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Role of Change Management and Organizational Behavior in Implementing Management Information Systems for Outcome-Based Education

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This paper explores the critical role of change management and organizational behavior in the successful implementation of Management Information Systems (MIS) for Outcome-Based Education (OBE) evaluations. The study presents a detailed case study from an engineering institute, where the transition from a manual XLS-based approach to an MIS-based system for Course Outcomes (COs) and Program Outcomes (POs) evaluation was managed using Kotter's Change Management model. The first part of the study highlights the steps and processes involved in this transformation, emphasizing how the change model facilitated smooth adoption. The second part focuses on a survey conducted among heads of departments in various programs, assessing the impact of organizational behavior and change management factors on the effectiveness of MIS implementation for OBE. A relational matrix is developed based on input-output parameters, identifying key factors that enhance the likelihood of successful MIS adoption in academic institutions. The findings underscore the significance of leadership, communication, and readiness in driving MIS success, providing actionable insights for improving the implementation of MIS in OBE environments.

Keywords: Change Management; Organizational Behavior; Management Information Systems (MIS); Outcome-Based Education (OBE); Kotter's Change Management Model

1. Introduction

The implementation of Management Information Systems (MIS) for Outcome-Based Education (OBE) evaluation represents a significant advancement in academic institutions, enhancing data accuracy, streamlining processes, and improving decision-making. However, this transformation is not solely a technological upgrade; it necessitates an organizational shift that relies heavily on effective change management and an in-depth understanding of organizational behavior. This study examines how these factors facilitate the transition from

manual systems to MIS, with a focus on Kotter's Change Management model and the critical roles of leadership, communication, and readiness in this process.

Successful MIS implementation often faces resistance rooted in organizational dynamics. Chaudhry (2018) highlights the importance of Organizational Development (OD) interventions in addressing employee resistance to change, ensuring readiness, and fostering alignment between technological advancements and organizational processes. Similarly, Simatupang (2016) documents challenges such as redesigning business processes and reskilling employees during ERP adoption, underscoring the importance of IT-business collaboration and continuous post-implementation change management to maximize benefits.

For OBE evaluation, MIS systems streamline data collection, analysis, and reporting, but they also present technical, organizational, and user-related challenges. Sulistiyani et al. (2020) describe the failure of a fingerprint-based student attendance system due to inadequate change management, emphasizing the need for comprehensive gap analyses and strategic planning. Wu et al. (2019) advocate for hierarchical MIS structures in universities to address inefficiencies in traditional centralized systems, while Lie et al. (2021) highlight the importance of user-centered designs to improve functionality and security in MIS for academic settings.

The integration of Knowledge Management (KM) and ERP systems further enhances organizational efficiency by facilitating seamless information sharing. Samiei and Habibi (2020) demonstrate the symbiotic relationship between KM and ERP, where one optimizes the implementation of the other. Aziz et al. (2018) propose a Knowledge Management Performance Measurement model to address barriers in KM practices, providing insights that are essential for ensuring the broader success of MIS and ERP systems in academic environments.

Kotter's Change Management model offers a structured approach to managing IT-driven transformations, emphasizing steps such as creating urgency, building coalitions, and embedding changes into organizational culture. Studies by Farris et al. (2009) and Lomoschitz & Stummer (2022) highlight the importance of generating urgency and forming stakeholder coalitions to overcome resistance. In educational contexts, involving faculty, administrative staff, and IT specialists aligns diverse goals and ensures a smoother transition to MIS.

Empowering stakeholders through training and resources is another critical factor. Auguste (2013) and Lomoschitz & Stummer (2022) emphasize that removing barriers such as inadequate training enhances acceptance and proficiency. Celebrating short-term wins, such as successful pilot programs, builds momentum and reinforces the benefits of new systems, maintaining enthusiasm during the transition. Leadership plays a central role in aligning institutional goals with MIS implementation. Thekedam (2014) and Roth & Price (2016) argue that effective leadership ensures resource allocation, mitigates resistance, and drives professional development. Haerani et al. (2024) add that organizational readiness, supported by leadership and communication, creates a conducive environment for technology adoption. Surveys show that informal communication and organizational citizenship behaviors (OCBs) significantly enhance collaboration and the success of MIS adoption (Karimikia et al., 2015; Neugeboren, 1995).

While previous studies provide valuable insights into change management and MIS adoption, gaps remain in understanding the interplay between organizational behavior and change management in engineering institutes transitioning to MIS for OBE evaluations. This study addresses these gaps by analyzing a detailed case study from an engineering institute, employing Kotter's Change Management model, and developing a relational matrix to assess the impact of organizational behavior and readiness. By integrating theoretical frameworks with empirical data, this research offers actionable strategies to enhance MIS implementation in academic environments, focusing on leadership, communication, and readiness as key drivers of success.

2. MIS for for Outcomes-Based Education based Evaluation

Outcome-Based Education (OBE) is a pedagogical framework that focuses on achieving specific outcomes in terms of student skills, knowledge, and abilities upon completing a program. In the OBE model, educational goals are defined at a high level by Program Outcomes (POs), which represent the competencies graduates should demonstrate upon finishing their studies. These POs are linked to Course Outcomes (COs), which represent the expected results from individual courses that contribute to the program's overall objectives. To achieve these outcomes, the curriculum is structured to ensure that each course aligns with and contributes to the program's broader goals.

Management Information Systems (MIS) play a pivotal role in evaluating and monitoring the success of OBE by providing a structured approach to assessing COs and POs. The Institute implemented the MIS at the Engineering Institute, instructors and administrators can systematically track and evaluate how well course outcomes align with program outcomes. The system guides users through a step-by-step process, starting with defining COs and mapping them to POs based on a scale of low, medium, or high levels of contribution.

The MIS aids in evaluating CO attainment by allowing users to input assessment tools, such as exams and assignments, that measure the performance indicators associated with COs. By feeding student grades and performance data into the system, the MIS calculates the degree of CO attainment for each course. This data is then used to assess the overall PO attainment for the program through a combination of direct and indirect methods, where direct attainment involves CO-PO mapping and indirect attainment incorporates feedback from surveys and other qualitative sources. Using the information gathered through the MIS, educational institutions can take corrective actions to improve course delivery, teaching strategies, and curriculum design, ultimately leading to enhanced student outcomes and successful program implementation.

These steps offer a structured approach to calculating CO and PO attainment, providing educational institutions with the insights needed to assess and improve the effectiveness of their programs.

Steps for Course Outcome (CO) Attainment Calculation

1. Define Course Outcomes (COs)

- Establish specific outcomes for each course within a program. These outcomes should reflect what students are expected to know, understand, or be able to do upon completing the course.

2. CO-PO Mapping

- Map the COs to relevant Program Outcomes (POs). This mapping is typically done at three levels: low, medium, or high, indicating the strength of the connection between the course outcomes and the program outcomes. This process ensures that each course contributes meaningfully to the overall program goals.

3. Set CO Targets

- Define specific targets for each CO in terms of performance. This could involve setting benchmarks for assessment scores, pass rates, or other measurable indicators of success.

4. Tool Evaluation and CO Evaluation

- Implement assessment tools (e.g., quizzes, exams, projects) that are designed to evaluate the achievement of COs. Each assessment question or task should be linked to a specific CO to ensure clarity in measurement.

- Collect student performance data by entering scores for each question into the MIS system. This step allows for the evaluation of student achievement relative to the CO targets.

- Repeat this step for multiple assessment tools, if applicable, to get a comprehensive picture of CO attainment.

5. Calculate Total CO Attainment for the Course

- The MIS system automatically calculates CO attainment based on the data entered. This calculation may involve a weighted average to reflect the varying importance of different assessment tools.

- Use this information to assess the overall success in meeting CO targets for the course. If necessary, take corrective actions to improve areas where CO attainment falls short.

Steps for Program Outcome (PO) Attainment Calculation:

1. Direct PO Attainment

- Calculate direct PO attainment by aggregating the CO attainment results from all courses within the program. This involves using the CO-PO mapping to determine how much each course contributes to each PO.

- Compute a weighted average based on the relative importance of each course to get the overall direct PO attainment values.

2. Indirect PO Attainment

- Gather additional data from surveys, feedback, or other qualitative sources to assess PO attainment from a broader perspective. This data might include feedback from students, alumni, employers, or other stakeholders.

- Input this information into the MIS system to get the indirect PO attainment values.

3. Calculate Overall PO Attainment

- Combine direct and indirect PO attainment values using a weighted average to get the overall PO attainment for the program.

- This step provides a comprehensive view of how well the program achieves its intended outcomes.

4. Take Corrective Action Based on PO Attainment

- Compare the overall PO attainment results with target values set for the program. If discrepancies are found, identify the areas that need improvement.

- Implement corrective actions to address gaps in attainment, which may involve adjustments to the curriculum, teaching methods, or other aspects of the program.

- The MIS system can help monitor these corrective actions to ensure continuous improvement in achieving POs.

3. Case Study of Implementation of Kotter's 8-step model

This section examines how Kotter's Change Management Model facilitated the transition from traditional, manual XLS-based methods to an integrated Management Information System (MIS) for Outcome-Based Education (OBE) evaluations at the institute where the first author is employed. The institute, an engineering college comprising five departments and approximately 150 faculty members from diverse academic backgrounds, previously relied on manual XLS-based processes for OBE assessments. As part of a comprehensive modernization initiative led by a Ph.D. scholar, the institution implemented an MIS to streamline and enhance OBE evaluation processes. This section presents a detailed case study on the adoption of MIS-based methods for evaluating course outcomes and program outcomes in the engineering college, guided by Kotter's 8-step model for leading organizational change. The Kotter model, summarized in Figure 1, provides a structured framework consisting of eight key steps: creating urgency, forming guiding coalitions, developing a strategic vision, and other critical phases. Each step includes specific substeps designed to address the unique challenges faced during the transition, ensuring a systematic approach to stakeholder engagement and change management.

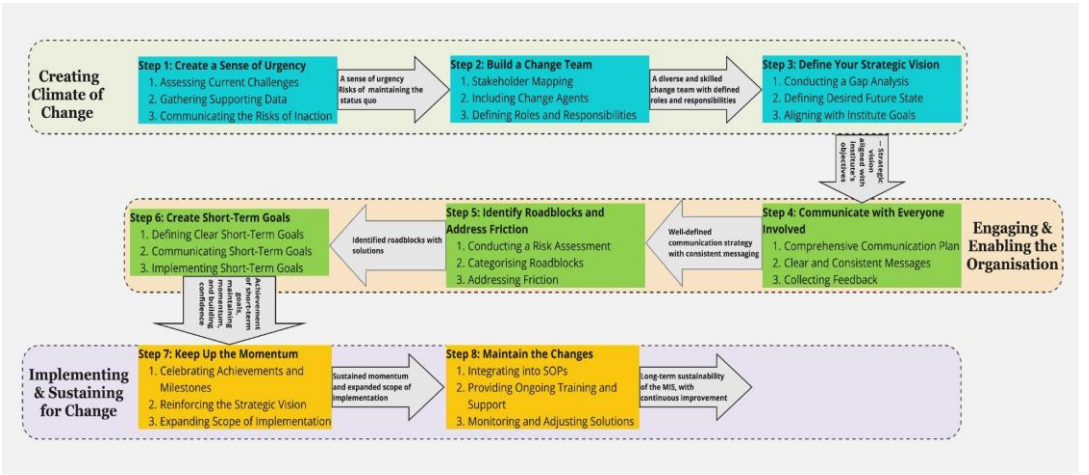

Figure 1: Kotter Change Management 8 step model

Step 1: Create a Sense of Urgency

A sense of urgency is the cornerstone of a successful change process. The following activities created urgency for the Management Information System (MIS) implementation:

- Assessment of Current Challenges: As shown in Table 1, Identified data inconsistency, delayed feedback, manual errors, and risk of data loss through stakeholder discussions.

- Gathering Supporting Data: Collected data to illustrate these challenges, such as student performance and accreditation reports.

Table 1: Challenges in Manual Process of CO and PO Evaluation

Challenge	Impact
Data inconsistency	Inaccurate assessments; unreliable reports
Delayed feedback	Slower response; hindered academic progress
Manual processes	Increased workload; risk of human error
Risk of data loss	Loss of critical records; affects accreditation

To communicate the risks of inaction, meetings were held to discuss the consequences of the current system summarized in the Table 2, emphasizing issues like accreditation risks, hampered academic quality, and student dissatisfaction. Real-world examples were provided to show the negative outcomes of similar approaches in other institutions.

Table 2: Consequences of Maintaining the Status Quo

Risk	Description
Accreditation issues	Challenges in meeting accreditation requirements
Student dissatisfaction	Inconsistent feedback; limited focus on higher learning outcomes
Hampering academic quality	Reduced ability to track outcomes; affects continuous improvement

Step 2: Build a Change Team

Building a diverse and skilled change team is critical for successful implementation:

- Stakeholder Mapping: Identified key stakeholders as shown in Table 3, across various departments and roles, including faculty, administration, MIS company representatives, student services, and support staff.
- Include Change Agents: Selected enthusiastic faculty and administrative staff to serve as change agents.

Table 3: Key Stakeholders for the Change Team

Stakeholder Group	Role and Contribution
Faculty	Academic insights; promotes change within departments
Administration	Provides leadership; ensures alignment with broader goals
MIS Software Representatives	Offers technical support throughout implementation
Student Services	Helps with communication to students
Support Staff	Provides logistical support; assists with training

Roles and responsibilities were defined within the team structure as given in Table 4, with the Dean of Academics appointed as the change leader and other key roles designated.

Table 4: Team Structure and Responsibilities

Position	Role and Responsibilities
Institute MIS Coordinator	Oversees implementation; liaises with administration
Department Coordinators	Coordinates MIS activities within departments
OBE Experts	Guides alignment with accreditation standards
MIS Software POC	Handles technical issues and updates
Course Instructors	Responsible for data input; ensures accurate evaluations

Step 3: Define Your Strategic Vision

A clear strategic vision is key to guiding the implementation of the MIS:

- Conducted a Gap Analysis: Identified inefficiencies in current processes, including manual evaluation challenges and excessive workload.
- Gathered Stakeholder Feedback: Collected feedback from various stakeholders to understand their concerns and expectations from the MIS.

As shown in Table 5, the desired future state was defined, with specific goals for course instructors, class coordinators, and heads of departments, focusing on enhancing ease,

accuracy, and user interface experience.

Table 5: Goals of the MIS Implementation

Goal	Description
Improved ease of use	Simplified processes; enhanced user interface
Increased accuracy	Improved data accuracy through automation
Simplified CO-PO mapping	Streamlined mapping processes
Enhanced academic quality	Better focus on course and program outcomes

The MIS implementation goals were aligned with the institute's broader objectives, such as promoting academic excellence and fostering continuous improvement.

Step 4: Communicate with Everyone Involved

Clear and consistent communication was central to the success of the MIS implementation:

- Develop a Comprehensive Communication Plan: Focused on increasing awareness and reducing resistance through regular updates, training sessions, and consistent messaging.
- Crafting Clear and Consistent Messages: As shown in Table 6, tailored messages for different audiences were prepared to ensure understanding and engagement.

Table 6: Key Messages for MIS Implementation

Audience Group	Key Message
Faculty	Benefits of MIS; reduced workload and errors
Administration	MIS's alignment with institutional objectives
Course Instructors	Simplified outcome evaluations
Class Coordinators	Improved management of outcome processes

The communication plan was implemented through campaigns, information sessions, and distribution of supporting materials. Feedback was collected and adjustments were made to address concerns and improve communication.

Step 5: Identify Roadblocks and Address Friction

Identifying and addressing potential roadblocks was critical to the MIS implementation's success:

- Conducting a Risk Assessment: As shown in Table 7, Identified technical, organizational, and human-related roadblocks.
- Categorized Roadblocks: Classified and prioritized them for targeted solutions.

Table 7: Roadblocks and Solutions

Roadblock	Solution
Technical issues	Technical support; regular system testing
Resistance to change	Additional training; addressing concerns
Organizational friction	Revised workflows; reallocated resources

Step 6: Create Short-Term Goals

Short-term goals helped maintain momentum during the MIS implementation:

- Define Clear Short-Term Goals: Achievable targets with specific metrics were defined as shown in Table 8.
- Communicate Short-Term Goals: Regular updates and a clear timeline to keep stakeholders informed.
- Implement Short-Term Goals: Execute the plan while monitoring progress.

Table 8: Short-Term Goals and Outcomes

Goal	Description	Outcome
Pilot project	Implement MIS in one department as a test	Successfully completed; identified areas for improvement
Initial training session	Conduct training sessions for faculty	Over 90% participation; increased confidence in MIS
Feedback mechanism	Establish feedback system	Collected insights for further improvements

The change team celebrated early successes to maintain momentum, acknowledging key achievements and sharing success stories.

Step 7: Keep Up the Momentum

Maintaining momentum was key to the MIS implementation's sustainability. The strategies to keep up the momentum was implemented as given in Table 9.

- Celebrate Achievements and Milestones: Boosted morale by celebrating key milestones and sharing success stories.
- Reinforce the Strategic Vision: Regularly communicated the strategic vision to keep stakeholders focused on long-term objectives.

Table 9: Strategies to Keep Up the Momentum

Strategy	Description
Celebrate achievements	Recognize and celebrate successes
Reinforce strategic vision	Regularly communicate the strategic vision
Expand scope of implementation	Gradual rollout to other departments

To expand the scope, the institute gradually scaled the MIS implementation and introduced additional features. Consistent communication and addressing emerging challenges were also central to maintaining momentum.

Step 8: Maintain the Changes

Maintaining the changes after successful implementation ensured the long-term sustainability of the MIS:

- Integrate into Standard Operating Procedures: Updated policies and standardized processes to embed the MIS in the institute's operations.
- Ensure Ongoing Training and Support: Provided continuous training sessions and established technical support to address issues.

Table 10: Strategies for Maintaining Changes

Strategy	Description
Integrate into SOPs	Incorporate MIS into standard procedures
Provide continuous training	Regular training sessions to maintain proficiency
Establish technical support	Dedicated technical support for troubleshooting

Monitoring and adjusting solutions was crucial to addressing emerging challenges. To foster a culture of continuous improvement, the institute encouraged feedback and shared best practices among departments.

4. Survey on Organizational Behavior and Change Management in the Context of MIS Implementation

The successful implementation of Management Information Systems (MIS) in supporting Outcome-Based Education (OBE) processes within academic institutions is closely tied to the dynamics of organizational behavior and change management. A structured survey was conducted with 56 institutional leaders, including heads of institutions and department heads, chosen for their active roles in decision-making and direct involvement in MIS adoption and integration.

The primary objectives were:

- Identify and evaluate key parameters influencing MIS alignment with organizational culture and academic readiness.
- Assess the effectiveness of change management practices and leadership support in facilitating MIS adoption.
- Measure overall MIS success in terms of adoption levels, usage effectiveness, user satisfaction, and institutional performance improvements.
- The survey was carefully developed to comprehensively capture organizational behavior and change management dimensions. It consisted of two key sections:
  - Organizational Behavior and Change Management Factors: This section evaluated the factors influencing MIS implementation which were considered as inputs of the GFS model. Key focus areas considered are:
    - Alignment with Academic Culture: Examining how well MIS aligns with institutional academic values.
    - Faculty and Staff Ownership: Assessing faculty and staff involvement in MIS implementation.
    - Leadership and Management Support: Evaluating the support provided by institutional leadership for MIS adoption.
    - Change Management Practices: Investigating strategies to address resistance and manage transitions.

■ Academic Readiness: Gauging the preparedness of stakeholders for MIS integration.

■ Communication and Cultural Norms: Understanding the impact of communication and cultural practices on MIS acceptance.

○ MIS Implementation Success Measures: This section analyzed the outcomes of MIS adoption, focusing on:

■ Adoption Levels: Measuring user engagement and consistency in MIS use.

■ Usage Effectiveness: Evaluating the system's utility in OBE processes and decision-making.

■ User Satisfaction: Gauging stakeholder satisfaction with MIS features and functionality.

■ Institutional Performance Improvement: Assessing MIS contributions to efficiency and outcomes.

■ System Reliability and Stability: Analyzing uptime, error rates, and robustness.

■ Scalability and Adaptability: Investigating the system's capacity to evolve with institutional needs.

The survey instrument was refined through expert feedback and a pilot test with five academic professionals. Internal consistency, measured using Cronbach's alpha, yielded a reliability score of 0.87, confirming the instrument's robustness.

Table 11: Questions related to Organizational Behavior and Changement Management aspects and its responses

Q. No.	Question	Answer 1	Answer 2	Answer 3
	Alignment with Academic Culture			
1	To what extent does the MIS align with the academic culture of your institution?	Not Aligned (4 %)	Partially Aligned (11 %)	Well Aligned (86 %)
2	Have you observed any conflicts between the MIS and existing norms or practices?	Often (7%)	Sometimes (40 %)	Rarely (53%)
3	Is the MIS customized to fit the academic culture of your institution?	Not at all (4%)	Partially (18%)	Fully (79 %)
	Faculty and Staff Ownership			
4	To what degree do faculty members and administrative personnel feel a sense of ownership over the MIS implementation?	Low (5%)	Moderate (43 %)	High (52%)
5	Are faculty and staff actively involved in the MIS implementation process?	Rarely (4%)	Occasionally (12%)	Frequently (84%)
	Leadership and Management Support			

6	How supportive are institutional leaders regarding the implementation and use of MIS?	Not Supportive (2 %)	Moderately (10 %)	Highly (88%)
7	Does the leadership encourage cross-functional teamwork to promote MIS adoption?	No (2 %)	To Some Extent (9 %)	Yes (89%)
8	Are organizational goals clearly communicated to ensure effective use of the MIS?	Not at all (2 %)	Partially (12 %)	Fully (86 %)
	Change Management			
9	To what extent has change management been employed during the implementation of the MIS?	Not at all (2%)	Partially (12 %)	Fully (86 %)
10	How effectively is resistance to change addressed in your institution?	Poorly (5%)	Moderately (35 %)	Effectively (60 %)
	Academic Readiness			
11	How ready are academic departments and faculty members to embrace the MIS?	Not at all (2 %)	Partially (18 %)	Fully (80 %)
12	Have the faculty and staff received adequate training on the use of the MIS?	No Training (5%)	Some (28%)	Extensive (67%)
	Communication and Cultural Norms			
13	Are there clear communication channels for sharing information about Course Outcomes and other MIS-related data?	Not at all (4 %)	Partially (14 %)	Fully (82 %)
14	How consistent is the flow of information across different levels of the institution?	Inconsistent (2 %)	Somewhat (14 %)	Consistent (84 %)
15	To what extent do cultural norms affect the adoption and effectiveness of the MIS?	Negatively (2%)	Neutral (16%)	Positively (82%)
16	Are communication practices within your institution conducive to promoting MIS adoption?	Negatively (2%)	Neutral (16%)	Positively (82%)

Table 12 : Questions related to Success parameters of MIS Implementation and Responses

Q. No.	Question	Answer 1	Answer 2	Answer 3
	Level of Adoption of MIS			
1	How would you describe the level of adoption of outcome evaluation modules in the Institute?	Low (2%)	Medium (23 %)	High (75%)
2	How timely is the utilization of these modules for outcome evaluation?	Low (2%)	Medium. (25 %)	High (73 %)
	Effective Usage of MIS			
3	What is the level of faculty members completing the initial settings in MIS within a reasonable time frame?	Low (2%)	Medium (25 %)	High (73 %)

4	How timely is the data update in the outcome evaluation tool in MIS?	Not Timely (2 %)	Moderately (25 %)	Very Timely (73 %)
5	How frequently is Course Outcome (CO) attainment data used for corrective actions after each evaluation?	Rarely (7%)	Occasionally (12 %)	Frequently (81%)
6	How often is Program Outcome (PO) attainment data utilized for corrective actions after each semester/academic year?	Rarely (4 %)	Occasionally (26 %)	Frequently (70 %)
	Time Required for MIS Implementation			
7	How long does it take for the first time to implement all the MIS modules compared to the standard implementation time?	Shorter (14 %)	As Expected (53 %)	Longer (33 %)
8	How long does it take for MIS usage as routine practice of Organisation ?	Shorter (5 %)	As Expected (51 %)	Longer (44 %)
	Satisfaction Level			
9	What is your level of satisfaction with the availability of data at any time through MIS?	Low (2%)	Medium (18 %)	High (81 %)
10	How satisfied are you with the system's capability to preserve data and reduce anxiety about data loss?	Low (2%)	Medium. (18 %)	High (81 %)
11	How satisfied are you with the collaborative work on CO-PO attainment facilitated by MIS?	Low (2%)	Medium (11 %)	High (88 %)

Table 13 : Questions related to Success parameters of MIS Implementation and Responses

Org. Behavior & Change Management Parameters	MIS Implementation Success Parameters (O)			
	Level of Adoption	Effectiveness of Usage of MIS	Time Taken for Adoption	Satisfaction Level
Alignment with Organization Culture (AOC)	Strong	Strong	Moderate	Weak
Faculty and Staff Ownership (FSO)	Strong	Strong	Moderate	Strong
Leadership and Management Support (LMS)	Strong	Weak	Moderate	Weak
Utilization of Change Management (UCM)	Strong	Strong	Strong	Weak
Academic Readiness (AR)	Strong	Strong	Strong	Strong
Communication and Cultural Norms (CCN)	Strong	Strong	Moderate	Strong

Table 11 presents survey responses related to organizational behavior and change management factors, while Table 12 highlights responses concerning MIS implementation success measures. Table 13 illustrates the relationship between Organizational Behavior and Change Management (OBCM) parameters and MIS Implementation Success parameters (MIS parameters). It provides insights into how various organizational factors influence key outcomes like the level of adoption, effectiveness of MIS usage, time taken for adoption, and satisfaction levels. Here's a breakdown of the findings:

Alignment with Organization Culture (AOC)

- Level of Adoption: Strong alignment with the organizational culture supports widespread adoption of the MIS.
- Effectiveness of Usage of MIS: A strong influence here indicates that cultural alignment helps users utilize the MIS effectively.

- Time Taken for Adoption: Moderate influence suggests that while cultural alignment aids in adoption, it may not necessarily accelerate the process.
- Satisfaction Level: Weak influence here could mean that while alignment eases adoption, it does not directly impact users' satisfaction levels.

Faculty and Staff Ownership (FSO)

- Level of Adoption: Strong ownership among faculty and staff significantly drives adoption of the MIS.
- Effectiveness of Usage of MIS: Strong correlation suggests that a sense of ownership fosters effective utilization of the system.
- Time Taken for Adoption: Moderate influence implies that while ownership aids adoption, other factors may affect the speed.
- Satisfaction Level: A strong connection indicates that ownership positively impacts satisfaction, as stakeholders feel invested in the process.

Leadership and Management Support (LMS)

- Level of Adoption: Strong leadership support promotes adoption of the MIS.
- Effectiveness of Usage of MIS: Surprisingly weak influence here may suggest that while leadership aids adoption, it might not directly impact day-to-day usage effectiveness.
- Time Taken for Adoption: Moderate influence shows that leadership contributes to steady progress but isn't the sole driver of faster adoption.
- Satisfaction Level: Weak influence here highlights that leadership alone may not guarantee user satisfaction, pointing to the importance of other factors.

Utilization of Change Management (UCM)

- Level of Adoption: Strong utilization of change management practices leads to better adoption rates.
- Effectiveness of Usage of MIS: Strong connection indicates that effective change management ensures smooth and efficient use of the MIS.
- Time Taken for Adoption: A strong influence suggests that well-planned change management accelerates adoption.
- Satisfaction Level: Weak connection implies that change management alone cannot guarantee satisfaction, which may depend on additional factors like user experience or system performance.

Academic Readiness (AR)

- Level of Adoption: Strong academic readiness significantly facilitates adoption.
- Effectiveness of Usage of MIS: A strong influence indicates that readiness ensures users can effectively engage with the system.

- Time Taken for Adoption: Strong correlation suggests that readiness helps streamline the adoption process.
- Satisfaction Level: A strong connection here demonstrates that readiness contributes directly to higher satisfaction levels among users.

Communication and Cultural Norms (CCN)

- Level of Adoption: Strong communication and positive cultural norms encourage successful adoption of the MIS.
- Effectiveness of Usage of MIS: Strong influence suggests that clear communication and supportive cultural practices enhance effective system usage.
- Time Taken for Adoption: Moderate influence here may indicate that while communication supports adoption, other logistical factors might determine the timeline.
- Satisfaction Level: A strong connection indicates that effective communication and supportive culture lead to higher satisfaction levels.

5. Conclusions

This study highlights the critical role of change management and organizational behavior in successfully implementing Management Information Systems (MIS) for Outcome-Based Education (OBE) evaluations. The case study demonstrates that Kotter's 8-step model offers an effective framework for transitioning from manual, XLS-based methods to an MIS-based system, with key steps like creating urgency, forming coalitions, and fostering a strategic vision minimizing resistance and ensuring stakeholder engagement. Effective communication and cultural alignment were critical enablers, while structured change management practices, including training and readiness initiatives, accelerated adoption and enhanced satisfaction. Survey results further reveal that alignment with academic culture, faculty ownership, and academic readiness strongly influence MIS success measures such as adoption level, usage effectiveness, and satisfaction. Leadership and teamwork supported change momentum, while academic readiness and cultural alignment emerged as the strongest predictors of effective MIS integration. Institutions should prioritize fostering stakeholder ownership, aligning MIS with institutional culture, and maintaining clear communication to ensure successful implementation.

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