

## Scope and Limitations

This capstone project focuses on the development of a web-based document management system specifically designed for Cavite State University – Bacoor City Campus Extension Services. The system aims to streamline the processing, monitoring, and management of documents related to extension projects and activities. It supports a structured document flow that includes uploading, reviewing, approval, and status tracking of documents marked as pending, approved, rejected, ongoing, or completed. The platform also incorporates a role-based access system where users—such as the Staff Extensionist, Department Coordinator, Campus Coordinator, and School Dean (Super Admin)—are provided with features based on their respective responsibilities and privileges.

An additional feature of the system is its attendance module, which enables users to log and view attendance per activity. This data is automatically visualized through graphs, providing users with a clear and analytical overview of participation trends. Each document has an integrated chat box that allows users involved in a specific project to communicate directly within the system, promoting collaboration and quick feedback. Moreover, the system includes a reporting module where the Staff Extensionist and Campus Coordinator can generate and print structured quarterly and annual reports in PDF format. To ensure timely engagement, the system provides real-time notifications for document uploads as well as alerts two days prior to upcoming extension activities.

Despite its wide range of functionalities, the system has limitations. As a web-based platform, it is dependent on a stable internet connection, and it does not support offline or mobile application access. The chat feature, while useful for basic discussions, lacks real-time instant messaging capabilities and is restricted to document-specific conversations. Report generation is limited to a predefined template and does not allow full customization. The notification system is basic, offering only a single alert for document uploads and a two-day advance notice for scheduled activities. Furthermore, the role-based access control is fixed, meaning users cannot create or modify roles or permissions beyond what is already programmed. Lastly, the system does not support integration with external applications or tools such as Google Calendar, Microsoft Office, or cloud storage platforms, which could enhance its flexibility and interoperability.

## Automated Attendance Monitoring Systems

Automated Attendance Monitoring Systems have become increasingly popular in Philippine educational institutions due to their potential to streamline attendance tracking, reduce human error, and discourage absenteeism, but their implementation often faces issues such as equipment maintenance, resistance from users unfamiliar with technology, and limitations in internet connectivity in rural areas, all of which must be addressed to achieve the system's full potential in enhancing academic accountability (Reyes, et al., 2020).

## Synthesis

The reviewed literature collectively emphasizes the growing necessity and benefits of **Web-Based Document Management Systems (WDMS)** in both educational and institutional contexts. These systems are increasingly adopted to replace traditional paper-based processes, offering significant improvements in **efficiency, accessibility, data security, collaboration, and record management**.

Locally, various implementations in Philippine academic institutions and government offices (Estrera et al., 2022; Nagrama et al., 2024; Del Rosario & Santos, 2023) demonstrate the relevance of WDMS in enhancing workflows, minimizing document handling delays, and ensuring long-term preservation of critical data. Studies stress the importance of integrating features such as **automation, role-based access, user-friendly interfaces**, and **secure digital archiving**.

Foreign studies support these findings, highlighting successful implementations of WDMS in various sectors, including education and healthcare. Alade (2023) and Triyana & Fianty (2023) report high user satisfaction rates and improved document management efficiency in schools, while Zhang et al. (2023) showcase how cloud-based systems in hospitals improve **data security, compliance, and retrieval speed**.

Despite the advantages, challenges persist in both local and global implementations. These include **technical limitations, high initial costs, internet dependency**, and **resistance to change**, especially in rural or resource-constrained settings (Gonzales et al., 2023; Reyes et al., 2020). The success of these systems heavily depends on proper planning, infrastructure readiness, and user training.

In a parallel context, **Automated Attendance Monitoring Systems** are being introduced in Philippine schools to enhance academic accountability. Like WDMS, these systems face challenges related to **technology adoption, equipment upkeep**, and **internet connectivity**, particularly in underserved areas (Reyes et al., 2020).

Overall, the convergence of findings across studies underlines the strategic role of digital systems like WDMS and attendance trackers in transforming traditional processes. For successful implementation, both **technical robustness** and **human-centric design** must be prioritized to ensure broad usability, sustainability, and long-term impact.