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The effect of management information system on student academic performance: A case of selected higher learning institutions in Lusaka District, Zambia

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Abstract

Overview: The integration of Management Information Systems (MIS) into higher education has significantly transformed academic administration and learning processes. In the context of selected higher learning institutions in Lusaka district, Zambia, this study examined the impact of MIS on student academic performance.

Body of Knowledge: MIS provides a centralized platform for managing student records, facilitating communication between educators and students, and streamlining the delivery of educational resources. The system enhances real-time access to academic information, such as grades, attendance, and course materials, which fosters student engagement and promotes accountability.

Methods: The study employed both the qualitative and quantitative methods as well as correlational and descriptive designs which were considered appropriate for the study. The study that sampled 100 respondents; Faculty Deans, University Lecturers and Students from 4 selected higher learning institutions with Lusaka district in Zambia.. Data was obtained from the respondents by means of interviews and questionnaires. The quantitative data collected through the questionnaires were analyzed using appropriate statistical methods, such as descriptive statistics using SPSS and Microsoft excel whereas the qualitative data from semi structured interviews were analyzed thematically.

Results: The findings revealed that MIS supports data-driven decision-making by enabling institutions to analyze student performance trends and identify areas requiring intervention. This capability contributes to personalized learning approaches, which are crucial in improving academic outcomes. However, the study also highlighted challenges such as unequal access to MIS due to socio-economic disparities, limited digital literacy among users, and occasional system downtime.

Recommendation: The study underscores the transformative role of MIS in enhancing student academic performance while calling attention to the need for inclusive and robust implementation practices in higher learning institutions in Lusaka, Zambia.

Keywords: Academic Performance; Higher Learning Institutions; MIS; Student Engagement; Technology Integration

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1. Introduction

Management Information Systems (MIS) play a crucial role in enhancing student academic performance in higher learning institutions by streamlining administrative tasks, improving data management, and enabling data-driven decision-making. In the context of Lusaka, Zambia, MIS offers tools that enhance the efficiency of academic processes, such as student registration, course scheduling, and examination management. Mumbi & Nyirenda (2024) in their study noted that these systems provide real-time access to student records, attendance, and performance data, allowing educators to monitor progress and identify struggling students. This enables timely interventions, such as providing academic support or adjusting teaching strategies to meet diverse student needs. Additionally, MIS fosters effective communication between students, faculty, and administration, ensuring a seamless flow of information and reducing barriers to academic success.

Furthermore, the use of MIS facilitates personalized learning experiences by integrating technologies like e-learning platforms and automated feedback systems. These systems enable students to access educational materials and assessments tailored to their individual learning paces and styles. However, the effectiveness of MIS in Lusaka's higher learning institutions is influenced by factors such as technological infrastructure, staff training, and financial resources. Institutions with robust MIS tend to report improved academic outcomes, as these systems enhance transparency, accountability, and efficiency. Conversely, challenges such as inadequate technical support, resistance to change, and limited digital literacy can hinder the full realization of MIS's potential benefits (Chanda et al., 2024a). Overall, MIS represents a transformative tool in education, with the potential to significantly impact student performance when effectively implemented and supported.

Higher learning institutions, such as universities and colleges, play a crucial role in shaping the academic performance of students through the effective implementation of management information systems (MIS). These systems help streamline administrative processes, enhance data management, and support decision-making, leading to improved academic outcomes for students (Skyles & Venkatesh, 2009). By providing access to a centralized platform for information, students can easily access their academic records, grades, schedules, and learning materials, which enhances their engagement and performance. MIS also enables efficient communication between students, faculty, and administration, improving coordination and support services. Venkatesh et al (2003) noted that the integration of MIS in higher education institutions has proven to be a valuable tool for improving academic performance, enabling more accurate and timely assessment of student progress, and promoting a more efficient and effective learning environment.

The use of Management Information Systems (MIS) plays a significant role in enhancing student academic performance by streamlining administrative and academic processes. MIS enables efficient data management, such as tracking student attendance, grades, and performance trends, which allows educators to identify and address learning gaps promptly (Chanda et al., 2024b). Furthermore, MIS provides timely feedback to both students and parents, fostering a collaborative approach to academic improvement. By automating routine tasks, teachers can dedicate more time to instructional activities, positively impacting learning outcomes. Additionally, MIS supports evidence-based decision-making, allowing educational institutions to implement targeted interventions aimed at improving academic performance. Overall, the integration of MIS creates a data-driven learning environment that supports students' success and institutional efficiency.

Technology integration refers to the process of incorporating technological tools and resources into educational practices to enhance teaching, learning, and management (Kim, 2019). In the context of research on the effect of Management Information Systems (MIS) on student academic performance, technology integration plays a crucial role in facilitating the effective use of MIS tools, such as learning management systems, databases, and student performance tracking software. These technologies allow for efficient data collection, real-time assessment, and personalized learning pathways for students. Miller & Hafner (2008) narrated that the integration of such technologies not only streamlines administrative functions but also empowers educators with better insights into student progress, which can lead to targeted interventions. As a result, technology integration within an MIS framework can significantly impact student academic performance by improving resource accessibility, enhancing communication between students and teachers, and fostering a more engaging and responsive learning environment.

Student engagement refers to the level of enthusiasm, commitment, and involvement that students exhibit in their learning processes. In the context of this study on the effect of management information systems (MIS) on student academic performance, student engagement is a crucial variable. An effective MIS can enhance engagement by providing students with timely access to academic resources, feedback, and performance tracking, thus promoting active participation in their learning (Seda, 2021). When students are actively engaged, they are more likely to take ownership of their academic progress, utilize available resources, and interact with their instructors and peers. This increased

engagement can lead to improved academic outcomes, as students become more motivated and focused on achieving their academic goals. Therefore, understanding the relationship between MIS and student engagement can help in assessing how technology-driven systems contribute to enhancing student performance in educational settings.

1.1. Statement of the problem

According to Zohaib et al (2023), the integration of Management Information Systems (MIS) in higher learning institutions has become increasingly significant in enhancing academic administration, student performance tracking, and overall institutional management. However, there remains limited research on the direct impact of MIS on student academic performance in the context of Zambian higher learning institutions. While MIS can streamline administrative processes, improve access to academic resources, and provide real-time feedback to students, its influence on academic outcomes such as grades, graduation rates, and student engagement has not been adequately explored. This study sought to address this gap by examining how the implementation and use of MIS in selected higher learning institutions in Lusaka, Zambia, affects student academic performance. By assessing factors such as system usability, data accessibility, and the responsiveness of students and faculty to MIS-driven interventions, the study aimed to provide insights into the potential benefits and challenges of MIS in improving academic outcomes.

1.2. Objectives of the Study

- To assess the impact of Management Information Systems (MIS) on the academic performance of students in selected higher learning institutions in Lusaka, Zambia.
- To explore the relationship between the use of Management Information Systems (MIS) and the efficiency of academic processes in selected higher learning institutions in Lusaka, Zambia.

1.3. Conceptual Framework

The study's concept involves understanding how MIS tools, when integrated into educational settings, influence decision-making, resource allocation, and teaching practices, which in turn impact student outcomes. MIS in educational institutions typically includes systems for managing student data, tracking academic progress, facilitating communication between teachers and students, and providing access to resources and support services. Zohaib et al (2024a) in their study observed that these systems enable efficient tracking of student performance, the identification of learning gaps, and the implementation of personalized learning strategies, all of which contribute to improving academic outcomes. Moreover, MIS facilitates data-driven decision-making by educators and administrators, allowing them to optimize instructional strategies and academic interventions. The concept suggests that the effective use of MIS can enhance administrative efficiency, improve student engagement, and provide timely feedback, all of which contribute positively to student performance. Conversely, inadequate use or lack of training in these systems can hinder their potential benefits (Rocci, 2005). Thus, the concept emphasizes the importance of MIS as a tool for both administrative efficiency and educational enhancement, suggesting that its proper implementation can lead to significant improvements in student academic performance.

1.4. Significance of the Study

The significance of this study lies in its potential to illuminate the critical role that Management Information Systems (MIS) play in enhancing student academic performance within higher learning institutions in Lusaka, Zambia. As educational institutions increasingly adopt technology to streamline administrative processes and improve academic outcomes, understanding how MIS can influence academic performance is crucial. This study sought to provide insights into the ways in which the effective use of MIS such as data management, academic tracking, and communication tools can support students in their academic endeavors. Additionally, the study may highlight the benefits of integrating such systems, not only for academic enhancement but also for improving overall institutional efficiency. By focusing on selected higher learning institutions in Lusaka, the study may contribute to the body of knowledge on the impact of technology on education in Zambia, offering valuable information for policymakers, educational administrators, and scholars looking to improve academic performance through strategic technological investments.

2. Methodology

The study adopted a mixed methods approach which is a combination of quantitative and qualitative data. Correlational and descriptive designs were as well considered appropriate as they also helped in understanding the current use and functionalities of MIS in higher learning institutions and how it is perceived by students and staff. The correlational design also helped examine the relationship between the usage of MIS and students' academic performance (Banda et al., 2017). The study was aimed at collecting information from respondents on the effect of management information system on student academic performance in selected higher learning institutions within Lusaka district of Zambia. The

sample consisted 100 respondents; 10% of the target population 1000. The population for the study was purposefully drawn from the four higher learning institutions within Lusaka district. Purposive sampling procedure was used to select Faculty Deans (8); 2 from each selected institution and University Lecturers (16); 4 from each selected institution while the simple random sampling procedure was used to select the University Students (76); 19 from each selected institution. The data collection process involved distributing the questionnaires to the selected participants and conducting individual semi-interviews. The quantitative data collected through the questionnaires were analyzed using appropriate statistical methods, such as descriptive statistics using SPSS (Statistical Package for Social Sciences) and excel whereas the qualitative data from semi structured interviews were analyzed thematically. The study upheld research ethical considerations such as voluntary participation of the respondents, confidentiality, honesty, and right of privacy.

3. Results and Discussions

3.1. The Impact of Management Information Systems (MIS) on the Academic Performance of Students

The study findings on the impact of Management Information Systems (MIS) on the academic performance of students showed that Improved Communication was the highest representing 25%, Real-Time Feedback and Assessment at 20%, Data-Driven Decision Making at 15%, Personalized Learning at 15%, Efficient Resource Allocation at 10%, Lecturer Performance Monitoring at 10%, and lastly was Monitoring Institutional Performance at 5%. The findings indicated that Management Information Systems (MIS) play a significant role in improving communication within higher learning institutions in Lusaka District, Zambia. By integrating various communication tools and platforms, MIS facilitates seamless and real-time information sharing between students, faculty, and administrative staff (Garrison et al., 2000). This enhanced communication leads to more efficient dissemination of academic schedules, exam results, course materials, and announcements, allowing students to stay informed and up-to-date with academic expectations. Additionally, MIS enables easier access to academic support services, such as tutoring or counseling, ensuring that students can quickly resolve issues that may affect their learning progress. The ease of communication fosters a more collaborative learning environment, contributing positively to student engagement and overall academic performance (Zohaib et al., 2024b).

Furthermore, MIS improves communication between different departments within educational institutions, leading to better coordination and decision-making processes that directly impact student success. For example, the ability of lecturers and academic staff to share feedback on student performance in a centralized system allows for timely intervention and personalized support for struggling students. Banda et al (2020) in their study alluded that the transparency and accessibility of information through MIS also promote accountability, ensuring that academic policies and procedures are consistently followed. As a result, students benefit from clearer guidance, more personalized learning experiences, and prompt responses to their academic needs, ultimately enhancing their academic performance.

Konayuma (2015) says that Management Information Systems (MIS) have increasingly become integral in enhancing academic performance in higher learning institutions by providing real-time feedback and assessment tools. These systems allow for the continuous collection and analysis of student data, which can be used to track academic progress and identify areas for improvement. By delivering immediate feedback, MIS enables educators to address learning challenges promptly, providing students with the necessary support and guidance to improve their academic outcomes. Additionally, real-time assessment tools enable instructors to monitor student performance across various platforms, allowing for the tailoring of instructional methods to meet diverse learner needs. This timely intervention is critical in fostering a more responsive and adaptive educational environment.

In the context of higher learning institutions in Lusaka district, Zambia, MIS not only enhances the accuracy of performance assessments but also contributes to a more efficient and effective management system. By centralizing academic data, these systems allow for better decision-making at both the administrative and teaching levels (Phiri & Mbolola, 2018). Students benefit from personalized learning experiences, as real-time insights allow them to understand their academic standing and make necessary adjustments to improve. Furthermore, the integration of MIS in assessment processes reduces the burden of manual grading, streamlining the academic workflow and ensuring transparency and consistency in the evaluation process (Chanda et al., 2024c). This ultimately contributes to improved academic performance by fostering a proactive learning environment that encourages continuous engagement and development.

Lecturers alluded that Data-Driven Decision Making (DDDM) plays a critical role in enhancing the academic performance of students in higher learning institutions by leveraging data to inform and guide decisions at various levels. One of the lecturers explained that:

“Management Information Systems (MIS) provide administrators, instructors, and academic leaders with real-time data on student performance, engagement, and progress. This allows for informed decision-making regarding curriculum design, resource allocation, and targeted interventions for students who may be struggling”.

Through the use of MIS, institutions can identify trends, patterns, and areas needing improvement, ultimately leading to a more tailored and responsive educational experience that supports student success. By utilizing data to monitor and analyze student outcomes, academic policies can be adjusted to address gaps in learning, enhance teaching methods, and improve overall institutional effectiveness.

In the context of Lusaka district, Zambia, the impact of MIS on student academic performance is particularly significant in the face of growing enrollment numbers and resource constraints. DDDM through MIS enables institutions to assess the effectiveness of different pedagogical strategies, identify at-risk students early, and implement timely interventions such as remedial programs or counseling services (Chanda, 2024a). Additionally, MIS systems offer faculty and administrators insights into student attendance, assignment completion rates, and engagement with learning materials, which are key indicators of academic success (Cheng et al., 2023). As a result, higher learning institutions can create a more data-driven academic environment that not only fosters student performance but also supports institutional accountability and continuous improvement. By aligning academic strategies with data insights, institutions in Lusaka can better meet the diverse needs of their student populations, contributing to improved academic outcomes and greater institutional success.

The study findings indicated that personalized learning, as an impact of Management Information Systems (MIS) on academic performance, refers to tailoring educational experiences to meet the diverse needs of students. MIS in higher learning institutions in Lusaka District, Zambia, enables the collection and analysis of detailed student data, including academic progress, learning styles, and preferences. This information allows institutions to design and deliver customized learning pathways for students, ensuring that the learning process is more aligned with individual strengths and areas for improvement (Braxton et al., 2000). The integration of MIS fosters adaptive learning platforms, where students can engage with content at their own pace, access resources that match their learning needs, and receive real-time feedback that enhances their understanding and retention of course material.

The adoption of MIS in Lusaka’s higher education institutions also facilitates the tracking of student performance through data analytics, which helps in identifying gaps in learning and predicting potential challenges before they affect academic outcomes (Himoonga, 2020). By enabling faculty and administrators to closely monitor individual progress, MIS supports early intervention strategies to assist struggling students and further challenge high-performing ones. As a result, personalized learning through MIS not only contributes to improved academic performance but also supports a more student-centered approach to education. This approach is vital in enhancing student engagement, motivation, and overall success, as it encourages a more efficient and dynamic learning environment tailored to the needs of each student (Chanda, 2024b).

The lecturers further observed that Management Information Systems (MIS) play a crucial role in the efficient allocation of resources in higher learning institutions by streamlining the collection, processing, and dissemination of data. These systems enable administrators to make informed decisions on budgeting, staffing, and the allocation of educational resources such as classrooms, equipment, and teaching materials (Chanda et al., 2024d). With real-time data on student performance, faculty schedules, and resource utilization, MIS help institutions identify gaps and areas requiring improvement, ensuring that resources are allocated where they are most needed. This optimized resource allocation not only reduces wastage but also ensures that students have access to the necessary tools and support for their academic success. In the context of Lusaka district, Zambia, the implementation of MIS can significantly enhance student academic performance by ensuring that resources are allocated more effectively. For instance, data-driven insights can help institutions address issues like class overcrowding, inadequate teaching materials, and inefficient use of faculty time. HEA (2020) in their research noted that by using MIS to monitor student progress and track academic performance, institutions can identify struggling students early and provide targeted interventions. Moreover, the ability to forecast resource needs based on student enrollment patterns and academic trends helps prevent bottlenecks, thereby improving the overall learning experience. This contributes to better academic outcomes and supports the growth and development of higher learning institutions in Lusaka.

Additionally, the results indicated that Management Information Systems (MIS) play a significant role in monitoring and enhancing lecturer performance in higher learning institutions. One of the faculty deans expressed that:

“Through the collection and analysis of data, MIS enable institutions to track various aspects of teaching, such as class attendance, grading, student feedback, and the delivery of course content”.

This real-time monitoring helps identify areas where lecturers may require support or development, ensuring that they maintain high teaching standards. In Lusaka district, the integration of MIS has facilitated a more structured approach to evaluating lecturer effectiveness, which directly impacts the quality of education. By streamlining administrative tasks, MIS free up time for lecturers to focus on improving their teaching methods, thus fostering a more productive learning environment. The impact of lecturer performance monitoring through MIS extends to students' academic outcomes (Ntebe & Raison, 2014). When lecturers are consistently evaluated, it encourages them to adopt best practices and engage in professional development, ultimately leading to improved instructional quality. Moreover, MIS allow students to provide anonymous feedback on teaching effectiveness, which contributes to a more responsive and adaptive teaching approach. In Lusaka's higher learning institutions, this data-driven approach ensures that student needs are met more efficiently, resulting in better academic performance. By ensuring that lecturers are held accountable for their teaching, MIS help improve the overall educational experience, leading to enhanced learning outcomes for students (Allen & Seaman, 2017).

Furthermore, the study noted that Management Information Systems (MIS) have become critical tools for monitoring institutional performance in higher learning institutions, including those in Lusaka district, Zambia. Zohaib et al (2023c) pointed out that MIS provide a centralized platform for the collection, processing, and analysis of data related to student performance, faculty activities, and institutional resources. By enabling real-time tracking of student grades, attendance, and academic progress, MIS allow administrators and faculty to identify trends, gaps, and areas requiring intervention. This data-driven approach enhances decision-making, ensuring that students receive timely support and that academic policies can be adjusted based on actual performance metrics (Gaber et al., 2020). As a result, MIS contribute significantly to the overall improvement of educational outcomes in these institutions.

The impact of MIS on academic performance is also evident in the way they foster accountability and transparency. With MIS, students and staff are better able to access performance data and institutional progress reports, leading to a more engaged and informed academic community. Chanda & Phiri, (2024) added that faculty members can monitor their students' progress more effectively, implementing targeted interventions such as personalized tutoring or remedial programs for underperforming students. Furthermore, MIS facilitate improved communication between departments, ensuring that academic and administrative teams work in sync to support student success. Ultimately, the integration of MIS in Lusaka's higher learning institutions not only boosts operational efficiency but also promotes a culture of continuous improvement that directly benefits student academic performance.

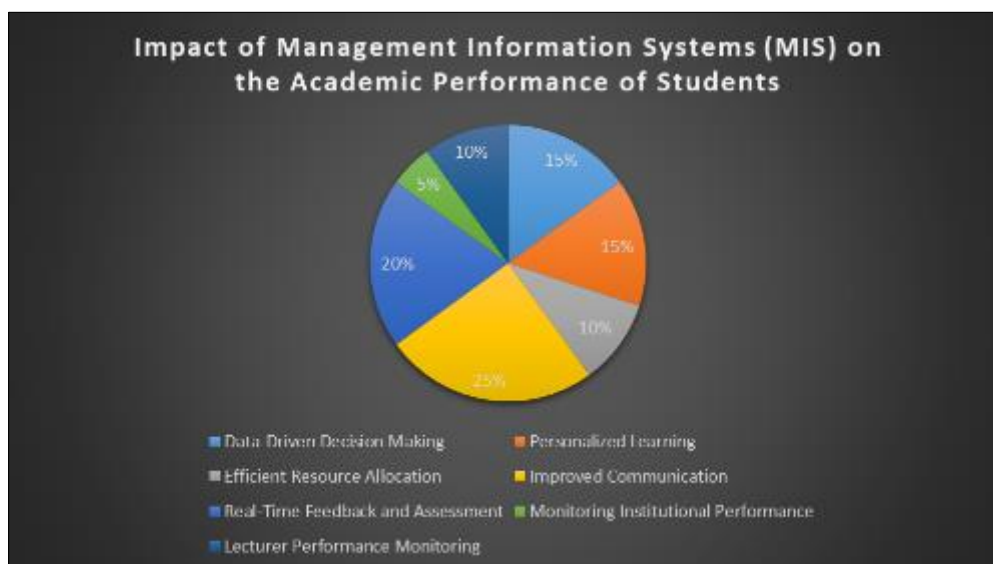


Figure 1 Impact of Management Information Systems (MIS) on the Academic Performance of Students

3.2. The Relationship between the use of Management Information Systems (MIS) and the Efficiency of Academic Processes

The research findings revealed that the relationship between the use of Management Information Systems (MIS) and the efficiency of academic processes is critical in modern educational institutions. The study identified 6 factors that showed this relationship; Curriculum and Course Management was at 25%, Student Services at 25%, Faculty and Staff

Management at 15%, Cost and Time Efficiency at 15%, Automation of Administrative Tasks at 10%, and Accreditation and Compliance at 10%. Figure 2 below summarized these findings;

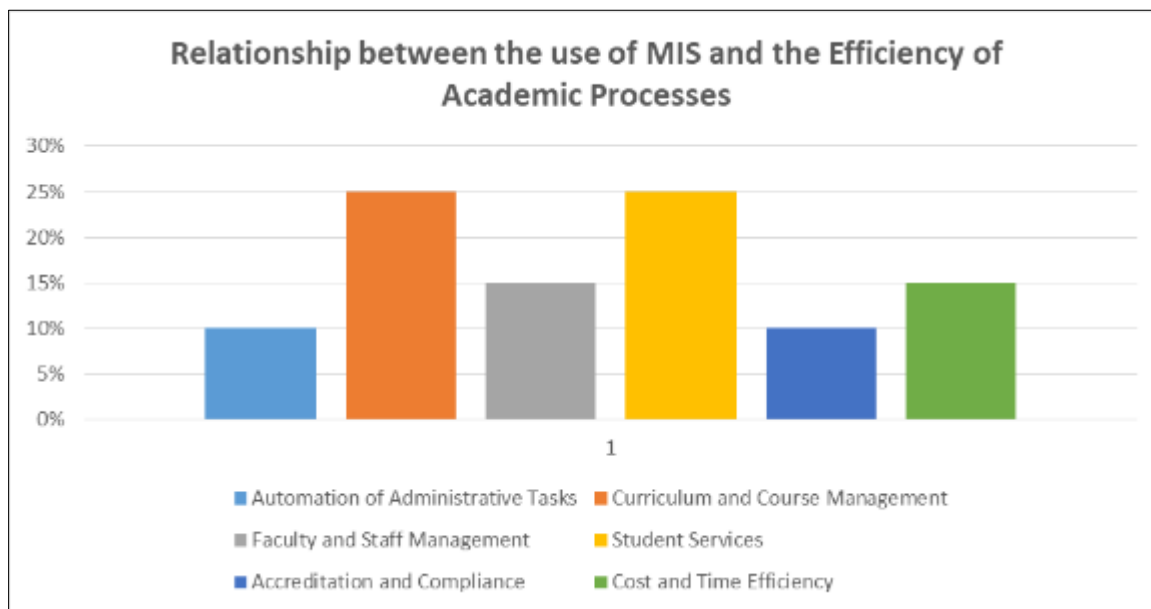


Figure 2 Relationship between the use of Management Information Systems (MIS) and the Efficiency of Academic Processes

The results findings detailed that Management Information Systems (MIS) play a significant role in enhancing the efficiency of academic processes within higher learning institutions by facilitating the management of curricula and courses. Through the use of MIS, universities and colleges in Lusaka district can streamline the design, delivery, and monitoring of academic programs. These systems allow for real-time updates of course content, schedules, and assessments, ensuring that the curriculum remains relevant and aligned with current educational standards (Alma et al., 2024). MIS also support data-driven decision-making, providing faculty and administrators with critical insights into student performance, course popularity, and resource allocation, which ultimately helps in improving academic offerings and addressing potential gaps in course delivery. Furthermore, MIS aids in optimizing administrative processes such as student registration, timetable management, and grading. Anft (2020) noted that by automating these tasks, higher learning institutions can reduce manual errors and increase operational efficiency, enabling academic staff to focus more on teaching and student support. The integration of MIS in curriculum and course management also enhances communication between students, lecturers, and administrative staff, fostering a more transparent and responsive academic environment. This increased efficiency in managing academic processes leads to better student outcomes, as courses can be tailored to meet the evolving needs of learners, and resources can be allocated more effectively, ensuring that academic programs are delivered smoothly and efficiently.

Furthermore, in higher learning institutions within Lusaka District, the use of Management Information Systems (MIS) has significantly impacted the efficiency of academic processes, particularly in the provision of student services. MIS integrates various academic functions, including student enrollment, course registration, attendance tracking, grade management, and communication between students and faculty (Mumbi & Nyirenda, 2024). This integration allows for faster processing of information, reduces administrative burdens, and enhances accuracy in handling student data. One of the students affirmed that:

“Students benefit from MIS by having quicker access to information regarding their academic progress, class schedules, and administrative services, leading to improved satisfaction and engagement”.

The efficiency of academic processes is also enhanced by MIS in terms of data-driven decision-making. Institutions can use data collected through MIS to identify trends, monitor student performance, and make informed decisions on resource allocation. This not only streamlines academic operations but also helps in identifying areas for improvement in student services. Additionally, the automation of routine administrative tasks frees up staff time, enabling them to focus on more critical aspects of student support, such as advising and career guidance. Overall, the use of MIS

contributes to a more efficient, transparent, and responsive academic environment, benefiting both students and administrative staff.

The study results also revealed that the use of Management Information Systems (MIS) in higher learning institutions plays a crucial role in enhancing the efficiency of academic processes, particularly in the management of faculty and staff. In Lusaka District, Zambia, MIS facilitates streamlined communication, scheduling, and monitoring of academic staff performance. It allows administrators to effectively allocate teaching resources, track faculty workloads, and ensure that staff members adhere to academic policies and timelines. By integrating data from various departments, MIS provides real-time updates on faculty attendance, course delivery, and academic performance, enabling institutions to make informed decisions (Adam & Bakiri, 2022). This technological support not only minimizes administrative overhead but also helps optimize resource allocation, leading to better management of academic staff and faculty affairs. Furthermore, the adoption of MIS can lead to improved faculty and staff management through automated processes and better access to data. Faculty members benefit from having up-to-date information regarding course schedules, student performance, and institutional requirements. They can also easily access academic records and engage in efficient communication with both students and administration. For staff, MIS provides tools for performance appraisal, professional development, and staff welfare management. The seamless integration of MIS into the daily operations of higher education institutions ensures that faculty and staff management is aligned with institutional goals, thus enhancing overall academic efficiency and quality of service delivery (Zohaib et al., 2024d). This technological integration ultimately supports a more organized, transparent, and effective academic environment.

The faculty deans pointed out that the use of Management Information Systems (MIS) in higher learning institutions in Lusaka district, Zambia, plays a pivotal role in enhancing both cost and time efficiency within academic processes. One of them stated that:

“MIS allows for the automation of administrative tasks such as student registration, course scheduling, and grade management, which significantly reduces the time required to complete these activities. This automation minimizes human error and the need for paper-based records, thus streamlining processes and reducing operational costs”.

For instance, instead of manually inputting student data or managing course allocations through traditional methods, institutions can rely on MIS to quickly update and manage records, leading to a more efficient flow of information and a reduction in resources spent on administrative overhead. Moreover, the implementation of MIS fosters better decision-making through real-time data access, which further contributes to cost and time savings (Zenke et al., 2017). Academic leaders and administrators can monitor student performance, track attendance, and identify trends in real time, allowing them to make timely interventions when needed. This proactive approach reduces the likelihood of resource wastage and ensures that academic processes are continuously aligned with institutional goals. Additionally, MIS systems improve communication between departments, students, and staff, which accelerates administrative functions and academic services, enhancing the overall efficiency of operations in higher learning institutions (Yates et al., 2015). By optimizing both time and cost, MIS supports the development of more effective and sustainable academic environments.

The respondents added that the automation of administrative tasks through the use of Management Information Systems (MIS) in higher learning institutions significantly enhances the efficiency of academic processes. By automating routine tasks such as student registration, timetable scheduling, attendance tracking, and grading, MIS reduces the manual effort and time required from staff members. This allows for a smoother workflow, enabling administrators and faculty members to focus on more strategic tasks, such as improving academic programs and student support services (Chanda et al., 2024e). The streamlined data management offered by MIS also minimizes human error, improving the accuracy and reliability of academic records, thus ensuring better decision-making and reporting. Furthermore, the integration of MIS in academic administration facilitates real-time access to critical data, such as student performance and course progress, which supports timely interventions when necessary. Faculty members can track students' academic achievements, while administrators can generate reports for institutional planning and accreditation purposes. The use of MIS also supports better communication and coordination among departments, enhancing collaboration across various academic and administrative functions (Dijk, 2020). As a result, institutions in Lusaka district are able to improve the overall quality of education by ensuring that academic processes are efficient, transparent, and data-driven, contributing to the smooth functioning of the institution.

The findings also noted that accreditation and compliance are critical factors in ensuring the quality and efficiency of academic processes in higher learning institutions. In Lusaka District, Zambia, the use of Management Information Systems (MIS) plays a significant role in supporting these objectives. Mpolomoka et al (2027) in their study revealed that accreditation bodies require institutions to meet specific standards related to curriculum delivery, student

performance, and administrative operations. MIS platforms enable institutions to efficiently collect, analyze, and report data, ensuring that academic processes adhere to accreditation guidelines. Through the digital management of student records, course offerings, faculty qualifications, and assessment outcomes, MIS systems help institutions maintain compliance with national and international educational standards (Lăzăroiu et al., 2021). This facilitates smoother accreditation processes, as institutions can easily provide accurate and up-to-date data required for the evaluation of their academic programs.

Furthermore, Zohaib et al (2024e) added that MIS contributes to the efficiency of academic processes by streamlining administrative tasks, enhancing decision-making, and improving resource allocation. In the context of Lusaka's higher learning institutions, MIS enables the automation of routine academic functions such as registration, grading, and scheduling, reducing the time and human effort needed for manual record-keeping. This not only supports timely and accurate reporting to accreditation bodies but also ensures that institutions operate efficiently, minimizing delays and errors in the academic workflow (Nazzal et al., 2021). By leveraging MIS, institutions can quickly adapt to changing regulatory requirements, thereby maintaining continuous compliance and improving the overall quality of education. Consequently, the relationship between MIS usage and academic efficiency is foundational in supporting both accreditation and the operational effectiveness of higher learning institutions, especially in student retention (Chanda, 2024c).

4. Conclusion

The study on the effect of Management Information Systems (MIS) on student academic performance in selected higher learning institutions in Lusaka District, Zambia, highlights the significant role of technology in enhancing educational outcomes. The findings suggest that the effective use of MIS contributes to improved academic performance by providing timely access to relevant data, streamlining administrative processes, and enabling better communication between students, lecturers, and academic staff. Additionally, MIS facilitates personalized learning, enhances decision-making, and supports academic planning, which positively impacts student engagement and overall academic achievement. However, the study also underscores challenges such as inadequate infrastructure, limited digital literacy, and resistance to change, which hinder the full potential of MIS in improving academic outcomes. Therefore, addressing these challenges is crucial for optimizing the benefits of MIS in higher education.

Recommendations

The following are actions that should be taken on the basis of the findings of this study;

- Enhance Integration of MIS with Teaching and Learning Processes:
 - Higher learning institutions should ensure that their Management Information Systems are seamlessly integrated with academic processes, such as course registration, grading, attendance tracking, and academic advising. This integration would enable students and faculty to access real-time academic data, leading to better decision-making.
- Train and Support Stakeholders on Effective Use of MIS:
 - Higher learning institutions should ensure that they provide continuous training and support for both students and faculty on how to effectively use MIS tools. The training should focus on improving digital literacy and ensuring that all users are proficient in navigating the system.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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