



Exploring Challenges and Inefficiencies in Managing Student Records and Academic Monitoring in the College of Marine Engineering at the Philippine Merchant Marine Academy (PMMA): Perspectives of Students and Teacher as Basis for a Proposed Case Management System

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Abstract

This study explores the challenges and inefficiencies in managing student records and monitoring academic progress in the College of Marine Engineering at the Philippine Merchant Marine Academy (PMMA). The goal is to assess the current system and propose a case management solution that meets the needs of both students and teachers. Using surveys and interviews, feedback was collected from 20 instructors and 132 students. The results revealed a significant gap in their experiences. While students reported fewer issues, teachers highlighted major concerns such as time-consuming manual processes, lack of real-time tracking, and systems that are not user-friendly. Both students and teachers agreed on the need for a centralized platform to simplify record-keeping and academic monitoring. Features like real-time updates, automated attendance tracking, improved communication tools, and a user-friendly design were identified as priorities for the proposed system.

This study underscores the importance of creating a case management system tailored to the needs of PMMA's academic community. Such a system would not only address existing challenges but also enhance efficiency and improve the overall experience for students and educators alike. By adopting this solution, PMMA can take a significant step toward modernizing its academic operations and supporting its stakeholders more effectively.

Keywords: Case management system, academic progress monitoring, student records

Introduction

The management of student records and academic monitoring in educational institutions is crucial for operational efficiency and quality assurance. At the Philippine Merchant Marine Academy (PMMA), a prestigious institution specializing in maritime education, these tasks are particularly challenging due to the specific requirements of marine engineering education. The complexity of academic monitoring in this field is amplified by the need for both theoretical and practical training, which demands precise record-keeping and real-time performance assessments (Smith, 2019) ^[23].

Currently, the use of outdated digital processes at PMMA has led to numerous inefficiencies and challenges. According to a study by Reyes and Hernandez (2021) ^[21],

these include delays in record retrieval, data inaccuracy, and difficulties in tracking student progress comprehensively. The reliance on manual processes not only consumes significant time but also increases the likelihood of errors. As a result, stakeholders such as students and teachers experience frustration, with students facing delays in accessing their academic records and educators struggling to provide timely feedback (Garcia, 2020) ^[10].

The need for a robust, integrated case management system is evident as a means to streamline processes, enhance data accuracy, and facilitate efficient record management and academic monitoring. Such a system would enable real-time updates, facilitate better communication between students and faculty, and enhance overall academic performance tracking. Moreover, adopting a more modern approach to

student record management aligns with global trends in education technology, promoting better learning environments (Johnson & Adams, 2022) ^[15].

This study seeks to explore the perspectives of students and teachers in the College of Marine Engineering at PMMA regarding the current challenges and inefficiencies in managing student records. Insights from this research will inform the development of a proposed case management system that addresses these issues effectively, ultimately aiming to improve academic outcomes and operational efficiency at the academy.

Integrated Literature and Studies

The effective management of student records and academic monitoring is paramount for educational institutions, especially in specialized fields like marine engineering at the Philippine Merchant Marine Academy (PMMA). Manual processes are a significant challenge in managing student records, often leading to inefficiencies and errors due to the reliance on paper-based systems (Johnson & Lee, 2019) ^[16]. This inefficiency is compounded by integration challenges, where disparate systems fail to communicate effectively, thereby hindering streamlined access to comprehensive student data (Miller, 2018) ^[18].

Academic monitoring also faces substantial hurdles, particularly the lack of real-time monitoring capabilities, which limits educators' ability to provide timely support to students (Brown & Taylor, 2021) ^[5]. Traditional feedback mechanisms often fall short of offering personalized insights necessary for fostering individual student growth, which negatively affects engagement and performance (Nguyen, 2020) ^[19]. Despite these challenges, the adoption of technology, particularly digital record systems and case management systems, has shown promise in addressing these issues (Garcia & Lopez, 2019) ^[11]. These systems enhance efficiency by reducing errors and providing easier access to student information, crucial for accurate academic monitoring (Clark & Davies, 2017) ^[6].

The perspectives of both students and teachers underscore the importance of efficient management systems. Research indicates that students experience increased satisfaction and engagement when academic administration is handled efficiently (Thompson, 2021) ^[26]. Similarly, improved

systems have been linked to reduced teacher workload, allowing educators to focus more effectively on delivering quality education (Harris, 2020) ^[13]. These improvements suggest that implementing an integrated case management system at PMMA could significantly enhance both student and teacher experiences, ultimately leading to better educational outcomes.

Theoretical and Conceptual Framework

In educational institutions like the Philippine Merchant Marine Academy (PMMA), efficient management of student records and academic monitoring is crucial for enhancing educational performance and operational efficiency.

The Information Systems Success Model by DeLone and McLean (1992) ^[8] provides a comprehensive framework for evaluating the implementation and impact of information systems. It suggests that information systems can be measured in terms of system quality, information quality, and service quality, which collectively contribute to user satisfaction and overall net benefits. Therefore, adopting a case management system within the PMMA could enhance these dimensions by streamlining processes and improving access to accurate and timely information.

Active Learning Theories emphasize the importance of adaptive systems that respond to both student and educator needs (Prince, 2004) ^[20]. Integrating an interactive and intuitive case management system could facilitate active participation and engagement in monitoring academic progress, thus improving educational outcomes.

Lastly, theories related to Change Management, such as Kotter's 8-Step Process for Leading Change (Kotter, 1996) ^[17], can provide insight into effectively managing the transition to a new system within the academic environment. It offers a structured approach for implementing change, emphasizing the importance of creating a sense of urgency, building a guiding coalition, and communicating a clear vision.

By drawing on these theoretical perspectives, the development of a case management system can be informed by an understanding of both technical efficiency and user experience, ensuring it meets the needs of students and teachers in the College of Marine Engineering at PMMA.

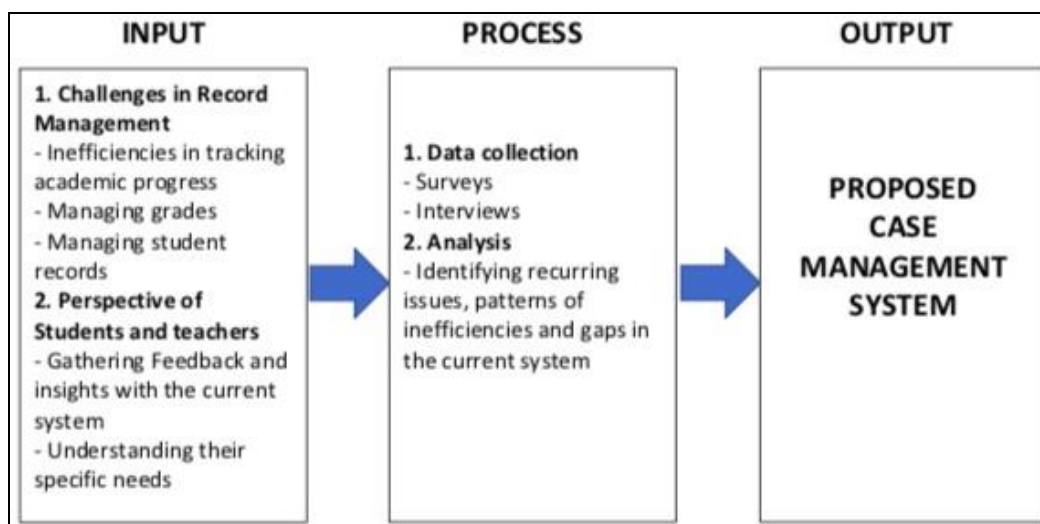


Fig 1: Paradigm of the Study

The study explores the challenges and inefficiencies in managing student records and academic monitoring in the College of Marine Engineering at the Philippine Merchant Marine Academy (PMMA).

The study begins by examining challenges in record management, such as inefficiencies in tracking academic progress, managing grades, and maintaining student records. It also incorporates feedback from students and teachers to understand their experiences with the current system and identify their specific needs.

The research process involves data collection through surveys and interviews, with students and faculty members. This is followed by an analysis phase to identify recurring issues, patterns of inefficiencies, and gaps in the current academic management system. The expected output of the study includes a proposed Case Management System designed to address the identified challenges.

Statement of the Problem

This research tend to answer the following questions:

1. What are the current challenges faced by students and teachers in managing student records and academic monitoring at PMMA?
2. What specific needs and expectations do students and teachers have regarding an efficient case management system for student records and academic monitoring?
3. How can a proposed case management system be designed to address the identified challenges and meet the expectations of both students and teachers at PMMA?

Definition of Terms

Academic Monitoring: Activities related to tracking and evaluating students' academic progress and performance, including assessments and feedback mechanisms.

Current Challenges: Refers to the specific difficulties and obstacles encountered by students and teachers that affect their ability to effectively manage student records and academic monitoring.

Design: The process and method by which the case management system is conceptualized, including its features, user interface, and technical specifications.

Efficient Case Management System: A proposed technological or procedural framework designed to streamline the handling and processing of student records and enhance academic monitoring capabilities.

Expectations of Both Students and Teachers: The anticipated functionalities and solutions that should be provided by the system to meet user needs effectively.

Identified Challenges: The specific problems and inefficiencies previously recognized that need to be addressed by the new system.

Managing Student Records: The process of maintaining, organizing, and accessing various types of student information such as enrollment details, grades, attendance, and personal data.

Proposed Case Management System: The new or revised framework suggested for implementation to address inefficiencies in current practices related to student records and academic monitoring.

Specific Needs and Expectations: The particular requirements and desires that students and teachers have from a case management system to facilitate better management and monitoring of academic data.

Students and Teachers: The primary stakeholders involved in the management of academic records, where students are the end-users of the systems and teachers are both users and custodians of academic information.

Research Design

This research is a mixed-methods exploratory study designed to investigate challenges and inefficiencies in managing student records and academic monitoring at the Philippine Merchant Marine Academy. By using both qualitative methods, such as interviews and quantitative methods, like surveys, the study gathers comprehensive insights from students and teachers. This approach allows for a detailed understanding of the issues, combining the depth of qualitative data with the breadth of quantitative data (Creswell & Plano Clark, 2017) [6]. The ultimate goal is to use these insights to propose a tailored case management system that addresses the identified inefficiencies and meets the needs of its users (Tashakkori & Teddlie, 2010) [25].

Participants

The respondents of the study were twenty (20) instructors and one hundred thirty-two students from the College of Marine Engineering at the Philippine Merchant Marine Academy. Break down of students were as follows:

Table 1: Breakdown of Student Respondents

Year Level	Number
4cl (first year)	53
3cl (2 nd year)	45
1cl (4 th year)	34
Total	132

Ethical Considerations

The research was achieved in a fair, truthful and evident manner. The profile of the respondents gathered was treated with confidentiality and for research purpose only. Most of all, all the literature, studies and references were acknowledged and credited all the relevant literature, studies, and references used.

Instrumentation

The instrument is a researcher made questionnaire that has three parts. Part I is the demographic profile. Instructors and the students. Part II is a four point likert scale towards the challenges and inefficiencies in managing student records and academic monitoring. Part III is an open ended question about the student and teachers perception on the current case management system.

Procedure

The data collection process began with the determination of

the study's inputs. After validating the questionnaires, the researcher, encoded on the google forms the survey questionnaire. For the data collection phase, the researcher send the survey to the target audience and collected the results.

Results and Discussion

Challenges in Managing Student Records and Academic Monitoring: The following are the discussion on the challenges in managing student records and academic monitoring faced by students and teachers.

Table 2: Challenges Faced by Students in Managing Records and Academic Monitoring

Statements	Weighted Mean	SD	Verbal Interpretation
I often face difficulties accessing my academic records (grades, attendance, etc.).	1.73	0.82	Disagree
My academic progress and performance are difficult to track due to system limitations.	2.42	0.85	Disagree
I frequently encounter discrepancies or errors in my student records.	2.38	0.84	Disagree
Communication between teachers and students about academic progress is often unclear.	2.10	0.73	Disagree
The current system for academic monitoring at PMMA is slow and inefficient.	2.20	0.86	Disagree
I find it challenging to get timely updates about my attendance and performance.	2.24	0.86	Disagree

The results in Table 2 indicates that students generally do not face significant challenges in managing their academic records and monitoring their progress, as all the weighted means fall below the midpoint of the scale. For instance, the statement regarding difficulties in accessing academic records received the lowest mean (WM = 1.73, SD = 0.82), reflecting a consensus that this is not a prevalent issue. Similarly, students disagreed with encountering discrepancies or errors in their records (WM = 2.38, SD = 0.84) and found communication about academic progress to be clear (WM = 2.10, SD = 0.73). Although tracking academic progress (WM = 2.42, SD = 0.85) and receiving timely updates on attendance and performance (WM = 2.24, SD = 0.86) were rated slightly higher, these still fall within the "Disagree" category, suggesting only minor concerns for a subset of students. The current system for academic monitoring was also perceived as relatively efficient (WM =

2.20, SD = 0.86). Overall, the responses reveal a shared experience of minimal challenges, with low to moderate variability in perceptions, suggesting that while the system is generally effective, addressing concerns related to tracking progress and record discrepancies could further enhance its functionality.

A study by Al-Sharhan (2014) ^[4] emphasized the importance of accessibility and user-friendly interfaces in e-learning systems. Findings revealed that systems with intuitive navigation and simple login features lead to higher user satisfaction and adoption rates.

According to Hamad *et al.* (2021) ^[12], communication tools like notifications for updates, assignments, and exams are integral to maintaining engagement and improving academic success. Proactive notifications reduce delays in academic tasks and foster better coordination between teachers and students.

Table 3: Challenges Faced by Teachers in Managing Records and Academic Monitoring

Statements	Weighted Mean	SD	Verbal Interpretation
Managing and updating student records is time-consuming and inefficient.	2.86	1.07	Agree
The current system does not provide accurate and real-time academic monitoring data.	3.00	0.82	Agree
Tracking student attendance and participation is often difficult.	2.86	1.07	Agree
The system's interface is not user-friendly for teachers to navigate.	2.86	0.90	Agree
Discrepancies in academic records are difficult to resolve.	2.86	0.90	Agree
The current system lacks the tools necessary to monitor and communicate student progress effectively.	3.14	0.69	Agree

The data in Table 3 highlights several challenges faced by teachers in managing records and monitoring academic progress, as all items received weighted means within the "Agree" range. Teachers perceive managing and updating student records as time-consuming and inefficient (WM = 2.86, SD = 1.07), indicating a shared concern about the workload associated with record management. Similarly, the system's inability to provide accurate and real-time academic monitoring data (WM = 3.00, SD = 0.82) emerged as a notable issue, suggesting that teachers find the lack of immediacy and reliability in data a significant hindrance. Difficulties in tracking student attendance and participation (WM = 2.86, SD = 1.07) and resolving discrepancies in records (WM = 2.86, SD = 0.90) also point to operational inefficiencies that disrupt teachers' workflows. Moreover, the system's interface is perceived as not user-friendly (WM = 2.86, SD = 0.90), further compounding these challenges. The highest-rated concern was the lack of tools necessary to monitor and communicate student progress effectively (WM = 3.14, SD = 0.69), reflecting a clear need for improvements

in system functionality. While standard deviations suggest some variability in perceptions, the overall agreement underscores a consistent acknowledgment among teachers regarding the limitations of the current system. Addressing these issues, particularly by enhancing system usability and introducing effective monitoring tools, could significantly improve teachers' efficiency and effectiveness in managing records and monitoring student progress.

Research by Ahmed *et al.* (2018) ^[1] highlighted that teachers perceive manual or inefficient academic record management systems as a significant contributor to increased workload. Teachers expressed frustration with time-intensive processes, which detract from instructional time and negatively impact productivity.

According to Al-Kindi and Al-Ani (2020) ^[3], teachers frequently encounter challenges with academic systems that fail to provide accurate, real-time data. The study identified the lack of immediacy in academic monitoring tools as a major barrier to effective teaching and timely interventions.

Needs and expectations regarding efficient case management system: The following are the discussion on

the needs and expectations regarding efficient case management system by students and teachers.

Table 4: Students’ Needs and Expectations Regarding Efficient Case Management System

Statements	Weighted Mean	SD	Verbal Interpretation
I would like to access real-time updates on my grades and academic performance.	2.25	0.83	Disagree
An ideal system should allow me to communicate directly with my teachers about my progress.	3.46	0.50	Agree
I prefer a system that is accessible on multiple devices (laptops, smartphones, etc.).	3.45	0.52	Agree
The system should provide clear and transparent academic records with no discrepancies.	3.50	0.56	Strongly Agree
I expect notifications about upcoming deadlines and class schedules through the system.	3.51	0.52	Strongly Agree
A user-friendly and intuitive interface would improve my academic monitoring experience.	3.52	0.50	Strongly Agree

The results in Table 4 highlight students' perspectives on features they value in a system for managing academic records and monitoring. Students expressed a strong preference for systems that are clear, intuitive, and efficient, as reflected in the highest-rated items. They strongly agreed that academic records should be transparent and free of discrepancies (WM = 3.50, SD = 0.56) and that receiving notifications about deadlines and schedules is essential (WM = 3.51, SD = 0.52). Similarly, the importance of a user-friendly and intuitive interface was emphasized (WM = 3.52, SD = 0.50), making it the highest-rated priority. Students also agreed that systems should enable communication with teachers about academic progress (WM = 3.46, SD = 0.50) and be accessible across multiple devices (WM = 3.45, SD = 0.52), reflecting their desire for flexibility and interaction. On the other hand, students disagreed with the statement about needing real-time

updates on grades and performance (WM = 2.25, SD = 0.83), suggesting that this feature may be less of a concern compared to others.

Overall, the findings emphasize a demand for a modern, multi-functional system that enhances transparency, usability, and communication while supporting students in staying informed and engaged with their academic progress. Aljohani and Davis (2016) [2] highlighted the importance of transparency in academic systems. Their research indicated that students value systems that minimize discrepancies in records, as accurate and reliable information fosters trust and enhances student engagement.

According to Dahlstrom and Brooks (2014) [7], students highly appreciate systems that provide notifications for academic deadlines and schedules. Such features were found to improve time management and help students stay on track with their coursework.

Table 5: Teachers’ Needs and Expectations Regarding Efficient Case Management System

Statements	Weighted Mean	SD	Verbal Interpretation
A real-time academic progress tracking system would improve record-keeping efficiency.	3.71	0.49	Strongly Agree
I need an interface that enables quick and easy updates of student academic data.	3.86	0.38	Strongly Agree
A system with tools for communication and collaboration with students would be useful.	4.00	0.00	Strongly Agree
An academic management system should include features for attendance monitoring.	3.71	0.49	Strongly Agree
A system that integrates multiple academic tools would enhance my workflow.	3.86	0.38	Strongly Agree
Reliable data storage and quick access to student profiles would streamline my work.	3.71	0.49	Strongly Agree

The data in Table 5 underscores teachers' strong agreement on the need for an enhanced academic management system that addresses key challenges in managing records and monitoring student progress. Teachers unanimously expressed the importance of a system equipped with tools for communication and collaboration with students (WM = 4.00, SD = 0.00), highlighting this as the most critical feature. Similarly, they strongly agreed on the value of a user-friendly interface for quick and easy updates of student data (WM = 3.86, SD = 0.38) and an integrated system combining multiple academic tools to streamline workflow (WM = 3.86, SD = 0.38).

Real-time progress tracking (WM = 3.71, SD = 0.49), reliable data storage with quick access to student profiles (WM = 3.71, SD = 0.49), and attendance monitoring features (WM = 3.71, SD = 0.49) were also strongly supported as essential components. These findings suggest a clear consensus among teachers on the need for a comprehensive, efficient, and reliable system to improve their workflow and communication with students. The

uniformly high ratings and low variability reflect consistent recognition of these priorities across the group. By addressing these needs, institutions can significantly enhance teachers' efficiency and effectiveness in managing academic records and monitoring progress.

Veletsianos and Moe (2017) [27] emphasized the critical role of academic systems equipped with tools for teacher-student communication and collaboration. Such systems facilitate real-time feedback, improve engagement, and create a more interactive learning environment.

Shukla *et al.* (2019) [22] reported that integrated systems combining tools like grading, attendance monitoring, and progress tracking streamline workflows for educators. These systems improve productivity by consolidating multiple tasks into a single platform.

Proposed case management system design to address identified challenges: The following are the discussion on the proposed case management system design to address identified challenges by students and teachers.

Table 6: Students' Proposed Case Management System Design

Statements	Weighted Mean	SD	Verbal Interpretation
A well-designed case management system should have easy login and access functionality.	3.54	0.52	Strongly Agree
I prefer a system that allows instant sharing and updates of academic feedback from teachers.	3.45	0.53	Agree
A system with a search function to easily find specific grades or attendance records would be helpful.	3.47	0.53	Agree
Notifications about class updates, assignments, and exams would improve my experience.	3.53	0.50	Strongly Agree
An academic record system should have options for downloading or printing official records.	3.49	0.50	Agree
An intuitive interface and simple navigation would make the system more student-friendly.	3.51	0.52	Strongly Agree

The findings in Table 6 emphasize students' preferences for features that enhance the usability and functionality of academic record management systems. Teachers strongly agreed on the importance of easy login and access functionality (WM = 3.54, SD = 0.52) and a student-friendly system with an intuitive interface and simple navigation (WM = 3.51, SD = 0.52), suggesting that accessibility and ease of use are top priorities. Similarly, they strongly endorsed the value of notifications for class updates, assignments, and exams (WM = 3.53, SD = 0.50), highlighting the need for proactive communication tools.

The ability to instantly share and update academic feedback from teachers (WM = 3.45, SD = 0.53) and having a search function for specific grades or attendance records (WM = 3.47, SD = 0.53) were also rated highly, reflecting the demand for streamlined features to enhance efficiency in managing and communicating academic data. Teachers further agreed on the importance of having options for

downloading or printing official records (WM = 3.49, SD = 0.50), emphasizing the need for both digital and physical access to documents.

Overall, the results indicate a shared preference for a robust and user-friendly system that supports efficient record management, real-time feedback, and effective communication, ultimately improving both teacher and student experiences.

Research by Sun and Mei (2020) ^[24] emphasized that systems with seamless login and access functionality improve user experience by reducing the time spent on administrative tasks and ensuring uninterrupted access to academic tools.

A study by Hamad *et al.* (2021) ^[12] confirmed the importance of an intuitive interface for academic systems, highlighting that such features reduce user errors and make it easier for teachers and students to navigate tools effectively.

Table 7: Teachers' Proposed Case Management System Design

Statements	Weighted Mean	SD	Verbal Interpretation
A proposed system should enable quick updates and access to student performance records.	4.00	0.00	Strongly Agree
The system should have tools to facilitate direct communication and feedback with students.	4.00	0.00	Strongly Agree
I would benefit from customizable dashboards that highlight key academic insights.	4.00	0.00	Strongly Agree
An automated attendance tracking feature integrated into the system would save time.	4.00	0.00	Strongly Agree
Reliable backup storage ensures that all academic data is secure and retrievable.	3.43	1.51	Strongly Agree
A system that offers easy integration of communication tools and reporting features would improve efficiency.	4.00	0.00	Strongly Agree

The data in Table 7 highlights teachers' unanimous agreement on the essential features of a proposed academic management system to address challenges in managing records and monitoring progress. Teachers strongly agreed (WM = 4.00, SD = 0.00) on the importance of quick updates and access to student performance records, emphasizing the need for efficiency and immediacy in academic monitoring. Similarly, tools that facilitate direct communication and feedback with students, as well as customizable dashboards that present key academic insights, were highly valued, reflecting the demand for functionality that enhances teacher-student interaction and data visualization.

An automated attendance tracking feature was also rated as critical (WM = 4.00, SD = 0.00), highlighting the time-saving benefits of such automation. Additionally, teachers strongly supported the inclusion of easy integration of communication tools and reporting features to improve workflow efficiency. While reliable backup storage for academic data was rated slightly lower (WM = 3.43, SD = 1.51), it still garnered strong agreement, though the higher standard deviation indicates variability in its perceived

importance among respondents.

Overall, the results underscore the need for a comprehensive, integrated, and user-friendly system that prioritizes efficiency, communication, and security to address teachers' challenges effectively. Such a system would not only streamline administrative tasks but also enhance the overall academic monitoring process. Research by Hwang *et al.* (2015) ^[28] emphasized that systems providing real-time updates on student performance enable teachers to quickly identify academic issues and implement timely interventions. Such systems enhance efficiency in academic monitoring and decision-making.

A study by Johnson *et al.* (2016) ^[14] confirmed the value of integrated communication tools in academic management systems. These tools promote teacher-student interaction by enabling direct feedback and fostering collaborative learning environments.

According to research by Dousay and Weible (2020) ^[9], dashboards that allow customization and real-time insights into academic data significantly improve data interpretation and decision-making efficiency for teachers.

Conclusion

The findings of the study reveal distinct challenges, needs, and expectations regarding the management of academic records and monitoring for both students and teachers.

For students, the challenges were minimal, with only slight concerns about timely updates and tracking progress. This indicates that while the current system is moderately effective, there is room for improvement, particularly in enhancing system efficiency and communication features. On the other hand, teachers reported significant challenges in managing academic records. Time-consuming processes, limited tools for real-time monitoring, and a lack of user-friendly interfaces were identified as major concerns, highlighting the need for streamlined workflows and reliable systems.

Both students and teachers expressed clear needs and expectations for an improved academic management system. Students emphasized the importance of having easily accessible and transparent academic records, proactive notifications for deadlines and schedules, and user-friendly interfaces. They also valued tools that facilitate communication with teachers and multi-device compatibility. Meanwhile, teachers prioritized features like real-time progress tracking, automated attendance monitoring, customizable dashboards, and efficient communication tools. They also highlighted the need for integrated solutions to simplify reporting and administrative workflows.

Overall, the study concludes that while the current system is somewhat effective for students, it poses significant usability and efficiency challenges for teachers. Addressing these issues through a modern, integrated, and intuitive academic management system would greatly enhance the experience for both groups. A system with real-time updates, streamlined processes, and improved communication features would not only reduce administrative workloads but also foster better academic engagement and monitoring.

Recommendation

Based on the conclusions, the following recommendations are proposed to address the challenges and meet the needs of both students and teachers in managing academic records and monitoring:

1. A centralized system that incorporates features for real-time updates, progress tracking, and automated notifications should be developed to streamline academic record management for both students and teachers.
2. The system should prioritize a user-friendly interface that is easy to navigate for all users. It should also be accessible on multiple devices, ensuring convenience for students and teachers.
3. Integrated communication tools should be included in the system to facilitate seamless interaction between students and teachers. This includes features for announcements and feedback.
4. To ensure effective utilization, training programs should be conducted for both students and teachers on how to navigate and maximize the system. Additionally, ongoing technical support should be made available.

5. The system should allow teachers to customize their dashboards and reporting formats to better meet their specific needs and preferences.

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