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Text in italics is our guide and should be deleted in completed documents.

Ethics Code	<i>As indicated in the ethics clearance</i>
Research Title	Faculty Academic Requirements Management System
Researcher/s	Fidel, Diana Rose V. Mingo, Ed Judah E. Nabayra, James V. Villamarzo, Kazel S.
College/Department	BSIT
Project Period	<i>July 2024 to January 2025</i>
Report Submission date	<i>11/28/2024</i>
I. Abstract and Keywords	
<p>A study was conducted to design and develop a Faculty Academic Requirements Management System for PUP Taguig to address inefficiencies in the current manual process of managing faculty submissions. The initiative aimed to streamline tracking, enhance file security, and expand digital infrastructure. The project was undertaken to resolve challenges such as time-consuming manual monitoring, inconsistent reminders, poor document categorization, limited storage capacity, and insufficient access controls, all of which hindered efficiency and compliance with ISO standards.</p> <p>The study identified critical gaps in the existing process, including the lack of automation, vulnerability of files to unauthorized access, and inadequate infrastructure to handle increasing volumes of submissions. The findings revealed that an automated system can significantly improve resource management by reducing administrative workloads, minimizing human error, and fostering collaboration among faculty members.</p> <p>These findings are crucial as they underscore the potential of technology to transform faculty resource management. By implementing a secure, scalable, and efficient system, PUP Taguig can improve compliance with ISO standards, ensure the integrity of academic records, and create a more collaborative and productive teaching environment. The system not only addresses current inefficiencies but also establishes a sustainable framework for future advancements in academic resource management, ultimately enhancing instructional quality and operational excellence at the institution.</p>	
II. Introduction	

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Managing faculty academic requirements efficiently is crucial in fostering a collaborative and high-quality educational environment, particularly in institutions like the Polytechnic University of the Philippines - Taguig (PUP-T). However, the current manual processes employed at PUP-T present significant inefficiencies, including time-consuming tracking methods, inconsistent reminders, and challenges in document organization and accessibility. These issues undermine administrative productivity and hinder the timely submission of academic requirements, which are essential for maintaining ISO certification standards.

Research highlights the transformative role of digital systems in enhancing academic processes. The **Technology Acceptance Model (TAM)** (Davis, 1989) underscores the significance of perceived ease of use and usefulness in ensuring the adoption of new technologies, while **Vygotsky's Collaborative Learning Theory** (1978) emphasizes the importance of collaborative platforms for resource sharing and improved teaching outcomes. Studies by De Guzman and Fernando (2018) and Santos and Reyes (2019) have demonstrated that centralized academic management systems significantly improve administrative efficiency and faculty performance by streamlining workflows and enhancing resource accessibility. Similarly, findings by Abdullatif and Gameil (2020) indicate that systematic integration of digital technology can enhance knowledge dissemination and academic performance.

Despite these advancements, the lack of a robust digital infrastructure at PUP-T hampers efficient management of academic requirements. The proposed Faculty Academic Requirements Management System seeks to address these gaps by automating tracking processes, enhancing document security through access controls, and providing scalable storage solutions. By integrating principles of collaboration and user-centered design, the system aspires to not only solve current challenges but also create a dynamic platform that fosters teamwork and elevates the educational standards at PUP-T. This study aims to explore the implementation and potential impacts of such a system in transforming academic management at the institution.

III. Materials and Methods

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Materials and Methods

This study focuses on developing a Faculty Academic Requirements Management System to enhance learning at the Polytechnic University of the Philippines (PUP) Taguig. The research methodology involves various systematic processes to ensure the credibility, reproducibility, and reliability of the study.

Research Design

The study utilized a quantitative research design, focusing on collecting and analyzing numerical data to evaluate the system's performance, efficiency, and user satisfaction. The researchers employed survey questionnaires, designed to align with the system's functionalities, as the primary data-gathering instrument. The numerical data were statistically analyzed to identify trends and patterns, ensuring an objective assessment.

Sources of Data

Data were collected from faculty members and administrative staff at PUP Taguig. Respondents completed survey questionnaires distributed via Google Forms. Additional data sources included system logs, usage statistics, and performance metrics generated by the proposed management system, which provided supplementary insights into the system's efficiency and functionality.

Respondents

The respondents consisted of two groups: administrative staff and faculty members. Administrative staff played critical roles in accessing and managing academic data, while faculty members were directly involved in creating and managing instructional materials. This targeted respondent group ensured the inclusion of diverse perspectives relevant to the system's use and impact.

Research Instrument

A structured survey questionnaire served as the primary instrument. It contained three sections: demographic information (e.g., age, gender, role), Likert scale-based questions evaluating system performance, and user satisfaction ratings. Numerical responses enabled statistical analysis of system functionality, ease of use, and reliability.

Data Collection Procedures

The questionnaires were distributed electronically via Google Forms, accompanied by a cover letter explaining the study's objectives and confidentiality measures. Respondents had two weeks to complete the survey, with reminders sent after one week. The system automatically processed responses, ensuring a streamlined and efficient data collection process.

System Development Methodology

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The Agile System Development Life Cycle (SDLC) guided the system's development. This iterative approach comprised multiple sprints, each involving requirement gathering, planning, construction, testing, deployment, and review. Adjustments were made based on feedback, ensuring the system aligned with user needs.

Statistical Analysis

The survey data were analyzed using measures of central tendency, specifically the mean, to summarize responses. Likert scale ratings were aggregated and averaged per category, providing insights into system performance and user satisfaction. Graphs and charts visually represented the findings, facilitating the identification of strengths and areas for improvement.

Ethical Considerations

The study adhered to ethical standards, ensuring informed consent from respondents and compliance with the Data Privacy Act (RA 10173). Participation was voluntary, and confidentiality was strictly maintained throughout the research process.

This comprehensive methodology ensures the reliability and validity of the study, providing a replicable framework for evaluating academic management systems in similar contexts.

IV. Results and Discussions of the Accomplishments per Objectives

In the Results section, simply state what you found, but do not interpret the results or discuss their implications.

- Use subheadings to separate the results of different experiments.
- Results should be presented in a logical order.
- Do not duplicate data among figures, tables, and text.
- Include the results of statistical analyses in the text, usually by providing p values wherever statistically significant differences are described.
- Your Discussion and Conclusions sections should answer the question: What do your results mean?

V. Proposed Utilization/Dissemination Activities (emanating from the results)

In this section you should detail the proposed utilization of the project and/or dissemination activities. This includes a Gantt Chart and identified conferences/fora, community/ies and journals.

VI. Actual/Perceived Impact of the Results

In this section you should detail the actual impact or perceived impact of the results in the identified sector, group, or participants.

VIII. References





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- Al-Abdullatif, A. M., & Gameil, A. A. (2021, June 4). The Effect of Digital Technology Integration on Students' Academic Performance through ProjectBased Learning in an E-learning Environment. *International Journal of Emerging Technologies in Learning (Ijet)*.
<https://doi.org/10.3991/ijet.v16i11.19421>
- Davies, R. S., & West, R. (2014, January 1). Technology Integration in Schools. ResearchGate.
https://www.researchgate.net/publication/313191395_Technology_Integration_in_Schools
- De Guzman, R., & Fernando, M. (2018). Efficiency improvements through centralized academic management systems. *Philippine Journal of Higher Education*, 15(1), 89-105.
- Fearnley, M. R., & Amora, J. T. (2020). Learning Management System Adoption in Higher Education Using the Extended Technology Acceptance Model. *IAFOR Journal of Education*, 8(2), 89-106.
- Paguirigan, J. (2023). Customized learning management system for the students and teachers of Isabel State University-Ilagan Campus, Philippines. *JETT*, 14(1), 302-313.
- Santos, L., & Reyes, K. (2019). Impact of digital platforms on faculty performance and administrative efficiency. *Philippine Journal of Educational Management*, 8(3), 22-38

IX. List of Equipment (if there is any)

In this section you should list the main equipment/systems were purchased from the budget of this project, please include the name, purpose, and model of them

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Submitted by <p>Name of the Researcher/s</p> <p>Diana Rose V. Fidel</p> <p>Ed Judah E. Mingo</p> <p>James V. Nabayra</p> <p>Kazel S. Villamarzo</p>	Signature and Date Date: 11/26/2024  <p>Diana Rose V. Fidel</p>  <p>Ed Judah E. Mingo</p>  <p>James V. Nabayra</p>  <p>Kazel S. Villamarzo</p> <p>Signature of the Researcher/s</p>
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