**CHAPTER I**

**THE PROBLEM AND ITS BACKGROUND**

INTRODUCTION

Monitoring and oversight of faculty activities is essential to academic institutions' ability to sustain high-quality instruction, encourage research projects, and guarantee general institutional effectiveness. Defined as an organized and systematic observation by Bessons et Al, he added that monitoring encompasses a broad spectrum of objects, phenomena, and processes, with the goal of evaluation, control, and prognostication. In the context of university education, monitoring serves as an indispensable tool for comprehensively understanding and enhancing the educational environment as stated by Singer‐Brodowsk et. Al. Historically, monitoring is done manually that make it hard to track the needed information but with the proliferation of Internet of Things (IoT) and mobile computing technologies, there is a significant perspective to design automatic monitoring systems for enhanced school system and and any other things that needed to be monitored to provide correct conditions evaluation according to Marques, G., & Pitarma.

Researchers conducted interviews with the academic unit and administrative staff in Batangas State University The National Engineering University ARASOF-Nasugbu Campus, identifying several issues and challenges regarding monitoring faculty effectiveness at the campus. In line with this, it is found that BatStateU TNEU ARASOF- Nasugbu Campus, faces problems in efficiently tracking faculty involvement in various academic activities, such as teaching, research, and student mentorship. It revealed the difficulty in maintaining consistency and tracking faculty members' involvement and compliance with deadlines. The lack of a system leads to confusion and inconsistencies in monitoring academic activities and submission deadlines. Even if Google Classroom platform facilitate the submission of requirements and reports, specific deadlines are not closely monitored due to the limited storage of the Google Drive of school. This results in faculty members struggling to monitor their quickness and stay on target dates. These challenges collectively reduce faculty effectiveness and disrupt communication and coordination among faculty members and administrative offices, potentially compromising the institution's overall academic efficiency.

To address these issues, the researchers proposed a system called EfficienSee: Enhancing Academic Efficiency through Faculty Involvement Monitoring System at BatStateU ARASOF- Nasugbu Campus. The EfficienSee system uses technology to automate the tracking and management of faculty activities to maximize resource use, enhance transparency, and minimize administrative procedures. Through real-time monitoring and analytics, EfficienSee enables educational institutions to make data-driven decisions that ultimately increase organizational performance and efficiency.

According to Haleem et. Al, the use of network technology to power a monitoring system aims to ensure inclusive and equitable quality education for all. Automation of the real-time monitoring system for the educational processes can be possible through the development and improvement of the information technologies, algorithms, and computational methods, such as machine learning methods, analysis, and visualization of big data processesprovides a variety of ways to improve academic productivity based on the study of Atymtayeva et. Al. Ahmad and Zhang emphasized that without adding to the workload, it offers insights into faculty participation in teaching, research, and administrative responsibilities by enabling real-time tracking and automatic data gathering. The automated monitoring system will guarantee responsibility and transparency in workload distribution, and supports resource allocation decisions through performance analysis and communication tools based on Ahmad's completed studies. Furthermore, by enabling flexible scheduling depending on availability and preferences, it helps faculty members maintain a healthy work-life balance, it essentially uses network technology to maximize faculty well-being, improve academic operations, and eventually increase the overall effectiveness for academic institutions, coming in from the Margins. (n.d.). Google Books.

The primary objective of this study is to offer a thorough framework for the efficient management and monitoring of teachers' instructional activities. The system's user-friendly interface, strong tracking capabilities, and analytical insights are intended to enhance academic administration practices. It also seeks to address the flaws of earlier methods. Through careful evaluation and validation, this study aims to demonstrate how successful EfficienSee is at making a creative and high-achieving culture in educational institutions.

BACKGROUND AND SETTINGS OF THE STUDY

The implementation of the study will take place at The Batangas State University, The National Engineering University ARASOF located at Nasugbu, Batangas. With the guide of university mission and vision that aimed at fostering excellence, innovation, and societal impact, the researchers propose the EfficienSee: Enhancing Academic Efficiency through Faculty Involvement Monitoring System to solve the problem being face of the university.

Batangas State University The National Engineering University ARASOF- Nasugbu Campus faces difficulties in keeping track of faculty participation in different academic tasks. Traditional methods of tracking faculty engagement, such as manual recording and paper-based systems, are often inefficient and prone to errors, leading to difficulties in ensuring high-quality teaching and resource allocation. To address these challenges, the researchers proposed EfficienSee**:** Enhancing Academic Efficiency through Faculty Involvement Monitoring System designed for automatic monitoring and tracking of faculty activities at Batangas State University The National Engineering University ARASOF- Nasugbu Campus. EfficienSee aims to provide a centralized platform for academic unit, administrative staff, and faculty members to monitor and coordinate academic activities more effectively.

On the system that we are proposing, faculty members would have the capability to monitor their academic engagements, including teaching sessions, research projects, community services, committee participation, and professional development.

The main reason why the researchers conducted this study was to help improve academic efficiency at BatStateU ARASOF by addressing the challenges faced in monitoring faculty involvement and meeting deadlines consistently. The EfficienSee system aims to not only offer but also provide comprehensive support for faculty members, administrative staff, academic unit in monitoring and managing their academic activities and engagements efficiently.

STATEMENT OF THE PROBLEM

This study aimed to propose a system that provides the full monitoring and tracking for the academic units, administrative staff and faculty members in the Batangas State University ARASOF- Nasugbu Campus. Specifically, the study sought to answer the following questions:

1.What are the issues and challenges encountered by academic units, administrative

staff, and faculty members in academic operations in terms of:

1.1 Managing of faculty involvement and achievements.

1.2 Monitoring the efficiency and effectiveness of the faculty.

1.3 Collection and consolidation of deliverables?

2. What is the level of satisfaction of the users on the proposed system in terms

of:

2.1 Accuracy.

2.2 Content

2.3 Ease of Use

2.4 User Interface: and

2.5 Responsiveness

3. What is the level of acceptance of the users on the proposed system in terms of:

3.1 Functionality.

3.2 Reliability.

3.3 Usability

3.4 Security and;

3.5 Accessibility

SIGNIFICANCE OF THE STUDY

The researchers agreed to create a system called "EfficienSee" or ‘Faculty Involvement Monitoring System’. This system is intended to address the common problems faced by academic units, administrative staff, and faculty members. EfficienSee is an innovative system designed to improve academic efficiency by offering organized and simplified monitoring and tracking of various academic activities and faculty involvement.

**University**. The system helps the university manage academics, track faculty, organize tasks, communicate better, analyze data, stay compliant, make smart decisions, and operate efficiently.

**Academic Units**. With the proposed system academic units effectively monitor and coordinate academic activities, facilitate better communication, and promote collaboration among different departments and personnel within the institution.

**Administrative Staff.** The proposed system will provide the administrative staff to better organize academic tasks, manage paperwork more efficiently, and communicate effectively with faculty members and staff in the college.

**Faculty Members**. The system helps the faculty members to manage their academic tasks more efficiently, keep track of deadlines, and collaborate effectively with colleagues and students.

**Researchers**. The study would help the researcher to develop their programming skills and knowledge as well as their patience, confidence, and self-esteem. While conducting the research, the researcher would develop their intellectual skills and would be able to help them think critically about the topic. Also, it would help to develop the researcher's performance in a comprehensive way.

**Future Researcher**. This will guide and provide information to upcoming researchers, and it will help them to have an idea about Tracking and Monitoring Systems. Also, it will give them additional information about the said topics.

SCOPE AND LIMITATION OF THE STUDY

This research focuses on proposing and evaluating the EfficienSee system at The Batangas State University The National Engineering University ARASOF-Nasugbu Campus. The study entails developing and implementing the EfficienSee system to tracks faculty participation across diverse academic activities, including teaching, research, community services, community communication and professional development automatically. The research evaluates user satisfaction and system acceptance among academic units, administrative staff, and faculty members, considering aspects like accuracy, ease of use, and functionality.

This application has multiple user accounts, including the academic units, administrative staff, and faculty members. Along with the administrative staff, the Vice Chancellor and Program Chairperson are members of the academic units and function as system administrators. To uphold the college's organization and communication standards, they are essential in handling paperwork, promoting communication with teachers and staff, and efficiently organizing educational tasks.

Within the scope of the EfficienSee, faculty involvement management stands as a central component. The system diligently tracks faculty participation across diverse academic activities including teaching, research, service, and professional development, through real time-monitoring and reporting mechanisms. Time tracking and reporting   
capabilities further increase the system’s functionality according to Wang et. Al, enabling faculty members to carefully log their activities and assign time resources effectively.

EfficienSee serves as an assistant, issuing timely reminders to faculty regarding impending deadlines and deliverables for academic requirements.  
This feature ensures that faculty members remain aware of their obligations and can   
grant time efficiently to meet academic commitments.

This study is limited to the ARASOF-Nasugbu Campus only. The range and depth of the investigation may be impacted by time, resource, and technological limitations. It does not currently include a mechanism for gathering student feedback or conducting student evaluations of faculty performance. Integrating student feedback into the "EfficienSee" system would provide a more comprehensive view of faculty performance and engagement. Ensuring the privacy and confidentiality of student evaluations would require strong data protection measures and compliance with relevant regulations and policies.

DEFINITION OF TERMS

For the better understanding of this study, the following terms are technically and operationally defined:

Academic Institution In this study, it refers to the Batangas State University The National Engineering University ARASOF- Nasugbu Campus.

**Academic units This term refers to the Vice Chancellor and Program Chairperson who are responsible for supervising academic activities and policies within an educational institution.**

**Academic Performance The** achievement and effectiveness of faculty members in carrying out their academic duties and responsibilities at BatStateU ARASOF- Nasugbu Campus, including teaching, research, and service.

**Accuracy** As used in this study, it is the degree to which the EfficienSee system provides correct and reliable information about faculty activities and academic operations, ensuring data integrity and trustworthiness.

**Accountability The responsibility of faculty members to perform their duties effectively and transparently, and to be answerable for their actions and decisions.**

**Compliance** The adherence to rules, regulations, and deadlines set by academic units and administrative staff at BatStateU ARASOF-Nasugbu Campus, particularly in relation to faculty involvement and academic activities.

**Efficiency** The ability to do tasks quickly and effectively without wasting time or resources.

**Faculty** **It signifies** the teachers or instructors working at Batangas State University and the National Engineering University's ARASOF- Nasugbu Campus.

**Involvement** The degree to which faculty members are engaged in various academic activities, such as teaching, research, and community service.

**Innovative** This term pertains to the introduction of new ideas, methods, or technologies, such as the EfficienSee system, to improve academic efficiency and effectiveness in higher education.

**Monitoring** It refers to keeping track of something, such as faculty activities, to ensure that everything is going smoothly.

Proposed System The innovative solution suggested by researchers to improve academic efficiency through monitoring faculty involvement.

Researcher The BS Information Technology students who conducted the research.

**Transparency** The principle of operating in a way that is open, honest, and accountable, providing clear and accessible information about academic activities and decisions.

**Usability** The degree to which a system, such as EfficienSee, is easy to use, allowing users, including faculty members and administrative staff, to navigate and interact with the system efficiently and intuitively.

User Accounts It refers to the academic units, administrative staff and faculty members that can access the system.

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