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Web-Based Automated Research Approval and Submission System

A Capstone Project Proposal
Presented to the Faculty of the
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Eastern Samar State
University Main Campus

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Chapter I

INTRODUCTION

Background and Rationale

The development of this Web-Based Automated Research Approval and Submission System seeks to help address some of the tracking and monitoring challenges in research management at Eastern Samar State University. The proposed system would potentially allow students to see where their research proposals are in the approval process and receive updates on their progress. Faculty might be able to more easily check which students have submitted what, and administrators could potentially monitor research activities from a centralized location.

At Eastern Samar State University, students currently have limited ways to check their research proposal status after submission. They often need to visit advisers personally to inquire about reviews or required changes. Faculty advisers manage multiple student proposals using paper files, which can make it challenging to organize submissions and track which students need attention. Administrators can typically only obtain research progress information by consulting individual faculty members.

Research information management systems (RIMS) may support the transparent aggregation, curation, and utilization of data about institutional research activities. According to OCLC Research, research information management (RIM) is "the aggregation, curation and utilization of information about research and is emerging as a part of scholarly communications practice in many university libraries" (OCLC Research, 2022). These digital platforms can potentially help universities monitor their research processes and identify areas for improvement.

The OCLC Research report "Research Information Management in the United States" provides documentation of RIM practices at US research universities, presenting an examination of RIM practices, goals, stakeholders, and system components (OCLC Research, 2021). This study suggests that research information management is becoming an increasingly important area of investment in US research universities.

Academic institutions across the U.S. and Canada are increasingly implementing systems such as Activity Insight, Pure, Converis, and Symplectic Elements, which track publications and scholarly activities of faculty. According to the Association of College and Research Libraries (ACRL), "these systems give an overall picture of the research and scholarly enterprise of an institution" (ACRL, 2023). This trend appears to reflect a growing recognition of the potential importance of systematic research tracking and management.

Some modern universities have adopted web-based electronic research administration systems to help streamline research processes. The University of Pennsylvania's PennERA (Penn's Electronic Research Administration system) serves as an example of this approach as "a suite of web-based applications that streamline processes and provide more efficient tools for handling pre- and post-award administrative tasks related to the sponsored projects" (University of Pennsylvania, 2025). PennERA

functions as "a full life-cycle system for research project development, support, and management," which illustrates the potential comprehensive nature of modern research tracking systems.

Similarly, the University of Connecticut utilizes InfoEd for proposal tracking, which includes "the ability to track project funding status, research compliance approval status and requested/awarded revenue" (University of Connecticut, 2025). These systems showcase features that may help address some of the challenges identified at Eastern Samar State University: providing visibility into research status, enabling tracking capabilities, and offering monitoring functions.

Without adequate tracking systems, students and faculty may spend additional time on status inquiries, and important deadlines could potentially be missed. Research Information Management encompasses "the ecosystem of activities and technologies that allow a university to track all of its research activities and outputs, including faculty activities, grant applications, funding, equipment, facilities, press and PR, and societal impacts" (West Arete, 2023).

The current system at Eastern Samar State University appears to provide limited visibility into the research approval process. Students seem to have few options for tracking their progress, advisers may find it challenging to monitor multiple submissions efficiently, and administrators appear to have restricted overview of institutional research activities. This apparent lack of tracking and monitoring capability represents one of the main challenges that may affect the research approval workflow.

Web-based tracking systems may offer certain advantages over traditional methods. Modern research platforms can potentially show where each proposal is in the approval process, send automatic updates when status changes, and provide dashboards that could give stakeholders the information they need. These systems might support greater transparency and efficiency in research management, potentially addressing some of the issues identified in traditional paper-based systems.

Objectives of the study

The study generally aims to develop and implement a **web-based automated research approval and submission system** that facilitates the research proposal workflow from title submission through final panel evaluation, reducing processing time and improving document tracking for students, faculty, and administrators at Eastern Samar State University. Specifically, this study seeks to:

1. To create a user registration system where students can input their group members, college affiliation, and academic details with administrative verification.
2. To develop a research title submission feature that allows students to upload proposal documents and receive automated notifications for approval or revision requirements.
3. To implement a complete chapter submission workflow that enables sequential submission and review of Chapters 1 through 5, requiring adviser approval before proceeding to the next chapter.
4. To establish a role-based collaborative commenting system that allows advisers to provide feedback through threaded discussions on Chapters 1-3, while panel members can comment on all chapters (1-5) only after students have completed their proposal oral final defense.
5. To establish a panel evaluation system that allows faculty panel members to review completed research proposals and provide structured feedback through comments only after students have completed their proposal oral final defense.
6. To integrate automated notification mechanisms that alert users about submission status changes, new comments, pending reviews, and approval decisions.
7. Evaluate the developed system using the ISO/IEC 25010:2011 Software Evaluation Questionnaire for alpha testing, assessing aspects such as functional suitability, performance efficiency, compatibility, reliability, and security, and the IBM Computer Usability Satisfaction Scale for beta testing.

Scope

The Web-Based Automated Research Approval and Submission System is created to make the whole process of submitting, reviewing, and approving research proposals simpler for everyone at the university. Students and faculty can submit proposals online, check how things are progressing, and get feedback from reviewers, all in one place.

The key features of the system include:

1. Account creation for students, including input of group members and college information.
2. Uploading and reviewing of research titles with panel approval.
3. Step-by-step submission of Chapters 1 to 3 with adviser review.
4. Notifications for approval or revisions needed.
5. Final panel submission for reviewed chapters.
6. Document tracking and status monitoring throughout the approval process.
7. Role-based access for students, faculty advisers, panel members, and administrators.

Limitations

1. Users must have an active internet connection to access this web-based platform.
2. While the system manages submission and tracking, the actual review and decision-making still rely on human evaluators.
3. File size limits may be implemented to prevent server overload.
4. The system includes basic security features but may not be completely immune to cyber threats without further enhancements.
5. The system does not provide built-in messaging for direct communication between researchers and reviewers. Feedback is given through status updates and comments, but real-time discussions must occur outside the system.
6. The system cannot automatically verify the academic integrity or originality of submitted research proposals.
7. System performance may vary across different web browsers and requires modern browser capabilities for optimal functionality.
8. The system operates as a standalone platform and does not integrate with existing university management systems or external academic databases.

Significance of the Study

The development of the Web-Based Automated Research Approval and Submission System will benefit:

Students, this system helps at Eastern Samar State University by enabling the digital submission of research proposals, reducing paperwork and confusion. The clear submission process makes it easier for students to understand what's required, so they can put more energy into improving the quality of their research instead of getting bogged down by administrative details. Students receive timely notifications about their submission status and can track their progress throughout the approval process.

Researchers, the system reduces manual work and provides a central place for storing research documents and feedback. Researchers can easily monitor the progress of their proposals, reducing the need for constant status updates. Plus, with all evaluations stored digitally, they have a valuable resource to help them improve future submissions.

Future researchers, the system creates a consistent process and clear evaluation standards, setting expectations for new projects. The stored information gives future researchers the opportunity to learn from past submissions and better understand what makes a proposal successful. This knowledge base helps maintain research quality and reduces learning curves for new researchers.

Faculty, the system organizes research proposals and provides structured review templates, reducing time spent searching for documents or checking submission statuses. This gives faculty the opportunity to offer more detailed feedback and stay more connected with the research activities happening in their department. Faculty members can access submissions from any location, improving flexibility in the review process.

Research administration, digital workflows replace paper-based processes, reducing lost documents and enabling quick information retrieval. With automated notifications, administrators don't have to follow up manually as often, giving them more time to focus on helping and guiding researchers. The system provides comprehensive tracking and reporting capabilities that support institutional decision-making and compliance requirements.

Academic institutions, Eastern Samar State University and similar institutions benefit from standardized procedures that promote fairness and consistency across departments. Improved efficiency can lead to more completed research projects and better institutional standing, while also providing useful data on research activities for planning and resource allocation. The system enhances the university's reputation by demonstrating commitment to modern, efficient research management practices.

DEFINITION OF TERMS

The following terms are defined operationally as used in the study Web-Based Automated Research Approval and Submission System:

Automated Notification Mechanisms - Digital alerts and updates that automatically inform users about submission status changes, new comments, pending reviews, and approval decisions without requiring manual intervention from administrators.

Chapter Submission Workflow - A sequential digital process that enables students to submit research chapters (Chapters 1 through 5) in order, requiring adviser approval before proceeding to the next chapter submission phase.

Collaborative Commenting System - A role-based digital feature that allows advisers to provide feedback through threaded discussions on Chapters 1-3, while panel members can comment on all chapters (1-5) only after students have completed their proposal oral final defense.

Document Tracking - The systematic monitoring and recording of research proposal documents throughout the approval process, providing real-time visibility into submission status and location within the workflow.

Panel Evaluation System - A digital platform feature that allows faculty panel members to review completed research proposals and provide structured feedback through comments only after students have completed their proposal oral final defense.

Research Information Management (RIM) - The aggregation, curation, and utilization of information about research activities, emerging as part of scholarly communications practice in university libraries to support institutional research oversight.

Research Information Management Systems (RIMS) - Digital platforms that support the transparent aggregation, curation, and utilization of data about institutional research activities, helping universities monitor research processes and identify areas for improvement.

Research Title Submission Feature - A digital process that allows students to upload proposal documents for their research titles and receive automated notifications regarding approval or revision requirements from panel members.

Role-Based Access - A system security feature that provides different levels of access and functionality for students, faculty advisers, panel members, and administrators based on their specific roles within the research approval process.

User Registration System - A digital process where students can input their group members, college affiliation, and academic details, with administrative verification required before gaining system access.

Web-Based Automated Research Approval and Submission System - A comprehensive digital platform designed to facilitate the research proposal workflow from title submission through final panel evaluation, reducing processing time and improving document tracking for students, faculty, and administrators at Eastern Samar State University.