty researcher.

Table 11

Research Unit Assessment on Average of Reliability

Reliability	Agreed Frequency	Disagreed Frequency	Percentage
The system provides option whether the researcher restrict the user from downloading their works or not.	1	0	100%
The system provides accurate information.	1	0	100%
The system can generate accurate reports.	1	0	100%
The system processes the data accurately.	1	0	100%
Total Average Percentage (%)			100%

Table 11 presents the data gathered from the Director of Research and Develpment Unit in Bukidnon State University about the acceptability of BukSU Research Record Management System based on its reliability. As a result, the total average percentage consists of 100% which means that the system was highly acceptable based on its reliability.

Table 12
Student Assessment on Average of Efficiency

Efficiency	Agreed Frequency	Disagreed Frequency	Percentage
The execution and response time is accurate.	14	1	93%
Total Average Percentage (%)			93.33%

Table 12 above shows the student assessment on average of efficiency. The total agreed frequency was fourteen (14) students and only one (1) student disagreed. The total average percentage was 93.33% which means that the system was acceptable by the student based on the systems' efficiency.

Table 13
Faculty Researcher Assessment on Average of Efficiency

Efficiency	Agreed Frequency	Disagreed Frequency	Percentage
The execution and response time is accurate.	14	0	100%
Total Average Percentage (%)			100%

Table 13 presents the data gathered from the different faculty researcher in Bukidnon State University about the acceptability of the system based on its efficiency. As a result, the total average percentage was 100% which means that those fourteen (14) faculty researchers accepted the system based on its efficiency.

Table 14

Research Unit Assessment on Average of Efficiency

Efficiency	Agree Frequency	Disagreed Frequency	Percentage
The execution and response time is accurate.	1	0	100%
Total Average Percentage (%)			100%

The table 14 above shows the data gathered from the Director of Research and Development Unit in Bukidnon State University about the acceptability based on the systems' efficiency. The outcome have shown that the total average percentage was 100% which means that the Research Director of Research and Development Unit was highly accepted the system based on its efficiency.

Table 15
Assessment Summary

Acceptability Percentage						
Summary	**Research Unit**	**Faculty Researchers**	**Student**	**Overall Percentage**	**Acceptability Range**	**Quantitative Description**
System Usability	100%	100%	94.29%	98.09%	Acceptable	The system is acceptable.
System Functionality	100%	100%	88.89%	96.30%	Acceptable	The system is acceptable.
System Reliability	100%	100%	98.33%	99.44%	Acceptable	The system is acceptable.
System Efficiency	100%	100%	93.33%	97.78%	Acceptable	The system is acceptable.
Total Average Percentage				97.90%	Acceptable	

Table 15 presents the overall acceptability evaluation conducted by the researchers on different characteristics of BuKSU RRMS. These revealed that the system is very acceptable with a total of 97.90 acceptability percentage.

Figure 1
Waterfall Software Development Life Cycle Model

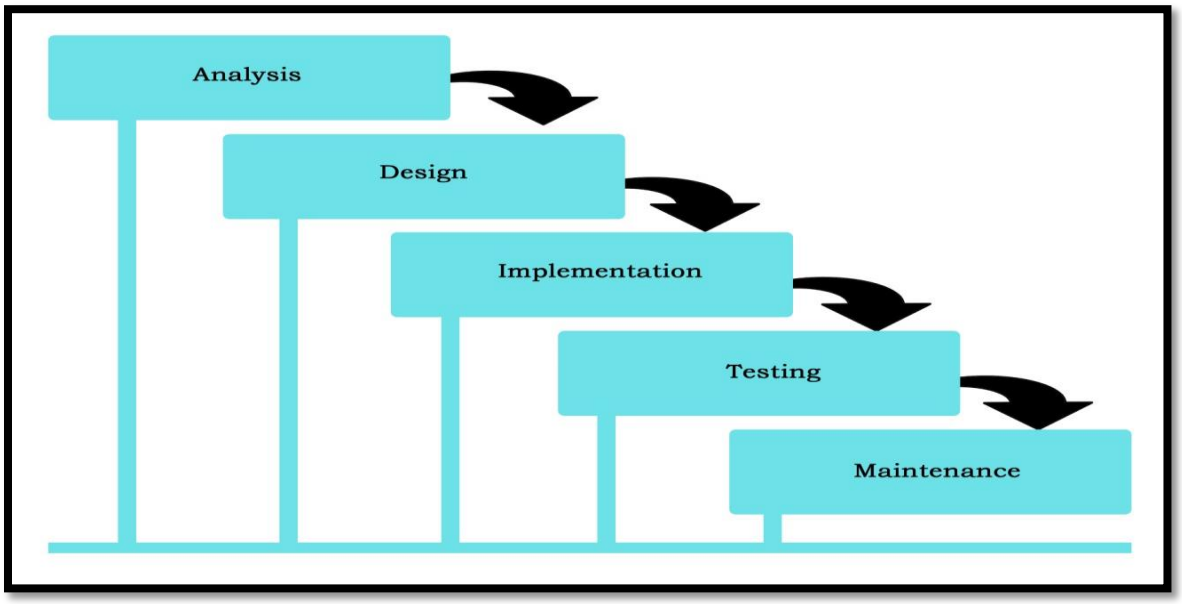

Figure 1 Waterfall Software Development Life Cycle Model

Figure 2
BukSU Research Record Management System Use-Case Diagram

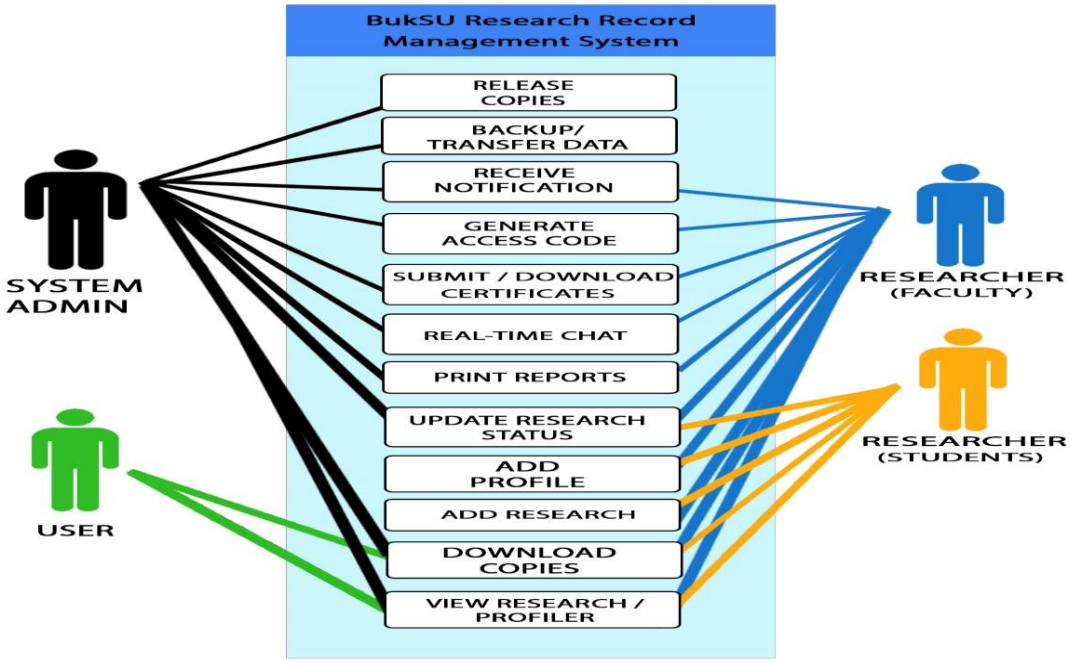

Figure 2 BukSU Research Record Management System Use-Case Diagram

Figure 3
BukSU Research Record Management System Context Diagram

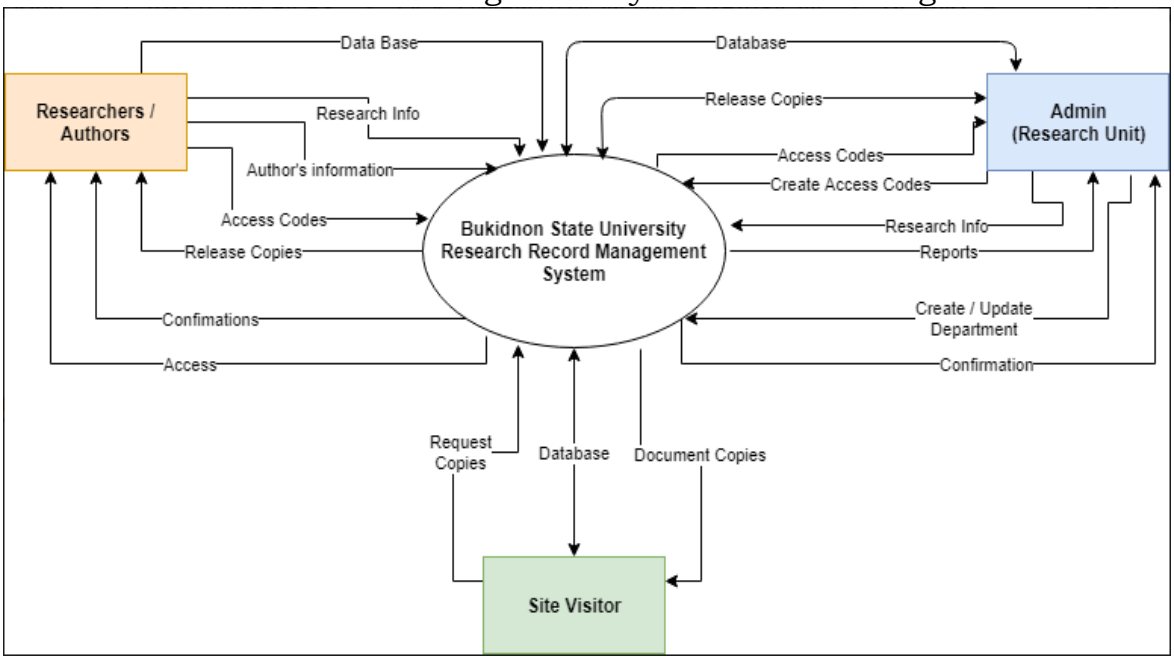

Figure 3 BukSU Research Record Management System Context Diagram

Figure 4
Adding of Research Papers Activity Diagram

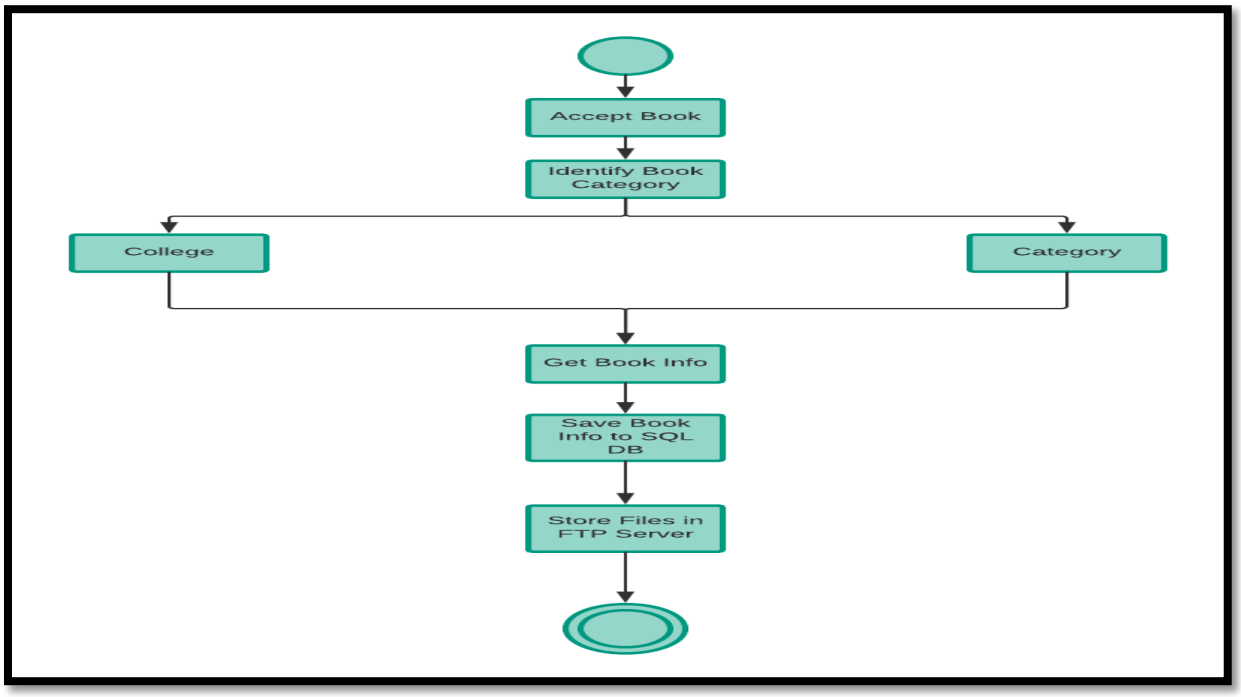

Figure 4 Adding of Research Papers Activity Diagram

Figure 5
Research Updating Profile Activity Diagram

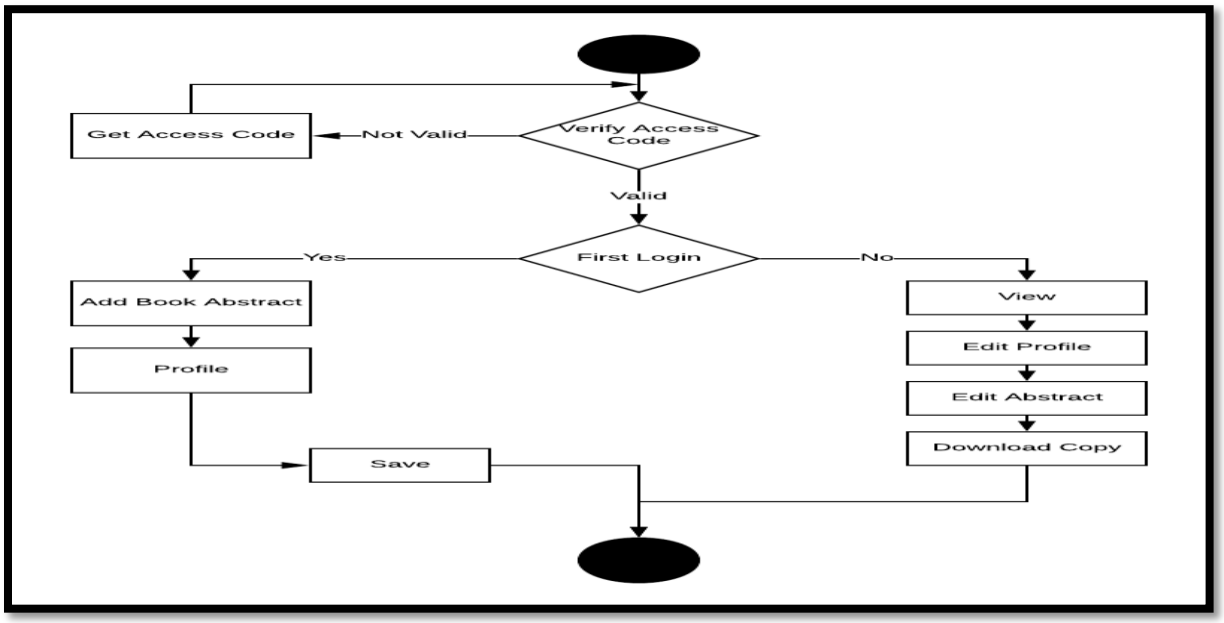

Figure 5 Research Updating Profile Activity Diagram

Figure 6
Activity Diagram for Dashboard Access (Admin and Faculty)

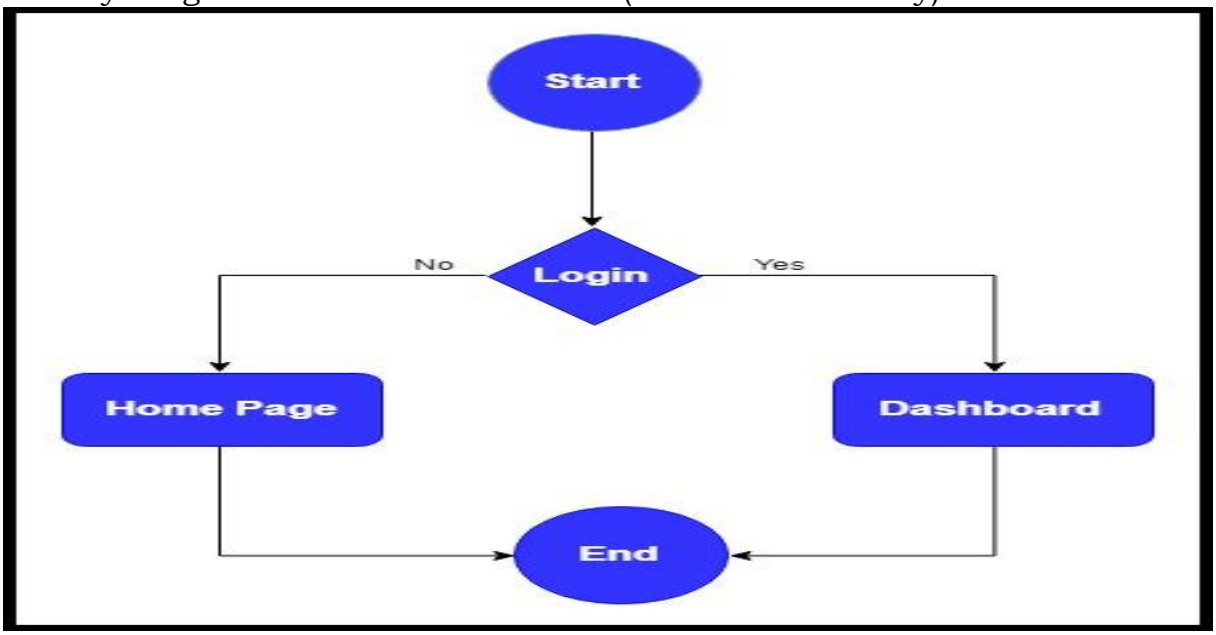

Figure 6 Activity Diagram for Dashboard Access (Admin and Faculty)

Figure 7
Activity Diagram for Viewing and Creating Message

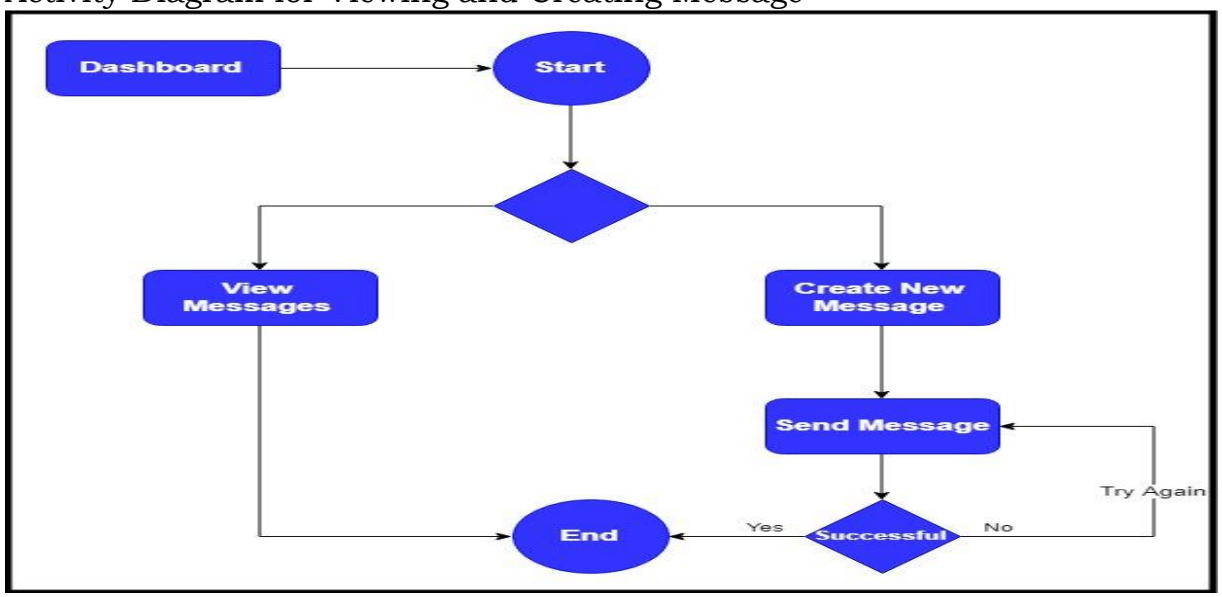

Figure 7 Activity Diagram for Viewing and Creating Message

Figure 8
Update Department

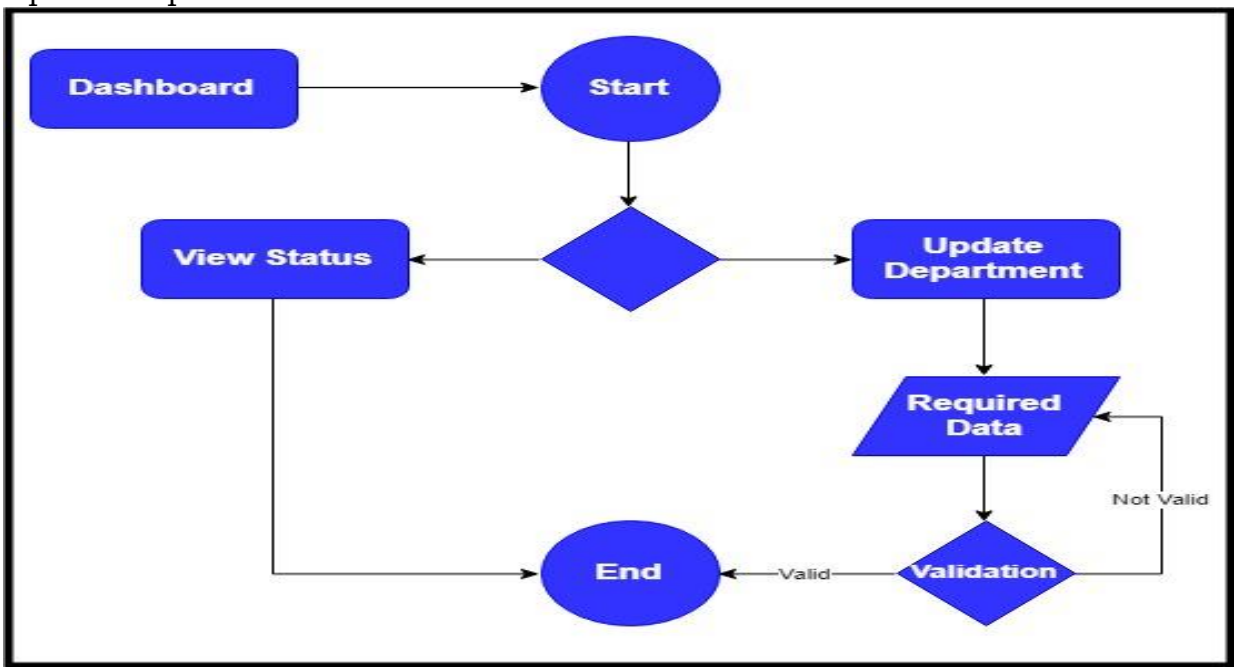

Figure 8 Update Department

Figure 9
Updating Research Status

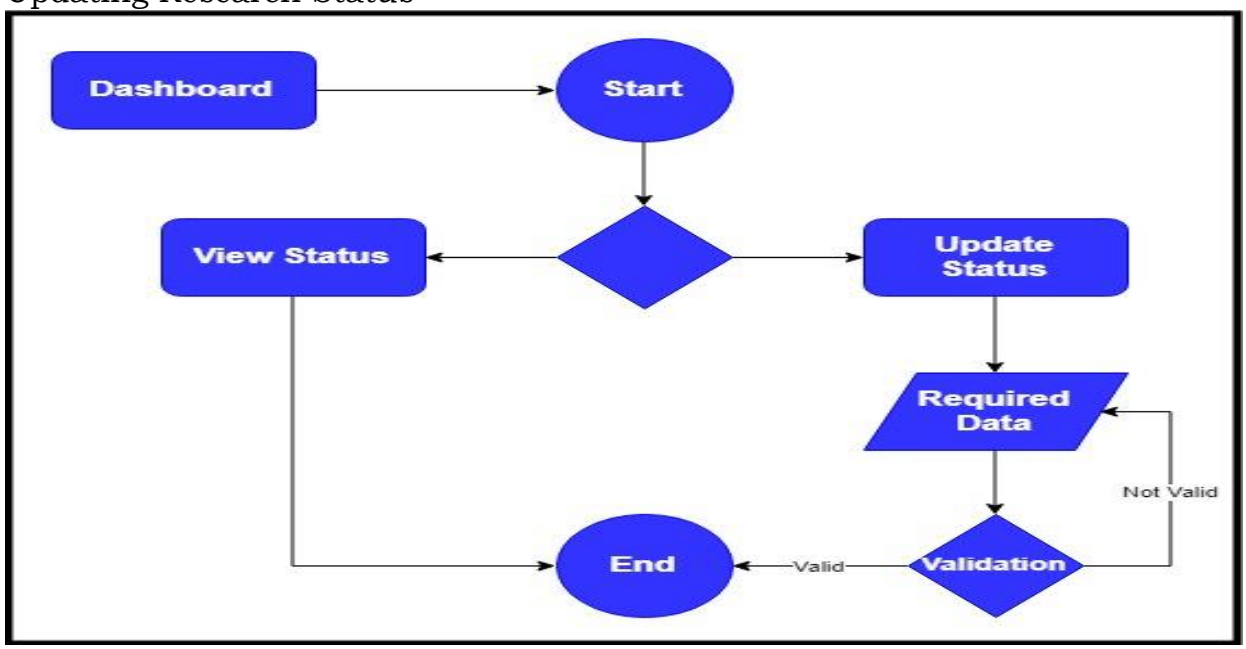

Figure 9 Updating Research Status

Figure 10
BukSU RRMS Physical Architecture

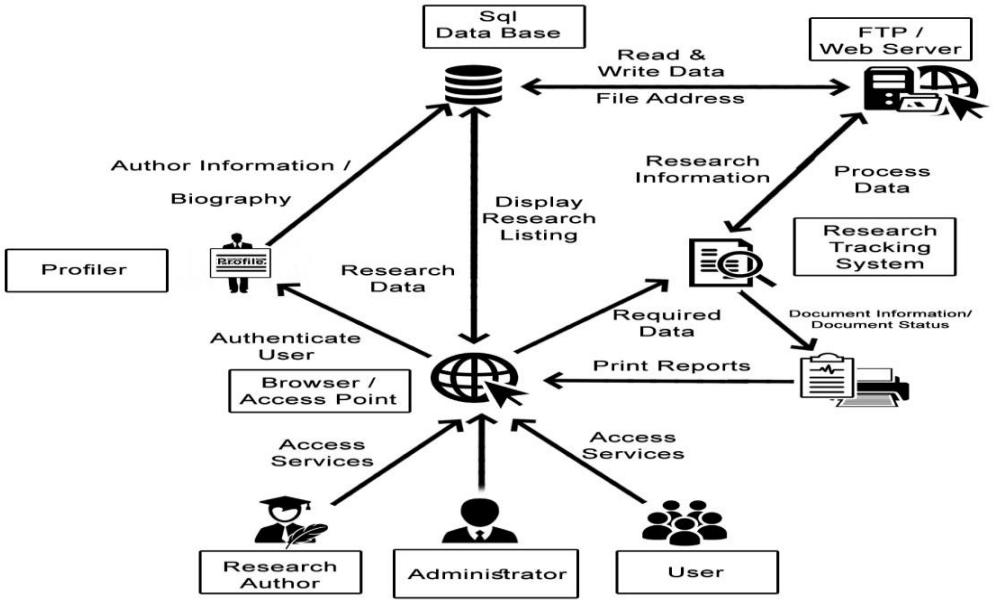

Figure 10 BukSU RRMS Physical Architecture

Figure 11
BukSU RRMS Flow Chart

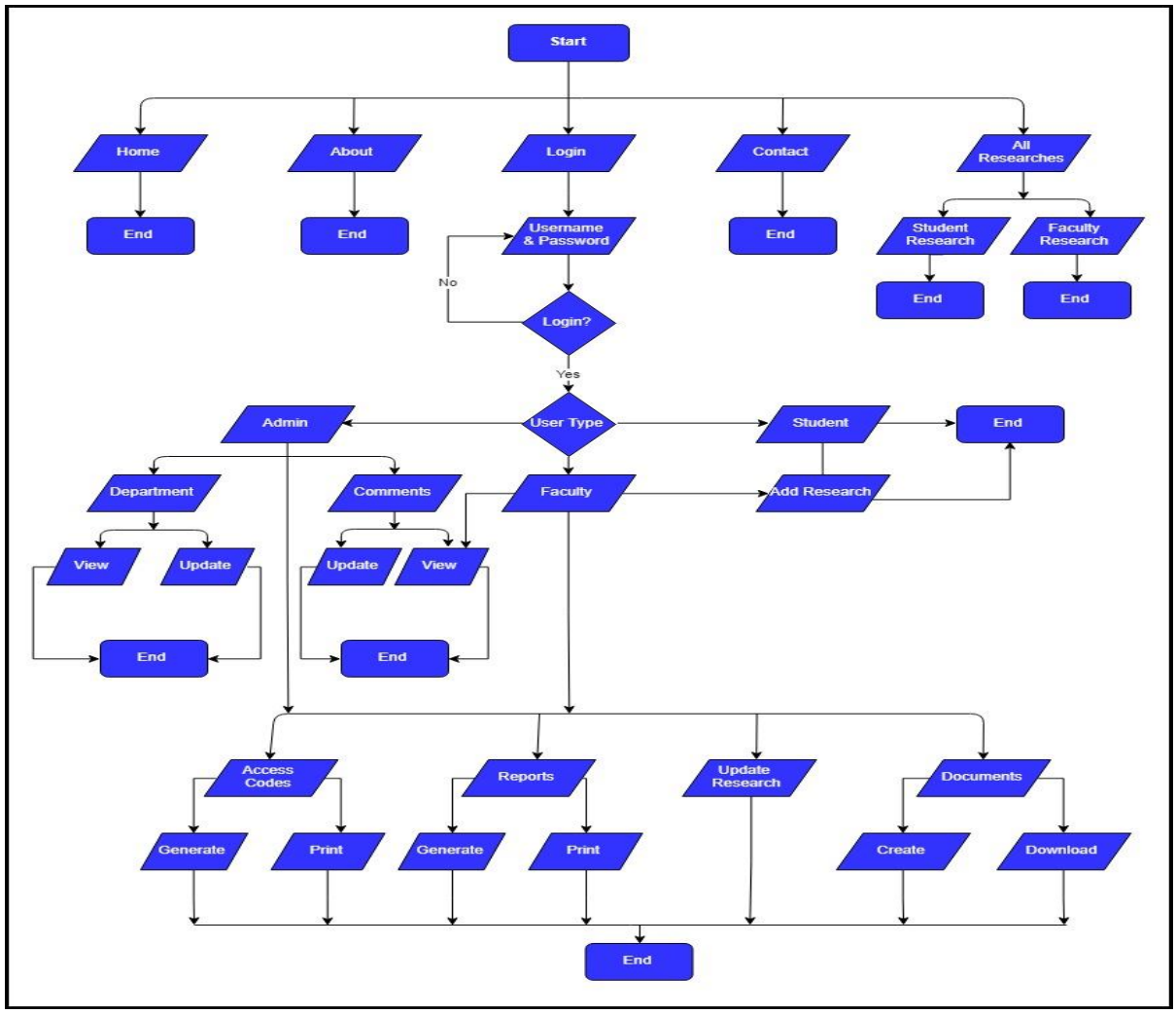

Figure 11 BukSU RRMS System Flow Chart

Figure 12
LOGIN PAGE

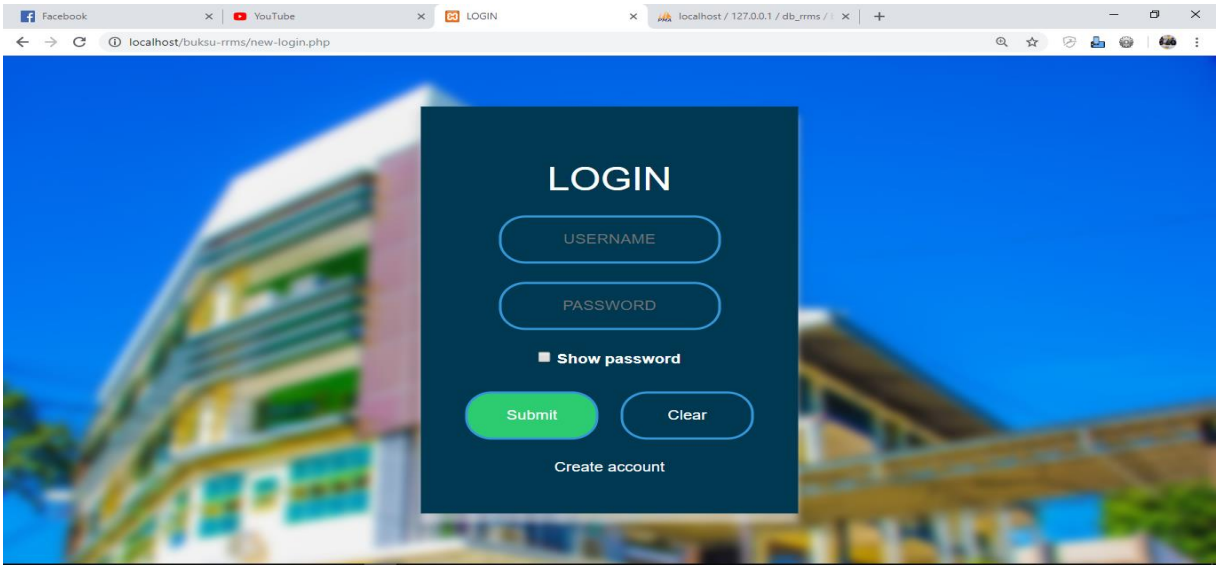

Figure 12 Login Page

Figure 13
ADMIN HOMEPAGE

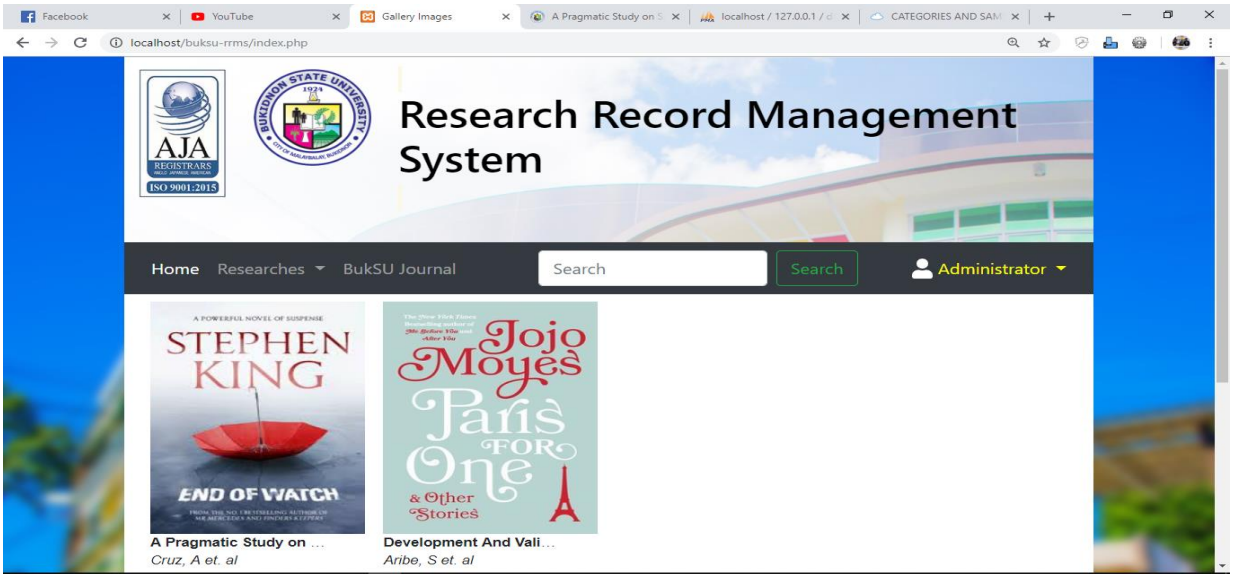

Figure 13 Admin Homepage

Figure 14
ADMINISTRATOR DASHBOARD

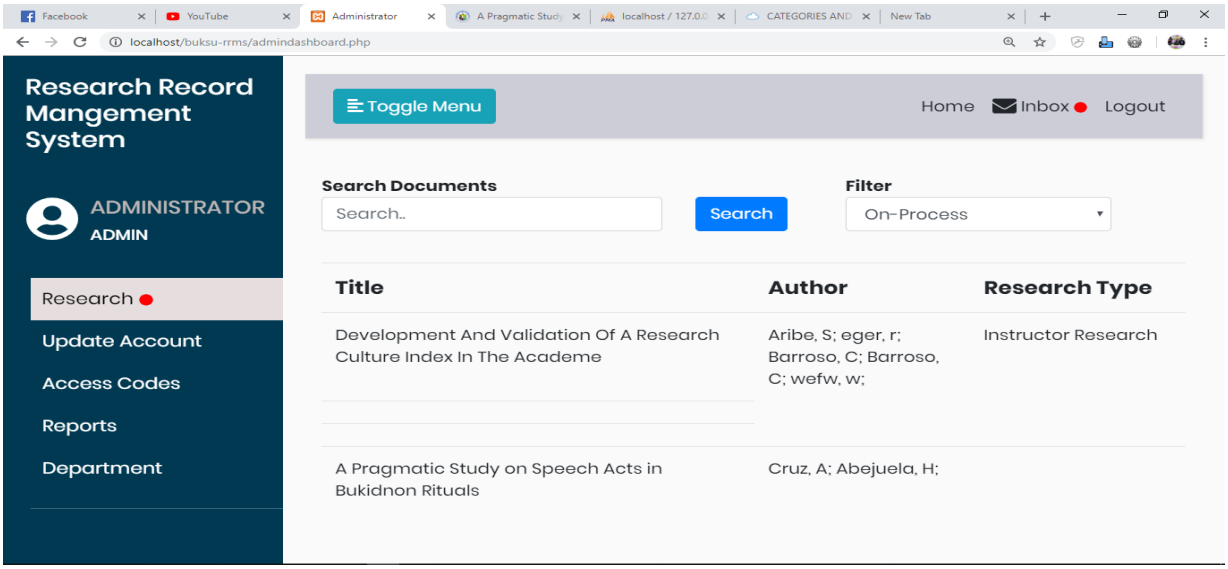

Figure 14 Administrator Dashboard Page

Figure 15
ADMINISTRATOR UPDATE ACCOUNT

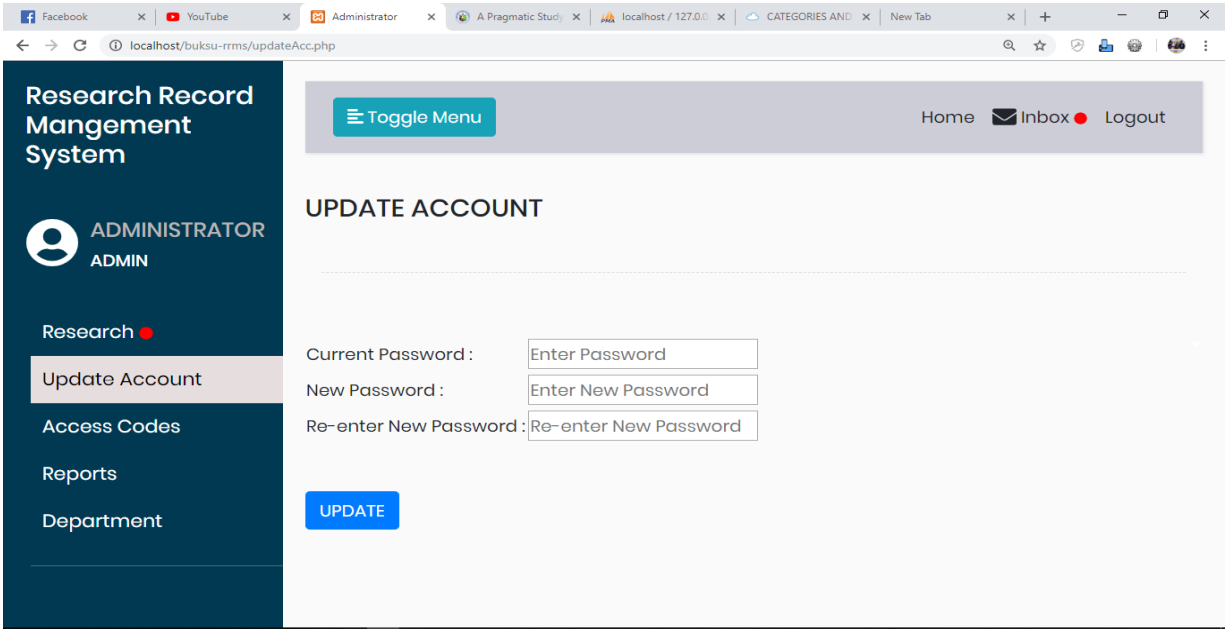

Figure 15 Administrator Update Account Page

Figure 16
ADMINISTRATOR ACCESS CODES

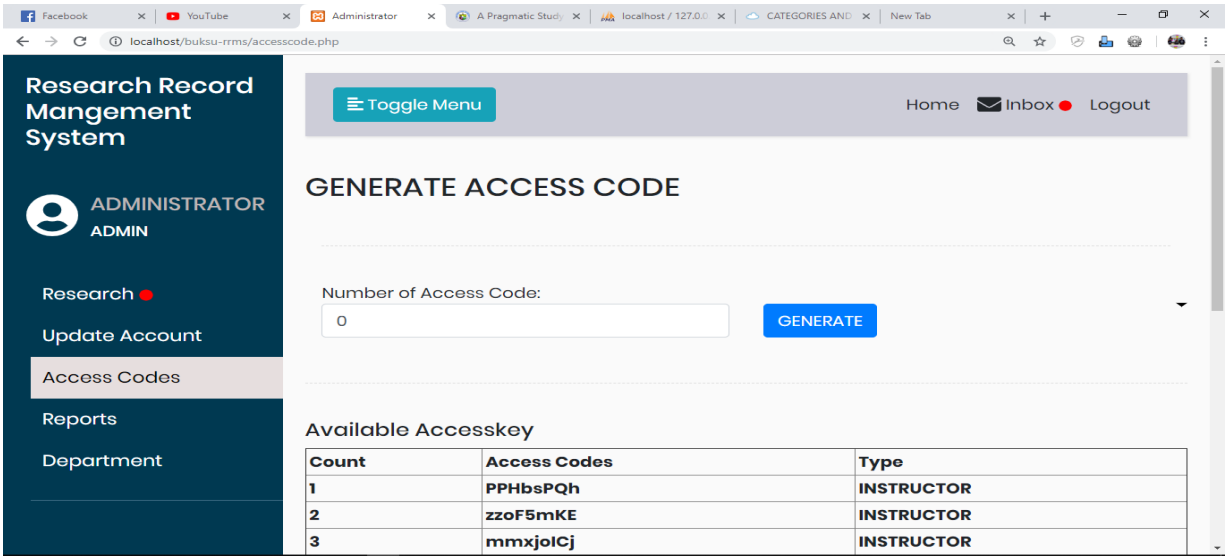

Figure 16 Administrator Access Codes Page

Figure 17
ADMINISTRATOR REPORTS

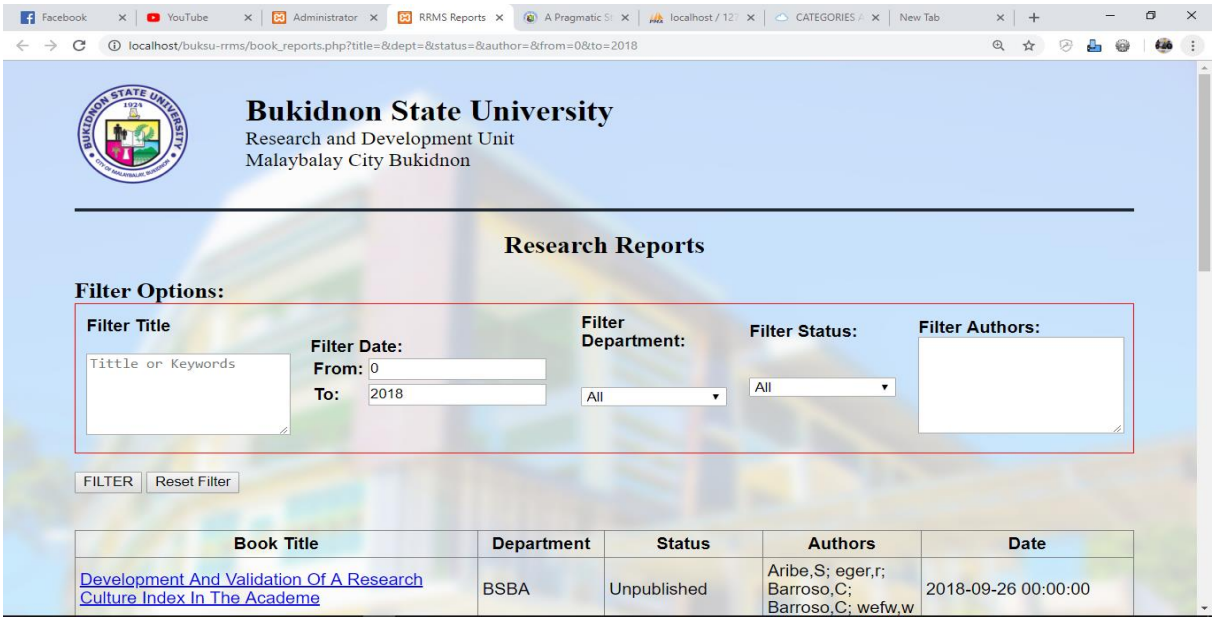

Figure 17 Administrator Reports Page

Figure 18
ADMINISTRATOR DEPARTMENTS

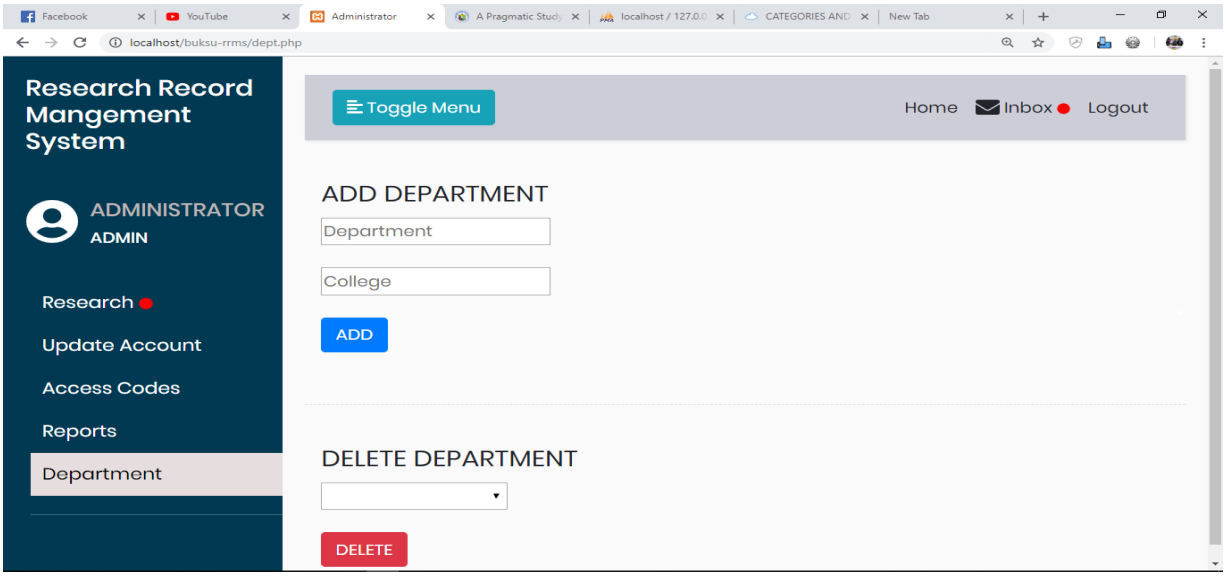

Figure 18 Administrator College Page

Figure 19
CREATE ACCOUNT (INSTRUCTOR)

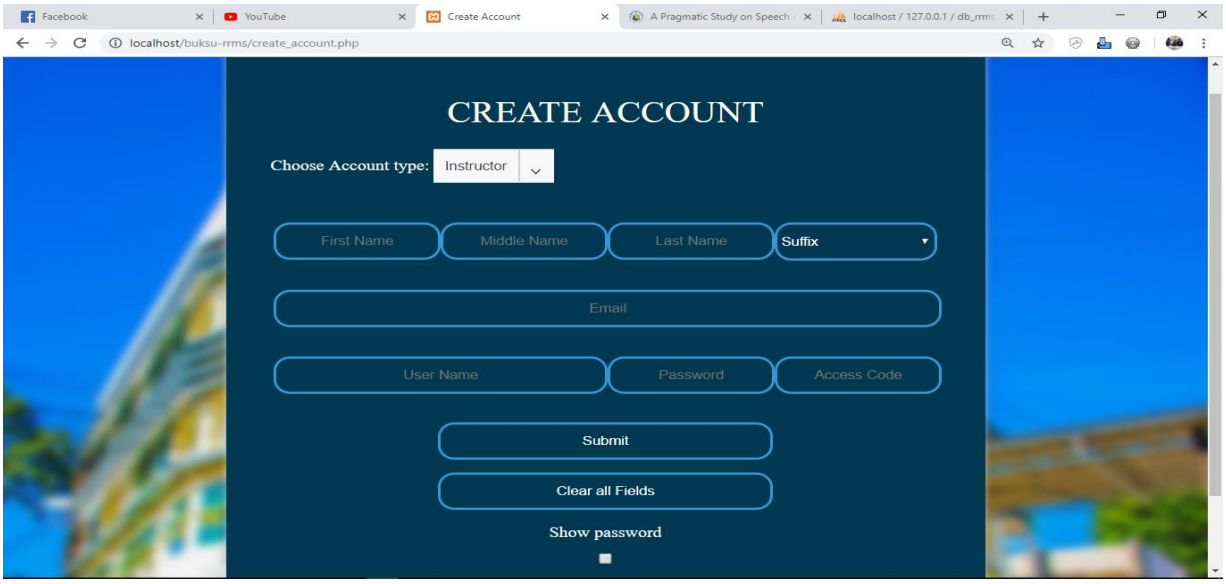

Figure 19 Instructor Create Account

Figure 20
INSTRUCTOR DASHBOARD

Figure 20 Instructor Dashboard

Figure 21
INSTRUCTOR ACCESS CODES

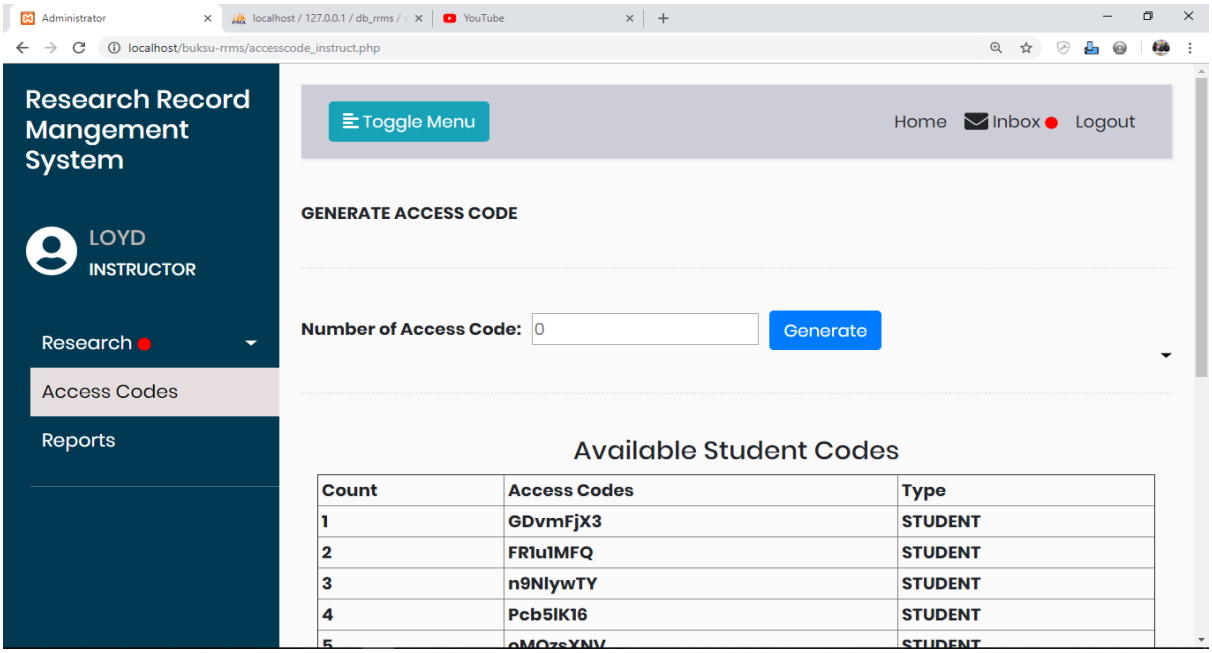

Figure 21 Instructor Access Code Page

Figure 22
INSTRUCTOR REPORT (INSTRUCTOR)

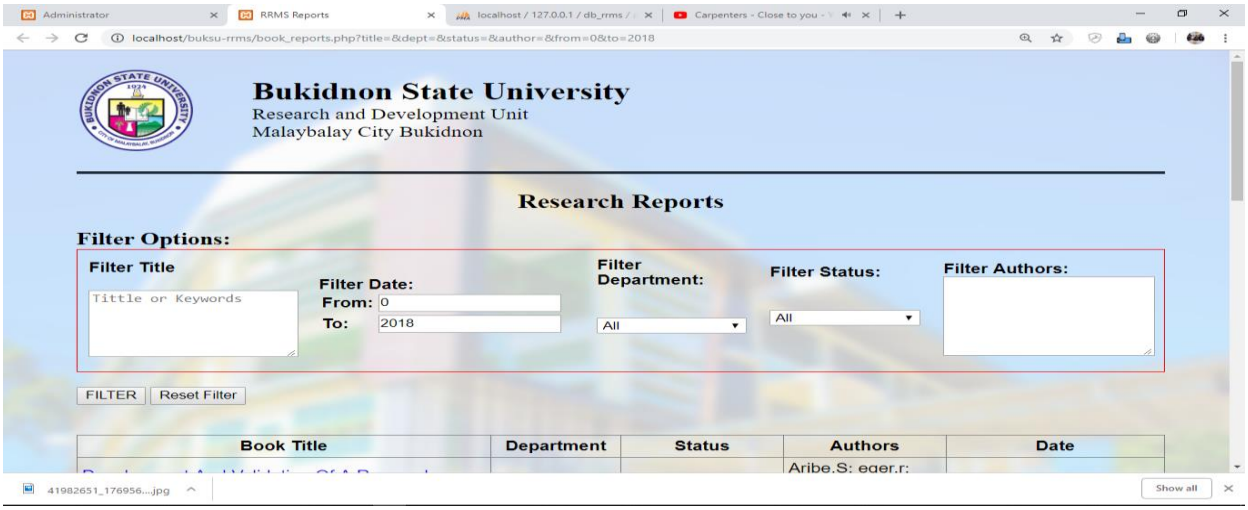

Figure 22 Instructor Reports Page

Figure 23
INSTRUCTOR FINISHED RESEARCH (INSTRUCTOR)

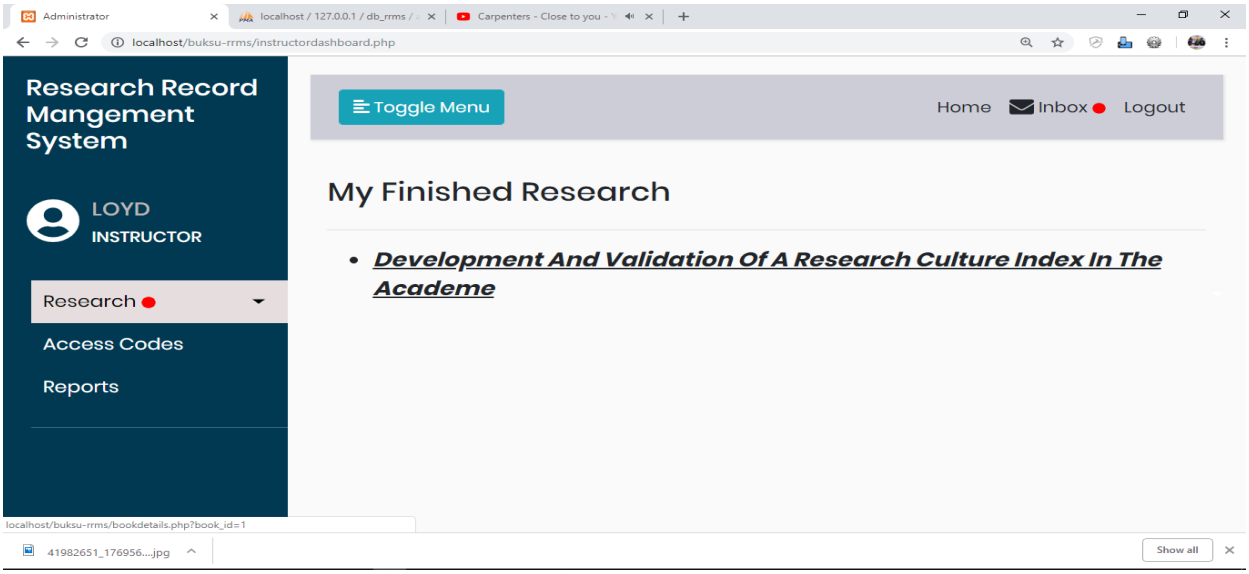

Figure 23 Instructor Finished Research Page

Figure 24
INSTRUCTOR ON-PROCESS RESEARCH (INSTRUCTOR)

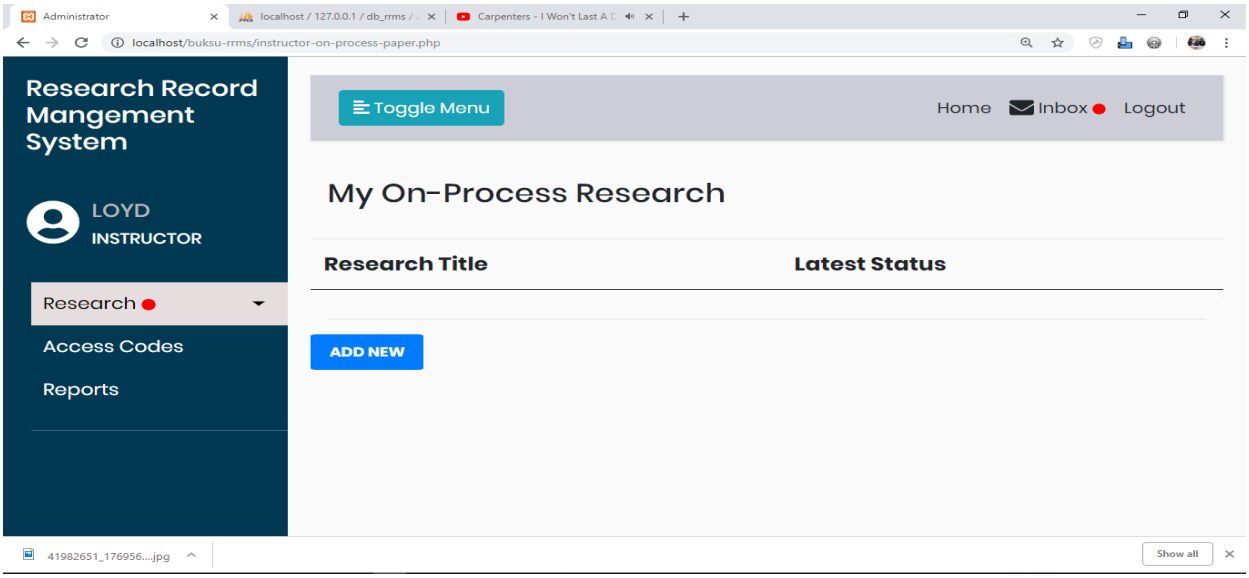

Figure 24 Instructor On-Process Research Page

Figure 25
INSTRUCTOR ADD RESEARCH (INSTRUCTOR)

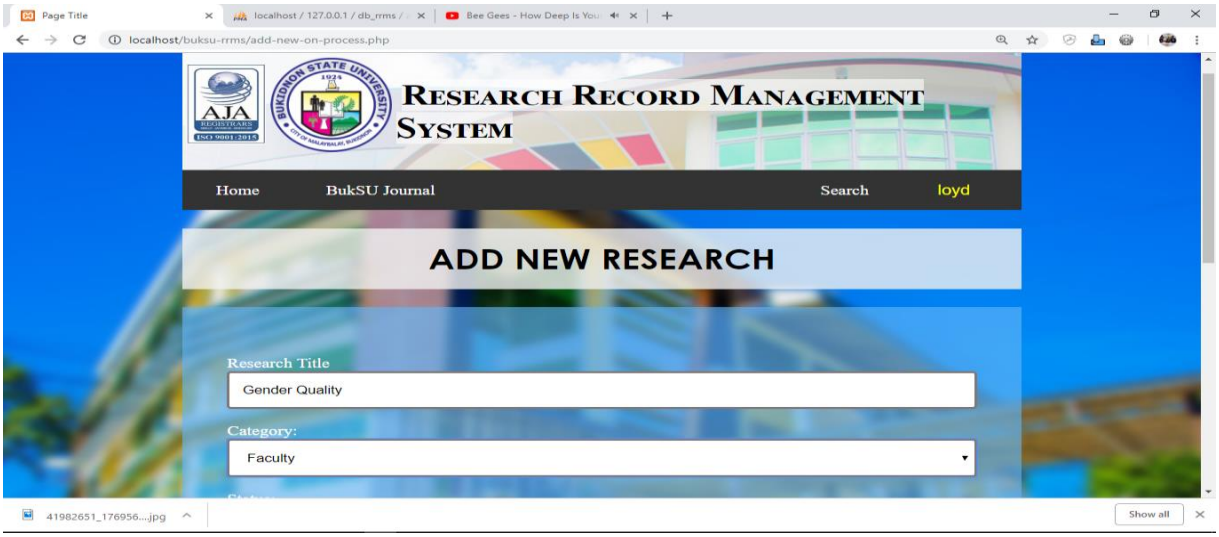

Figure 25 Instructor Add Research Page

Figure 26
STUDENTS CREATE ACCOUNT

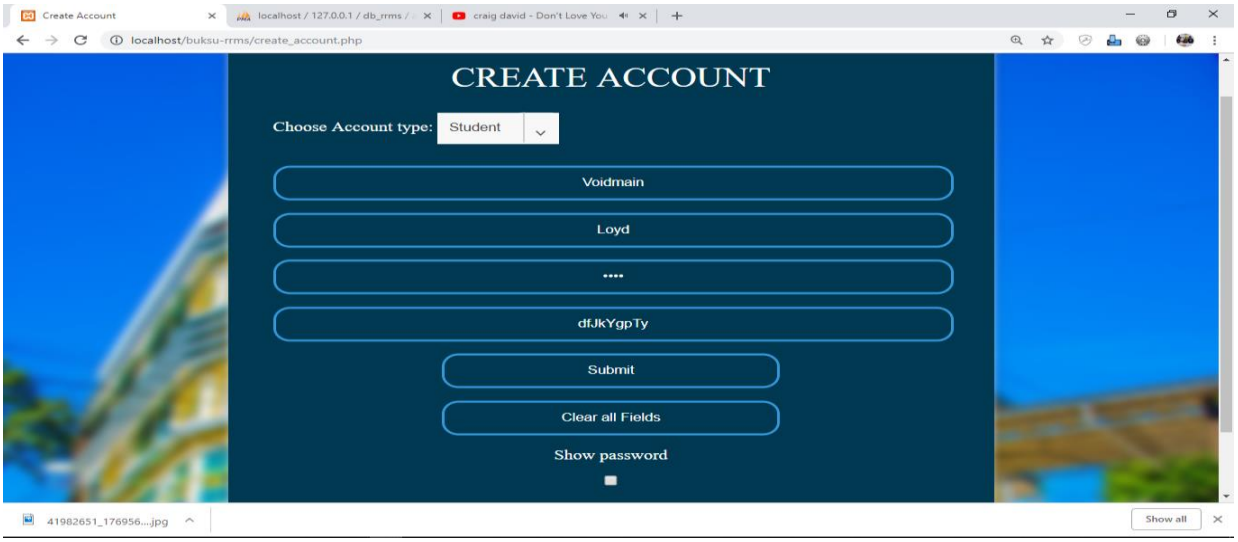

Figure 26 Student Create Account Page

Figure 27
STUDENTS HOME PAGE (STUDENT)

Figure 27 Student Homepage

Figure 28
STUDENTS MY RESEARCH PAGE

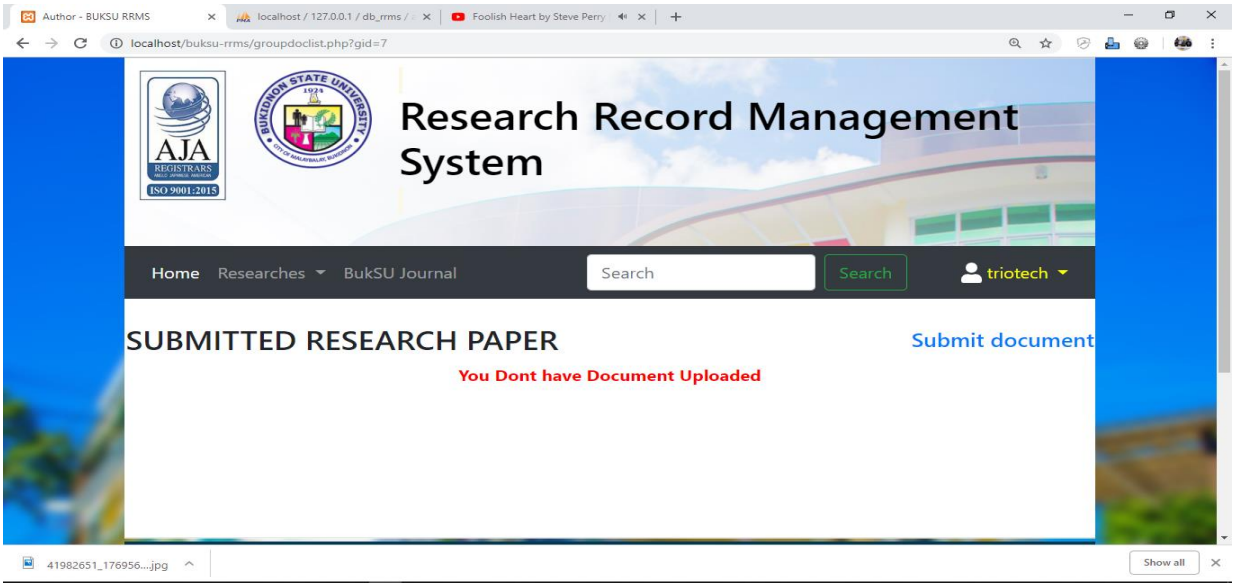

Figure 28 Student My Research Page

Figure 29
STUDENT SUBMIT RESEARCH PAGE

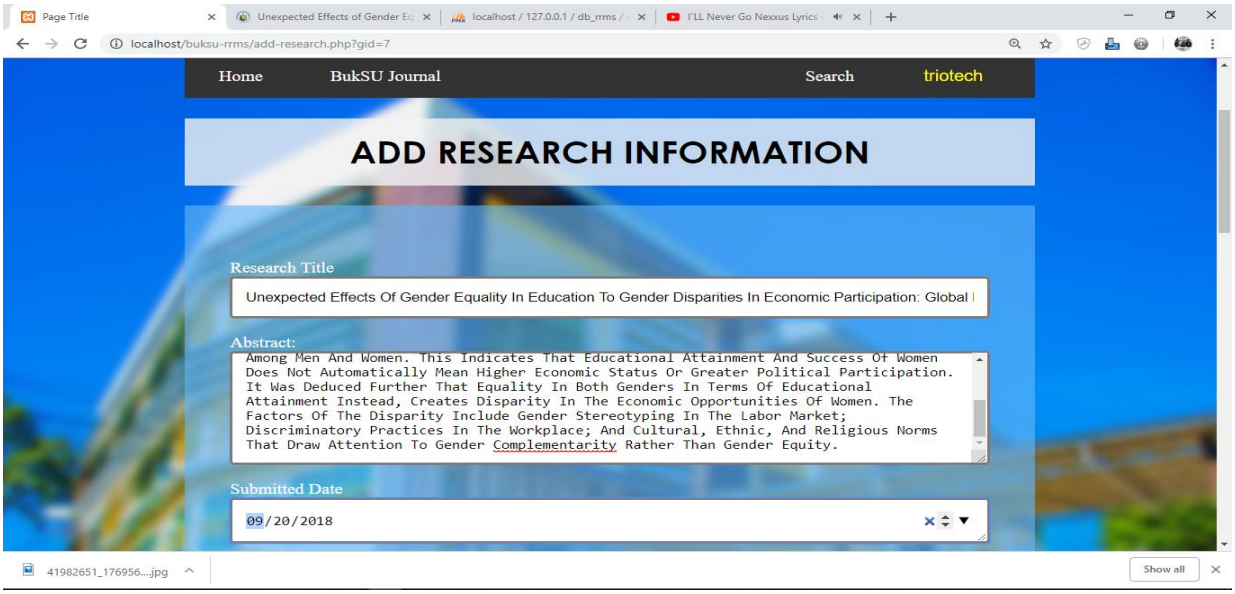

Figure 29 Student Submit Research Page

Figure 30
STUDENTS SUBMIT RESEARCH PAGE

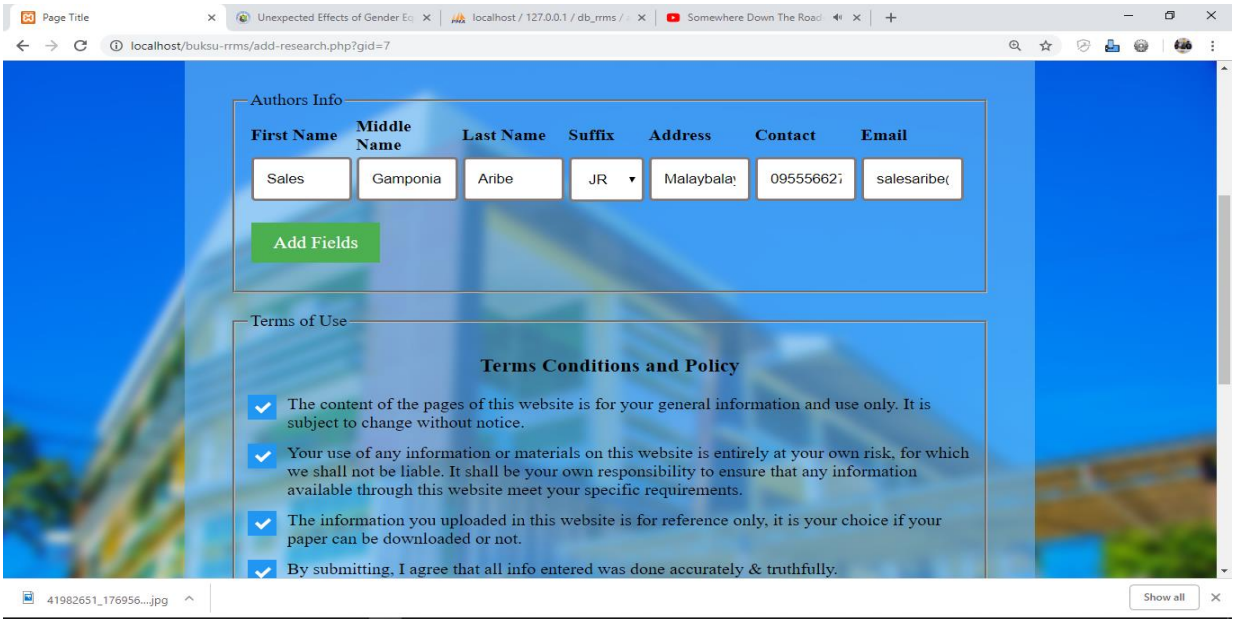

Figure 30 Student Submit Research Page

Figure 31
STUDENTS SUBMIT RESEARCH PAGE

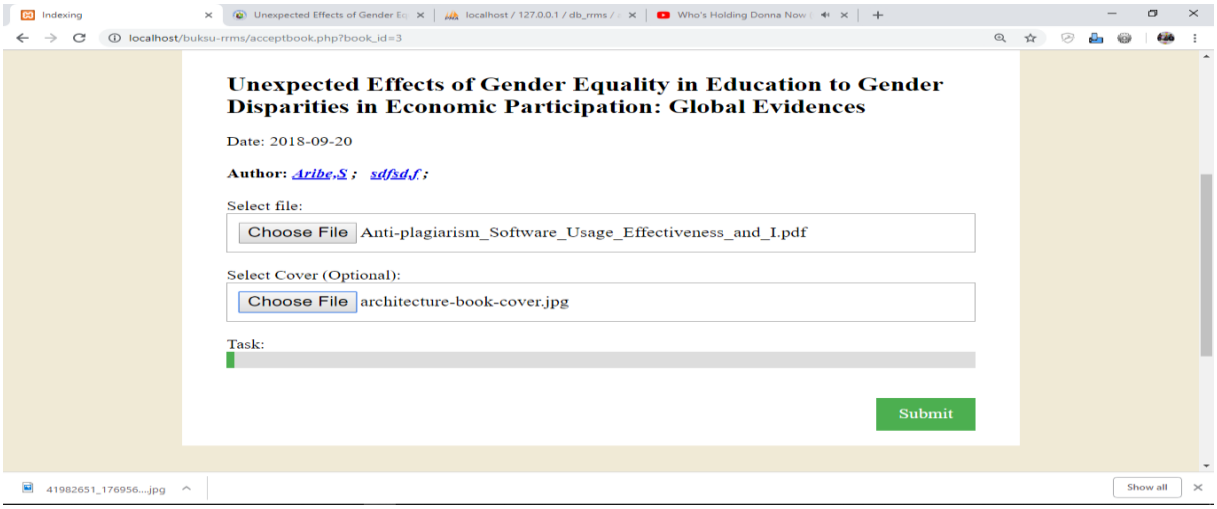

Figure 31 Student Submit Research Page

Figure 32
RESEARCH DETAILS PAGE

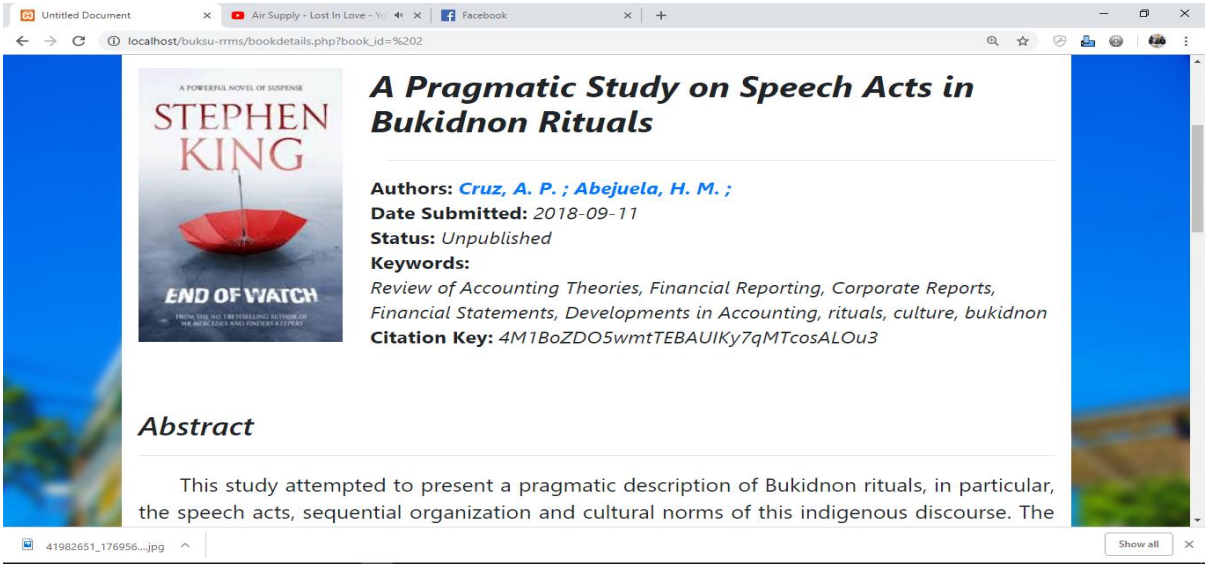

Figure 32 Research Details Page

Figure 33
RESEARCH STATUS

Figure 33 Research Status