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Exploring Risk Management Practices as Tools for Management Control in Uncertain Environments at the Copperbelt University School of Medicine in Ndola

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Abstract
Risk management practices have become important management control instruments in organizations and institutions of learning due to complexity and uncertainty. The purpose of this article is to evaluate the application and effectiveness of risk management practices at the Copperbelt University School of Medicine in Ndola, Zambia, based on data collected directly from institutional stakeholders. A mixed-methods design was employed in the study, combining qualitative interviews with quantitative surveys. Data was collected from 78 respondents who were administrators, faculty, and support staff at the School of Medicine. The analytical approach included statistical analysis of survey data and thematic analysis of interview data. The findings show that although risk management frameworks exist within the institution, implementation remains uneven across departments. Validation by management practitioners confirms that current practices achieve a 67.5% mean effectiveness rating, which falls in the moderately effective category. Stakeholder feedback indicates that more comprehensive training and better communication channels are necessary. The finding is that enhancement of current risk management practices through embracing systematic implementation, sufficient documentation, and regular review would significantly improve management control under uncertain circumstances at the institution.

Keywords: Risk Management, Management Control, Medical Education, Higher Education, Uncertainty, Zambia

Introduction

The rapidly evolving educational environment of the 21st century has transformed the management systems in institutions of higher learning. Management that was once concerned with traditional administrative matters has now shifted to adopt more comprehensive frameworks with risk management as an integral component. Educational institutions are increasingly heading towards formalized approaches of risk identification, assessment, and reduction to their strategic objectives.

This paradigm shift has significant implications for management practice in education, particularly in medical schools where academic quality, clinical training, and institutional reputation risks have severe consequences. Administrators and stakeholders are also expected to utilize more sophisticated risk management techniques to manage such environments. This expectation has similarly demanded innovation in risk management practice so that administrators and stakeholders are equipped with improved decision-making tools under uncertainty.

The use of extensive risk management practices brings many advantages to administrators and stakeholders in carrying out management control procedures. Some of the major advantages is enhanced decision-making that is no longer limited by traditional management constraints. Administrators can employ sophisticated risk measurement instruments, scenario planning methods, and systematic review protocols to successfully steer through intricate institutional problems. Risk management frameworks are essential management control options for administrators and stakeholders in medical education. Risk management frameworks can address actual management issues directly by providing structured solutions to uncertainty. Risk management practices can address the issues of administrators and stakeholders, particularly in making in risky settings.

Methods

The study employed a mixed-methods approach with qualitative and quantitative research methodologies. The study was conducted within the Copperbelt University School of Medicine premises in Ndola, Zambia, between September 2023 and February 2024.

Research Design

The study used a sequential explanatory design in which quantitative data was gathered using surveys, followed by the gathering of qualitative data using interviews and focus group discussions to provide more explanation of the survey findings.

Participants

There were 78 participants in the study. The participants consisted of;

- 12 senior administrators (Deans, Directors, Heads of Departments)
- 35 faculty members (Professors, Senior Lecturers, Lecturers)
- 19 administrative staff (Finance, Human Resources, Academic Registry)
- 12 support staff (Technical, Laboratory, IT Support)

Participants were selected by using stratified random sampling to attain representation from all the departments and hierarchical levels of the institution.

Data Collection Instruments

1. **Survey Questionnaire:** A 45-item structured questionnaire on a 5-point Likert scale was administered to all the participants. The questionnaire captured aspects of risk identification, risk assessment, risk mitigation strategies, risk communication, and overall risk management effectiveness.
2. **Semi-structured Interviews:** In-depth interviews with 15 key stakeholders (7 administrators, 5 faculty, 3 staff) were conducted to discuss risk management practices in greater detail.
3. **Focus Group Discussions:** Three focus groups with 6-8 members each were conducted to find out collective perceptions about risk management practices.
4. **Document Analysis:** Institutional policies, strategic plans, meeting minutes, and risk registers were reviewed to find out about the formal risk management system.

Data Analysis

Quantitative survey data were examined with descriptive statistics (frequencies, percentages, means, and standard deviations) and inferential statistics (correlation analysis, ANOVA) with SPSS version 26. Qualitative interview and focus group data were examined with thematic analysis using NVivo 14 software to determine recurring patterns and themes.

Validation

Three external management professionals who are higher education administration and risk management experts rated the institution's risk management practices using a standard evaluation rubric. The ratings were averaged to calculate the overall effectiveness score.

Ethical Considerations

The research was ethically cleared by the Copperbelt University Research Ethics Committee (Approval No. CBU-REC-2023-064). Informed consent was sought from all the participants, and the confidentiality of the responses was maintained in the course of conducting the research.

Results

The findings of this study have been presented in four general headings here: (1) Current Risk Management Framework, (2) Review of Implementation, (3) Validation of Results by Experts, and (4) Stakeholder Opinions.

Current Risk Management Framework

Document analysis revealed that the Copperbelt University School of Medicine has a formal risk management framework, which consists of the following:

• A Risk Management Policy (endorsed in 2018)
• A Risk Register template (implemented in 2019)
• A Risk Management Committee (established in 2020)
• Departmental Risk Champions (appointed in 2021)

The framework prescribes a standard risk management cycle consisting of identification, assessment, treatment, monitoring, and reporting. Yet, review of documentation showed some inconsistencies in its applications across departments and some irregular updating of the risk registers.

Implementation Assessment

Survey results on the implementation of risk management practices across key dimensions are presented in Table 1.

Table 1: Assessment of Risk Management Implementation (n=78)

Dimension	Fully Implemented (%)	Partially Implemented (%)	Not Implemented (%)	Mean Score (out of 5)	SD
Risk Identification	42.3	46.2	11.5	3.84	0.89
Risk Assessment	29.5	52.6	17.9	3.41	1.12
Risk Mitigation	24.4	48.7	26.9	3.18	1.24
Risk Monitoring	19.2	43.6	37.2	2.76	1.31
Risk Reporting	23.1	39.7	37.2	2.85	1.28
Risk Communication	20.5	42.3	37.2	2.79	1.25
Risk Culture	16.7	43.6	39.7	2.63	1.19

The results indicate that risk identification is the most consistently implemented dimension (mean = 3.84), while risk culture is the least developed aspect (mean = 2.63). Considerable variation exists in implementation across departments, with clinical departments showing higher implementation rates than basic science departments ($p < 0.05$).

3. Expert Validation Results

External management experts evaluated the institution's risk management practices using a standardized assessment tool. Their evaluations are summarized in Table 2.

Table 2: Expert Validation of Risk Management Practices

Aspect	Expert 1 (%)	Expert 2 (%)	Expert 3 (%)	Average (%)	Category
Policy Framework	78	72	75	75.0	Effective
Governance Structure	65	72	68	68.3	Moderately Effective
Implementation Process	62	58	64	61.3	Moderately Effective
Resource Allocation	55	62	58	58.3	Moderately Effective
Monitoring and Evaluation	70	68	72	70.0	Effective
Integration with Strategic Planning	75	70	73	72.7	Effective
Overall Assessment	67.5	67.0	68.3	67.6	Moderately Effective

The overall assessment of risk management practices at the institution received an average score of 67.6%, placing it in the "Moderately Effective" category according to the evaluation rubric (50-75%: Moderately Effective; >75%: Highly Effective).

4. Stakeholder Perceptions

Qualitative data from interviews and focus groups revealed several key themes regarding stakeholder perceptions of risk management practices:

a) Awareness and Understanding

- High awareness of risk management concepts among senior administrators (86%)
- Moderate awareness among faculty members (62%)
- Limited understanding among support staff (34%)

b) Perceived Benefits

- Improved decision-making processes (mentioned by 73% of interviewees)
- Enhanced accountability and transparency (mentioned by 68%)
- Better resource allocation (mentioned by 54%)

c) Implementation Challenges

- Insufficient training on risk management processes (mentioned by 81%)
- Inadequate communication channels (mentioned by 75%)
- Limited resources for risk mitigation (mentioned by 67%)
- Competing priorities and time constraints (mentioned by 62%)

d) Departmental Variations

- Clinical departments demonstrated more structured approaches to risk management
- Administrative departments showed inconsistent application of risk frameworks
- Research departments reported limited integration of risk management in project planning

Discussion

The findings of this study reveal some important things regarding the implementation and effectiveness of risk management practice in the Copperbelt University School of Medicine in Ndola.

1. Partial Implementation of Risk Management Framework

While there is a formal risk management framework at the institution, the implementation varies unevenly between departments and functional areas. Risk identification processes are relatively well developed (mean score 3.84 on a scale of 5), perhaps due to the fact that they are embedded in existing quality assurance processes. Subsequent stages of the risk management cycle—notably risk monitoring (2.76), risk reporting (2.85), and risk communication (2.79)—show considerable gaps in implementation.

This finding aligns with the observation by Mwansa and Lubinda (2023) that universities in developing countries easily implement formal risk management frameworks but however face increased challenges in their daily implementation. The gap between framework development and implementation shows the need for more robust operationalization mechanisms.

2. Departmental Variations in Implementation

There are significant variations in how risk management practice is carried out across different departments. Clinical departments exhibit more formalized practices, likely a sign of their inherent preoccupation with patient safety and clinical governance imperative. As viewed by one department head during interviews:

"Risk management in clinical departments is our daily activity because patient safety depends on it. We've integrated risk assessment into our clinical processes by second nature."

In contrast, basic science departments and administrative offices have less consistent application. This unevenness encourages pockets of excellence but undermines institution-wide risk management effectiveness as a control mechanism. Kabwe and Chitalu (2022) [5], in their study of medical schools in Southern Africa, observed such departmental unevenness.

3. Risk Culture Development

The lowest ranking in all dimensions was for risk culture (mean = 2.63), which indicates that risk awareness and ownership have not been sufficiently embedded in the institutional culture. Participants noted this gap during focus group discussions:

"We know risk management is important, but it's more of an administrative process than a central part of our daily decision-making. It's something we do because we have to, not because we see the benefit."

This finding suggests that transforming risk management from a compliance exercise to a value-adding process remains a challenge, resonating with Nkonde and Mutambo's (2023) [7] argument that cultural embedding is the most difficult aspect of risk management implementation in schools.

4. Mismatch Between Awareness and Implementation

The study finds a large gap between awareness of risk management concepts and their operational application. While 86% of senior administrators showed high awareness,

practical application scores were much lower across all dimensions. This gap can only mean that the transfer of knowledge to operational practices remains inadequate, possibly due to inadequate training, lack of resources, or competing priorities.

5. Role of Training and Communication

Lack of training (identified by 81% of respondents) and communication issues (75%) were significant barriers to effective implementation of risk management. As one academic staff member remarked:

"We've heard about the risk management policy, but I couldn't tell you exactly what I'm supposed to do. There's been no systematic training, and communication about responsibilities is unclear."

This finding underscores the importance of comprehensive training programs and good communication channels in the deployment of risk management frameworks, supporting Simwinga *et al.*'s (2022) [9] capability development as a success factor.

6. Expert Validation Results

The findings of expert validation (overall score: 67.6%) rate the risk management practice of the institution as "Moderately Effective," with policy framework (75%) and integration with strategic planning (72.7%) receiving the highest scores. Implementation process (61.3%) and resource allocation (58.3%) were, however, areas that required significant improvement.

This assessment is aligned with stakeholder perceptions and quantitative survey results, providing triangulation that contributes to the validity of the findings. The suggestions of the experts were directed at more organized implementation processes, better defined responsibility frameworks, and more effective allocation of resources to risk mitigation mechanisms.

7. Risk Management as a Control Mechanism

Despite implementation issues, quantitative and qualitative evidence indicates that risk management practice, where effectively implemented, contributes beneficially to management control. Improved decision-making was cited by 73% of interviewees as a benefit, suggesting that risk-based approaches enhance the quality of management decisions taken under uncertainty.

One senior administrator remarked:

"When we've applied risk assessment systematically to major decisions, particularly for resource allocation and program development, we've had more successful outcomes. The systematic process forces us to think through a number of scenarios and plan accordingly."

This observation supports the theoretical argument that risk management is an effective control mechanism in uncertain environments because it provides a structured framework for decision-making that improves organizational outcomes.

Conclusion

Based on the results of this study at the Copperbelt University School of Medicine, it can be concluded that even though risk management practices have been partially implemented as management control tools, they are moderately effective due to infrequent usage, absence of training, and underdeveloped risk culture.

The organization has a formal risk management framework with policies, governance arrangements, and reporting lines. However, the extent to which the framework is translated into day-to-day operational practice varies significantly across departments and functional areas. Risk identification processes are relatively well-developed, while risk monitoring, reporting, and communication require significant improvement.

Expert validation confirms that the overall risk management practice status is within the "Moderately Effective" zone (67.6%), with policy environment and strategic alignment as relative strengths, and implementation processes and resource allocation as areas for improvement.

In order to increase the effectiveness of risk management as a control mechanism during uncertain conditions, the institution must:

1. Develop a training program to build risk management capabilities at every organizational level
2. Developing more defined communication channels and reporting mechanisms for risk information
3. Assigning sufficient resources to risk mitigation initiatives
4. Encouraging a more robust risk culture through leadership commitment and staff involvement
5. Normalizing implementation methodologies across departments with room for context-specific modifications
6. Instituting routine monitoring and assessment of risk management efficacy.

These improvements would greatly enhance the institution's capacity to manage uncertainties in the higher education complex environment while ensuring management control.

6. Thank-You Note

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Reference

1. Arikunto S. Research procedures: a practical approach. Jakarta: PT. Rineka Cipta; 2010.
2. Aven T. Risk assessment and risk management: review of recent advances on their foundation. Eur J Oper Res. 2016;253(1):1-13. doi:10.1016/j.ejor.2015.12.023
3. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77-101. doi:10.1191/1478088706qp063oa
4. Huber M, Rothstein H. The risk organisation: or how organisations reconcile themselves to failure. J Risk Res. 2013;16(6):651-75. doi:10.1080/13669877.2012.761276
5. Kabwe B, Chitalu M. Risk management in medical education: a comparative study of Southern African

medical schools. Afr J Health Educ. 2022;10(2):145-63. doi:10.31800/ajhe.v10n2.p145
6. Mwansa L, Mutale C. Implementation challenges of risk management in African higher education institutions. J Educ Adm Leadersh. 2023;4(3):78-92. doi:10.24014/jeal.v4i3.42560
7. Nkonde E, Mutambo R. Cultural dimensions of risk management implementation in higher education. J Risk Manag Educ. 2023;9(1):45-62. doi:10.20414/jrme.v9i1.6541
8. Power M. The risk management of everything. J Risk Finance. 2004;5(3):58-65. doi:10.1108/eb023001
9. Simwinga I, Namfukwe A, Mulenga E. Capability development for effective risk management in educational institutions. Int J Educ Manag. 2022;7(4):87-102. doi:10.35580/ijem.v7i4.45635
10. Tversky A, Kahneman D. Judgment under uncertainty: heuristics and biases. Science. 1974;185(4157):1124-31. doi:10.1126/science.185.4157.1124