RISK MANAGEMENT IN THE UNIVERSITY OF ELDORET

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DECLARATION

This research project is our original work and has not been presented for any degree award in any institution.

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Most of all, we are grateful to God Almighty for giving us the health, wisdom, patience, and knowledge to undertake this study.

Our sincere gratitude goes to Dr. Otieno for his professional guidance, variable advice, and contributions that led to the successful completion of this project. We are grateful for the equipped library that enabled us to do our research vastly.

DEDICATION

We dedicate this work to all Actuarial Science students in our Institution, supervisor, friends, colleagues, and students across the globe to inspire them to keep working to improve this field of study and make it more significant than it already is.

ABSTRACT

This project aimed to develop and implement a comprehensive risk management program to identify, assess, and manage risks that could impact the University's operations. The project involved creating a risk management framework, identifying and evaluating risks, and developing mitigation and response strategies.

The project team worked collaboratively with stakeholders across the University. It engaged with experts in risk management to ensure that the program is informed by best practices and tailored to the specific needs of the University of Eldoret. The project was an ongoing process, with regular review and evaluation to ensure that the risk management program remained effective and responsive to changing circumstances.

The successful implementation of this project will enable the University of Eldoret to proactively manage risks and ensure the continuity of its operations, as well as promote a culture of accountability and continuous improvement across the University.

LIST OF FIGURES

LIST OF ABBREVIATIONS

ERM- Enterprise risk management

PSSP- Privately sponsored students

GSSP- Government-sponsored students

ETA- Event tree analysis

KUCCPS-Kenya University and college central placement services.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The issue of risk management is very paramount to any organization across the globe. It's a law that every Institution, whether private or owned by the Government, has a risk department to control all risks arising in that place (Mormul, 2021). The 2001 NACUBO publication Developing a Strategy to Manage Risk in Higher Education defines risk as any issue impacting an organization's ability to meet its objectives. Enterprise risk management replaced traditional risk management since it prevented institutions from risks that occurred in the past and those that could likely happen in the future. Enterprise Risk Management is how institutions plan for and mitigate risks that could prevent them from achieving their strategic goals. At the University of Eldoret, dropouts have been observed, poor student performance, delayed payment of school fees, strikes amongst teaching and non-teaching staff, and unutilized resources. Increased competition in the marketplace is increasing pressure to transform higher education. Enterprise Risk Management links institutional governance, risk management, and the University's strategic goals. Risk management will be conducted to reduce the impact of the potential hazards to a tolerable level. At tertiary institutions, The Risk Management Process should incorporate the following steps:

1. Understand your risks, e.g., in the context of Higher Educational institutions

2. Identify risks in your local context and area

3. Describe risks, e.g., through producing an internal risk register

4. Score your risk, e.g., using a matrix approach

5. Decide how you will manage your risks

1.2 Statement of the problem

All over the world, universities are responsible for providing quality education and training by ensuring that students pass their exams, complete their studies, and become responsible students capable of contributing to national development.

Today, we have so many unemployment cases among educated youths. Employers claim they do not have the necessary skills for the available jobs, yet they underwent complete study in their institutions. From this, it's evident that our institutions are producing "half-baked" students, meaning they are not well equipped for the roles available in the industry of their specializations. Therefore, there's a need to understand why this is so and draft the limitations hindering the institutions from achieving their primary goal.

We, therefore, came up with the risks that the University of Eldoret faces and found ways to curb or mitigate them.

1.3 Objectives of the Study

1.3.1 Overall objectives

The primary purpose of this research was to identify and assess a broad array of risks that could negatively impact achieving the University of Eldoret's goals and objectives, ensuring appropriate ownership and accountability of hazards, and developing and implementing appropriate risk mitigation.

1.3.2 Specific objectives

The study sought to:

i.   Improve the quality of education in the school.

ii.   Maximize the financial profits in the school.

iii.   Reduce students' school dropouts.

iv.   Improve the school's technology.

v.   Maintain school reputation

1.4 Research Questions.

1. What potential risks could affect the performance of the University of Eldoret in 2022?

2. What are the strategies that can be used to mitigate the identified risks

3. What is the trend in the admission of Privately sponsored and Government sponsored students over the years?

4. Trend of several graduations over the years?

1.5 Scope of study.

This project aimed to develop a risk management plan for the University of Eldoret. The project identified potential risks that could affect the University's performance and developed strategies to mitigate these risks. The project adopted a qualitative research design. Data will be collected through interviews with university administrators, staff, and students. The data will be analyzed using thematic analysis. The project was conducted over six months.

1.6 Significance of the study

Risk management is essential because it protects students, faculty, and finances from harm while protecting your financial assets and lowering your legal liability. Developing a risk management plan for a school reduces the chances of risk and will mitigate the effects of those risks if they occur.

The study comes with the following benefits; it Reduces potential losses in revenue, safeguards your reputation, and limits the possibility of a lawsuit against the University. It will also help the Institution reduce the rate of school dropout and improve the quality of education.

In this study, the goal was to eliminate all possible risks and manage the risks appropriately.

1.7 Limitations of the Study

1.   Misunderstanding of implementation instructions by key personnel or judgment errors due to carelessness and fatigue could lead to a well-designed ERM (Enterprise Risk Management) framework breakdown.

2.   Lack of quality data and limited access to sensitive data due to unsupportive organizational culture

3.   Difficulties in quantifying the risks

4.   Insufficient resources such as time and financial and human resources

5.   Lack of perceived benefits of ERM

1.8 Hypothesis of the Study

All the risks identified affect the quality of education at the University

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Enterprise Risk Management is an integrated process that helps organizations identify and manage risks that might affect achieving their objectives in the short and long run (Albasteki et al., 2019). The process helps create awareness of the organization's dangers and helps the management in decision-making. Amardeep insists that an effective decision-making process reduces the cost of capital while increasing the performance of an enterprise (Amardeep, 2011). In higher institutions, risk management practices have been implemented to help deal with the dynamic and complex environment that they operate in (Steenbergen et al., 2013). In a school setting, the nature of the risk management strategies may depend on the school's culture, geographical location, and management of the school.

Different risks might affect the Institution's performance, both in implementing its services and the overall performance. According to Scott, higher education risks can be of four main categories: academic risks, operational risks, financial risks, and reputational risks.

2.2 Academic risks

Academic risks are usually the risks that affect the student's ability to achieve their academic objectives, which lead to the possibility of the students failing and, as a result, affect the education quality of the University. Student success is usually the base measurement of the education quality in any learning institution. Therefore, if students fail, it will ruin the Institution's reputation and the education quality. The academic risks may include an increase in institution takeover, changes in accreditation requirements, and a decrease in the student's overall achievements (Melgar et al., 2022). To help mitigate and manage academic risks, administrators and educators can implement student assistance programs or student tutoring programs to help

them in every way possible (2022). Also, students in any form of struggle need support and opportunities to improve their performance and achieve their goals (Pariser, n.d). Improving the student's academic status will also help improve the Institution's reputation. Lastly, the Institution can include measures like enhancing education quality, improving learning and teaching methods, and increasing student support.

2.3 Operational risks

Every organization deals with operational risks in its daily activities. In higher education institutions, operational risks can happen during events, lectures, classes, and other functions hosted by the University (Dungy & Peck, 2019). The Campus operational risks endanger the students and other institution members equally. Operational risks in University can include decreases in productivity, changes in technology, and increases in costs. Most universities use online classes for learning purposes. Operational risks may affect the learning process, affecting their overall performance. To help mitigate the risks, before the start of the learning period, the administrators can conduct a risk assessment to detect the possible dangers that may affect the welfare of everyone in the Institution. Through the assessment, specific measures can be drafted to minimize the damage and the hazards that might arise. Also, the higher education institution could improve communication and collaboration, streamline processes, and increase transparency in all matters.

2. 4 Reputational risks

Higher institutions are usually ranked based on their reputation, education, nurturing talents and young minds, ensuring the student's welfare, and having a conducive and excellent learning environment(Troschitz, 2017). An institution's reputation can be affected by anything related to the education system and the differences that may arise due to culture. Reputational risks usually

include bad publicity, a decrease in applications for new and continuing entries, and decreases in donations by the alumni of the school. To counter reputational risks, the Institution could maintain proper standards and ensure they manage the students and classes without bias. In addition, in case anything threatens the school's reputation, the administrators could take legal measures to maintain and help defend the goodness of the Institution (Jennings,2012). Other strategies may include enhancing marketing and branding efforts, increasing alumni engagement, and improving stakeholder relations.

2.5 Financial risks

Like any other enterprise, finance is an essential department in higher education institutions. The investments, financial assets, and funding might be wasted if the Institution's finances are not well utilized (Troschitz, 2017). The financial risks in a higher education institution may include accounting errors, changes in the government and other funding sources, a decrease in the number of students enrolled, and increases in costs. The best way to identify financial risks and manage them in a higher education institution may be through drafting a business plan or a budget plan for the cash flows of the Institution and for every innovation the Institution on which they will spend. Other measures may include reducing costs, diversifying sources of income, and increasing efficiencies.

2.6 Conclusion

In conclusion, monitoring and evaluation are crucial in every Institution since there will always be struggles that may hinder attaining the main objective. Higher education institutions can counter the risks though making informed decisions for the student's growth and learning. An institution with a good plan can help to track the progress of the risk management process and help identify the areas that need attention. The process should include indicators that will

show the effectiveness of the risk management plan, and the administrators should review it

regularly.

<p align="center">CHAPTER 3: METHODOLOGY</p>

Enterprise risk management in universities refers to identifying, assessing, and managing potential risks that may affect the operations and reputation of the University (Vovk, 2022). This includes financial risks, operational risks, and academic and reputational risks. The goal of enterprise risk management in universities is to minimize the potential impact of these risks on the University's mission and objectives. This is typically accomplished through risk assessment, strategies, and ongoing monitoring and review of risk management practices. Universities need to have a robust enterprise risk management framework in place to help ensure their long-term sustainability and success.

The enterprise risk management (ERM) model in universities typically involves a three-step process: risk identification, risk assessment, and risk management.

3. 1 Risk identification

This step involved identifying potential risks that may affect the University's operations and reputation. The following techniques were used to identify risks in our Institution:

3.1.1 Brainstorming:
This technique involved bringing together a group of people, such as university staff and management, to identify potential risks. This was an effective way to generate a comprehensive list of risks. We discussed with students from different departments and came up with a list of risks the Institution faced.

3.1.2 SWOT Analysis:
This technique involved analyzing the University's strengths, weaknesses, opportunities, and threats (Kniazeva & Baskin, 2023).

Strengths of the University of Eldoret

- Good security

- Good facilities and infrastructure

- Strong Agricultural research and innovative capabilities.

Weaknesses of the University of Eldoret

- Weak alumni network.

- Unutilized resources

- Low student satisfaction; most students are not satisfied with the quality of education from the staff.

- Frequent strikes from teaching and non-teaching staff.

- Poor technology, malfunctioning of the student portal, and ineffective online learning.

Opportunities at the University of Eldoret

- Advancement in technology and online learning.

- Partnership and collaborations with investors to utilize the available resources.

- Improving the curriculum to allow technical learning, especially in stem courses.

Threats at the University of Eldoret

- Economic downturns or changes in demographic trends.

- Changes in government funding and policies.

- Competition from other universities.

- Reputational threats.

3.1.3 Surveys:

This technique involved interviewing key stakeholders, staff, and students from different departments to identify potential risks. We also administered questionnaires to a sample of staff and students.

3.1.4 Scenario and Historical Analysis:

This technique involved reviewing past events, incidents, and decisions to identify patterns and trends that indicated potential risks (Covello & Mumpower, 1985). Based on the previous events in our Institution, we noted frequent strikes by the staff and students due to a lack of payments and extra fees charged to the students. Increased deferment cases amongst students due to inability to pay their fees, failure to report due to malfunctioning of the student portal, and dropouts due to financial issues.

3.2 Risk assessment

This was the second step of the ERM (Enterprise Risk Management) framework, where the identified risks were evaluated and their impact on the Institution determined. There are two methods of risk assessment; Qualitative Risk Assessment and Quantitative Risk Assessment.

It is recommended to start with qualitative analysis followed by quantitative analysis, which is a data-driven and objective we discussed in Chapter 4.

3.2.1 Qualitative Risk Assessment

This method was used to evaluate and analyze risks faced by an institution or an organization based on subjective judgment, expert opinion, and past experience to identify and evaluate risks. It did not involve statistical analysis and mathematical modeling (Billinton, 2008).

The method is less precise and accurate than quantitative analysis, meaning its results are more reliable.

The process involved the evaluation of the likelihood, potential, and impact of the identified risks.

- **Likelihood**

The likelihood is the probability that an adverse event, which could cause a materialization of the risk, may occur. A probability score on its likelihood of occurrence was assigned for every risk identified. The values assigned ranged from 1-5.

Risk Level	Risk Category	Probability of occurrence
1	Very Low	5% Likely to happen
2	Low	10% Likely to happen
3	Medium	20% Likely to happen
4	High	50% Likely to happen
5	Very High	Over 50% likely to happen

Figure 3.1 The degree of likelihood of risks

- **Impact**

The impact is the potential loss should the risk materialize. The best measure of the impact of a potential risk was its' impact on the University's objectives. Values were assigned a range from 1 to 5, with explanations attached.

Impact Level	Impact Category	Description
1	Very Low	No impact
2	Low	Negative risks that have a very low probability of causing an impact to the university. Does not require much attention.
3	Medium	Negative risks that have an impact to the university but can be managed without long term effect.
4	High	Negative risks that have a high impact and require much attention since they require more effort to manage.
5	Very High	Negative risks that are a threat to the University's objectives and should be mitigated and managed since they affect the objectives directly.

Figure 3.2 The degree of impact of risks

- **Risk Ranking**

This aided us in coming up with the appropriate mitigation and risk management methods. We prioritized the risks based on their importance to the University's Objectives. This helped us determine the risk to give more attention to so we to come up with the best way to mitigate and manage risks more efficiently and effectively (Scrivens, 2015).

We used the following criteria to rank the previously identified risks; high (color code: red), Medium (color code: yellow), or low (color code: green). Each risk fell into one category based on the values allocated for likelihood and impact.

Risk level	Description
High risk	Top level of risk with a higher probability of occurrence and has a higher financial impact
Medium risk	High level of risk with a high probability of occurrence and a high impact on the university's objectives.
Low risk	Low level of risk and a lower probability of occurrence and has little or no impact to the

Figure 3.3 Risk levels

- **Risk prioritization**

Risk prioritization is identifying and ranking potential risks based on their likelihood and potential impact (Lin et al., 2021). This helps organizations to focus their resources and efforts on the most significant risks and to develop strategies to mitigate or manage those risks. In our research, we used risk rating to prioritize risk.

- **Risk matrix**

A risk matrix is a tool to evaluate and prioritize potential risks based on their likelihood and potential impact. We divided the matrix into four quadrants, with the x-axis representing the likelihood of the risk occurring and the y-axis representing the potential impact if the risk does occur (Bao et al., 2022).

The four quadrants were typically labeled as follows:

- ➢ High likelihood/High impact: These risks were considered the highest priority and required immediate attention and action.
- ➢ High likelihood/Low impact: These were still considered a priority but did not require as much immediate attention as the high likelihood/high impact risks.
- ➢ Low likelihood/High impact: They were considered less likely to occur but had a significant impact if they did. They should be monitored and addressed as necessary.
- ➢ Low likelihood/Low impact: These risks were considered the lowest priority and did not require immediate attention.

NO	RISK TYPE	RISK DESCRIPTION	LIKELIHOOD	IMPACT	RATING
RISK MATRIX					
1	Academic Risk	Abseentism, school dropout, curriculum innefficiency	Over 50%	Very High	Very High
2	Operational Risk	Portal malfunctioning, strikes, Inadequate seats, missing marks	Around 20%	Medium	Medium
3	Financial Risks	Delayed payment of school fees, Financial strain on students, Delayed payment of Salaries,Dependency on government funding,Unutilized resources	Over 50%	Very High	Very High
4	Reputational risk	Negative publicity, Social media.	Below 10%	Low	Low

Figure 3.4 Risk Matrix

3.2.2 Risk appetite

Risk appetite refers to the level of risk an organization is willing to accept to pursue its objectives (Aven, 2012). It is a key concept in risk management that guides decision-making, resource allocation, and risk-taking behavior within an organization. Based on the above risk matrix, academic and financial risks were highly likely to occur and had a high impact on the Institution; this meant that they were out of the Institution's risk appetite. The risks as mentioned above were rated very high; thus, there was a need for the Institution to minimize them since they bring adverse effects to the Institution.

3.3 Risk management

This involved the process of controlling organizational threats and challenges.

3.3.1 How to Manage Academic Risks

3.3.1.1 Absenteeism.

The invention of automatic attendance.

The school was to invent Biometric based attendance management systems that can be used to track students' attendance. This way, students know that automated attendance is part of grade calculation hence the need to come early for classes.

Introduction of the student-parent portal.

Parent involvement was to make more impact than anything else. Keeping parents informed of absences, grades, and discipline issues via email and SMS alerts and creating a parent's portal, therefore, fewer avoidable absence.

Provide a conducive environment for students.

The school should build an environment that helps students feel connected to the people they learn with and ensure that employees treat students with love and positivity.

3.3.1.2 School dropouts

Provide career and technical education.

Career and technical education talks make school more interesting and meaningful for students. The school should therefore increase the number of career and technical education talks to at least three times a semester. This would motivate the students and enable them to keep going.

Provision of multiple pathways for graduation

Not every student learns the same, and some students have personal commitments (children, jobs, etc.) outside of school that challenge traditional schooling. The school can therefore reduce

the dropout rate by providing alternatives like night schooling, which students can take to graduate.

Frequency in a career mentorship program

Ongoing support through mentoring and tutoring services helps keep students on track to graduate.

3.3.1.3 Curriculum inefficiency

The school should invest more in technical education (for example, the Construction of more computer laboratories). Lecturers should also emphasize technical coursework (Mulwa et al., 2023). The University of Eldoret should create links with more bodies offering professional certifications to enable students to access the certifications easily. The University should get internships and attachments for students.

Increase field attachment for undergraduates to two in their entire bachelor's course. This will increase students' skills in the field and avoid producing incompetent students in the outside world.

3.3.2 Ways to Manage Reputational Risk

Make reputational risk part of strategy and planning

It's important to recognize the impact that reputation can have on success. Investigate weaknesses and determine relevant reputational attributes within the organization. Brainstorm potential scenarios that could damage public perception with staff and students at various levels, as they may have unique contributions. Determine indicators and warnings for each attribute so you will know when to take action.

Understanding all actions can affect public perception

The board and top management must recognize the importance of reputational risk management, and staff must lead by example to promote positive messages to students. Institutional training, policies, and procedures can ensure that all individuals know how to behave and respond appropriately. When reputation is at risk, the University must act quickly and responsibly while doing anything within its power to positively influence public ideas.

Focus on a positive image and communication

In all situations, it's key to consistently send out positive communications. Over time, this will build up your reputation in the public mind, lessening the impact of future damages. Student service, transparency, good governance, and steady growth are some of the most important messages.

Create response and contingency plans

If the worst happens, the Institution must respond quickly and appropriately. Every minute can be crucial and reduce the public's respect for your organization and its managers. While seriously underestimated in some organizations, the risk that reputation presents is serious. It is a potential side-effect of any risk that can occur, so it's crucial to monitor it. Without effective reputation management, it may take an organization a long time to recover from an otherwise minor incident.

3.3.3 How to manage operational risk

3.3.3.1 IT Risk

Conduct timely risk assessment

A regular risk assessment by the I.T. department helps keep the enterprise risk profile current. It allows operational risk management leaders to incorporate relevant changes to the portal without unnecessary delay.

Employing more and high qualified I.T. experts

The experts will help create efficient websites and applications and maintain them.

Updated equipment and software

The University should have bought computers to help the students deal with technical tasks. There should be properly functioning computer laboratories with stable internet that students can access during working days and hours.

3.3.3.2 Strike

Employees payment

The University should pay its employees on time and liaise with the student association to know the needs and concerns of the students and address them to avoid student strikes.

Lockout technique

This is a technique usually used by institutions and organizations to put pressure on the workers, and this pressure is a diversionary technique in which the employee's mind is diverted from conducting a strike.

3.3.4. Financial risk

Delayed payment of school fees

The school should ensure the Fee Payment Policy is well adhered to. For example, students who are indebted in any manner to the University will have their examination results and their academic records withheld. It has been noticed that some students spend it on other affairs after receiving school fees from parents. Later on, since they can't be able to raise any amount, they choose to defer or drop out of school. The introduction of the student-parent portal will inform the parent of their students' progress, and fee payment behavior will improve.

Financial strains on students.

This can be managed if a second source of income is provided to the legal students, thereby increasing their income. The students can also manage it by creating a basic budget /spending plan that will limit their overspending and help them track their expenditures. The University should build more hostels that can cater to the welfare of most students. Some students delay paying school fees since they struggle much paying for their upkeep. Hostels are affordable to many; thus, the University should propose building more rooms.

Employee Salary delays

Measures that continuously improve the existing payroll can be implemented to prevent late salary payments. For example, if the previous payroll calculation errors resulted in delayed payments, then there is a need for the University to invest in payroll software to automate the calculation process. The school can also prevent delays by monitoring its cash flows to ensure sufficient funds to pay employees.

Dependency on government funding

The University should adopt innovative ways to mobilize its resources, especially now that there is a funding crisis and a proper amount of insurance can be taken to safeguard its assets.

The University can also form active finance divisions, including the risk management department that focuses on managing the financial risk of potential loss of assets and financial resources.

Unutilized resources

Unutilized school resources could be used to help increase the University's income. This is by the University ensuring efficient and effective management of space based on university priorities. The University could encourage both external and internal investors, boosting the institutions' kitty. For example, building nice hotels and swimming pools can help raise funds for the Institution since the Institution is blessed with huge land.

CHAPTER 4: DATA ANALYSIS, INTERPRETATION, AND DISCUSSION

4.1 Quantitative risk assessment

This section involved the process of quantifying risk. Quantifying risk is converting the impact of risk into numerical terms.

4.1.1 Deferred Students.

From the questionnaires, we could find the percentage number of students that have deferred during their study. Below is a chart that shows the percentage; we can conclude that 11.2 % of the students from the sample size have ever deferred during their study period.

From Figure 4.2, we concluded that most students deferred due to financial challenges, such as lack of fees or money to sustain their stay in the Institution, whereas others deferred due to not reporting.
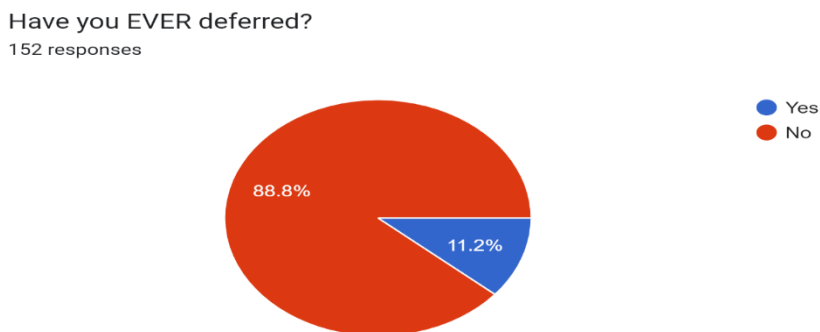

Figure 4.1 Proportion of students who deferred

4.1.2 Risks Facing the University.

From our survey, we recorded various kinds of risks that the University faces based on the students' and staff's opinions. Below is a graph that indicates the risks and the percentage of students that think it is a major risk facing the University.

Thus, we concluded that financial and operational risks are the major problems faced by the University.
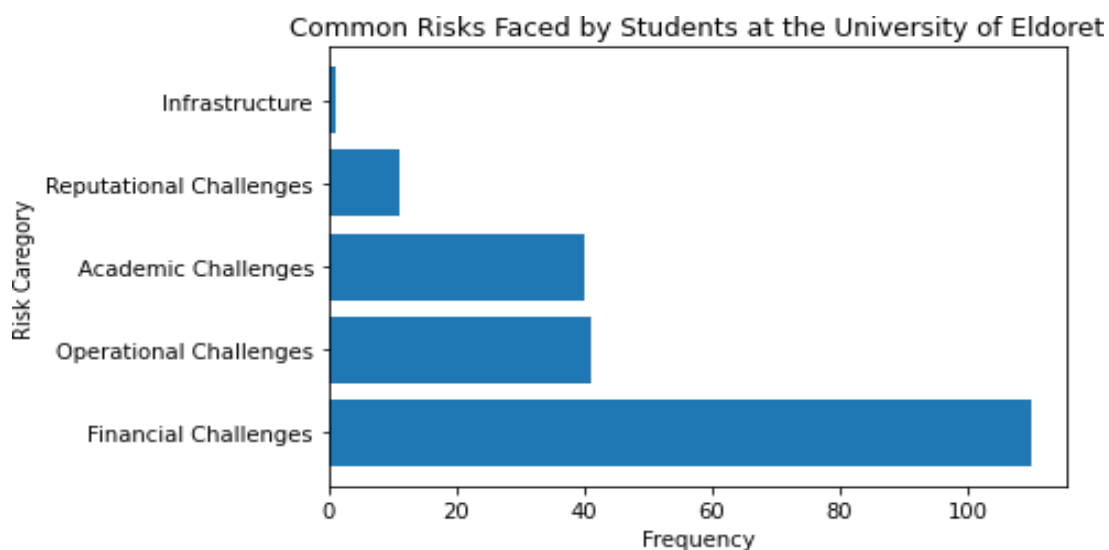

Figure 4.3. Risks Facing the University of Eldoret

We then picked the major challenges and researched the extent to which the major risk affected the University by asking for the student's opinions; as shown in Figure 4.4, we concluded that financial risks were the highest risk that the Institution faced.

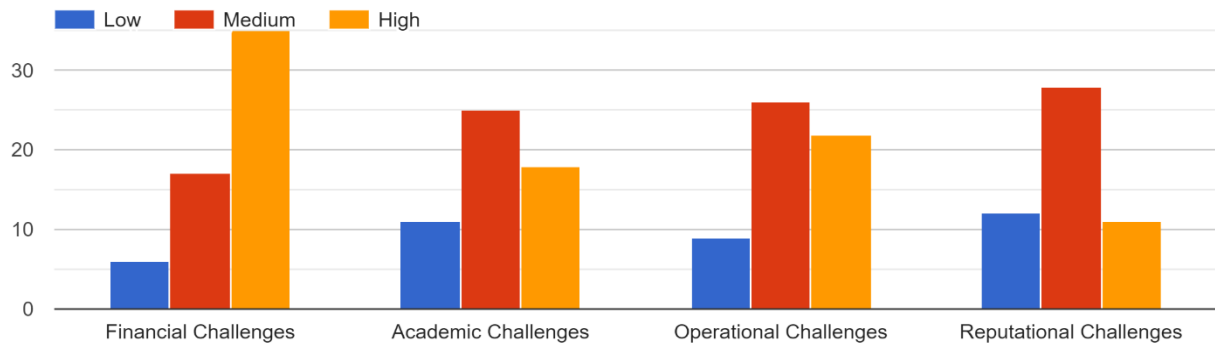To What Extent do the Challenges below affect the institution?

Figure 4.4. Impacts of The identified Risks on the Institution.

4.1.3 Student Admission and Graduation.

We researched the number of students admitted and the number that graduated after their years of study of each cohort from 2012/2013 to 2017/2018.

In the year 2017/2018, there was a decrease in the number of admitted students, and we linked the cause to the raising of the grade points required to join the University that year; thus, fewer students were admitted to the University that year.
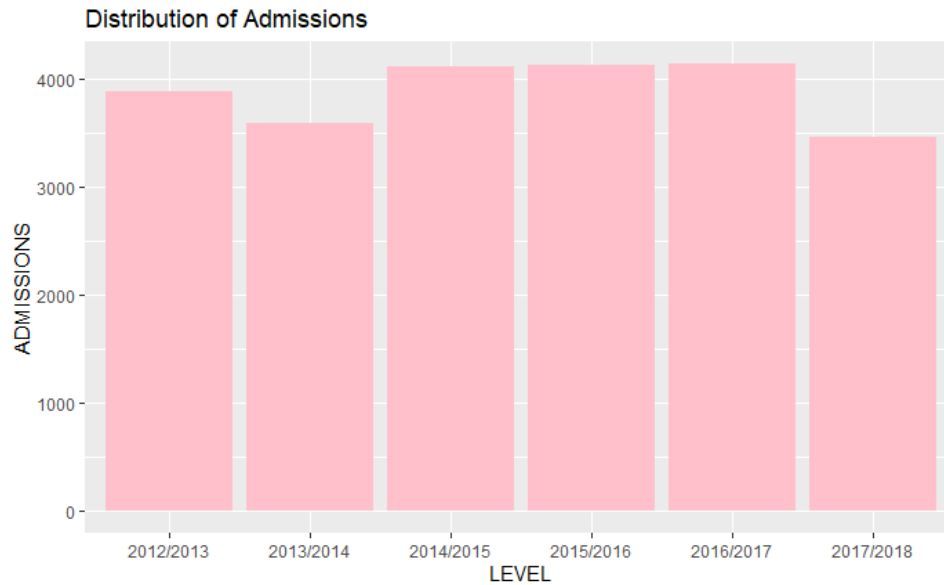
Figure 4.5 Admissions data based on the academic year.

The cohort admitted in 2016/2015 had the lowest number of graduates, thus registering a decrease, as shown in Figure 4.6.
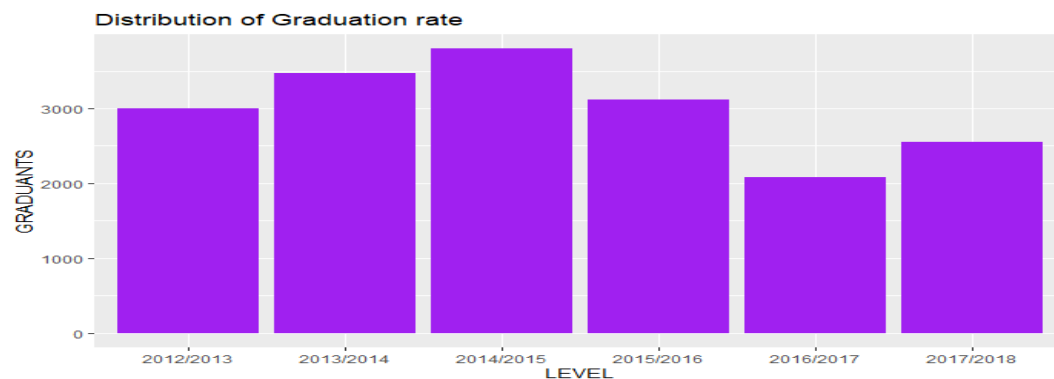

Figure 4.6 Distribution of Graduation Numbers

We then compared the number of students that graduated, and there was a decrease. This implied that there were factors that led to the decrease.
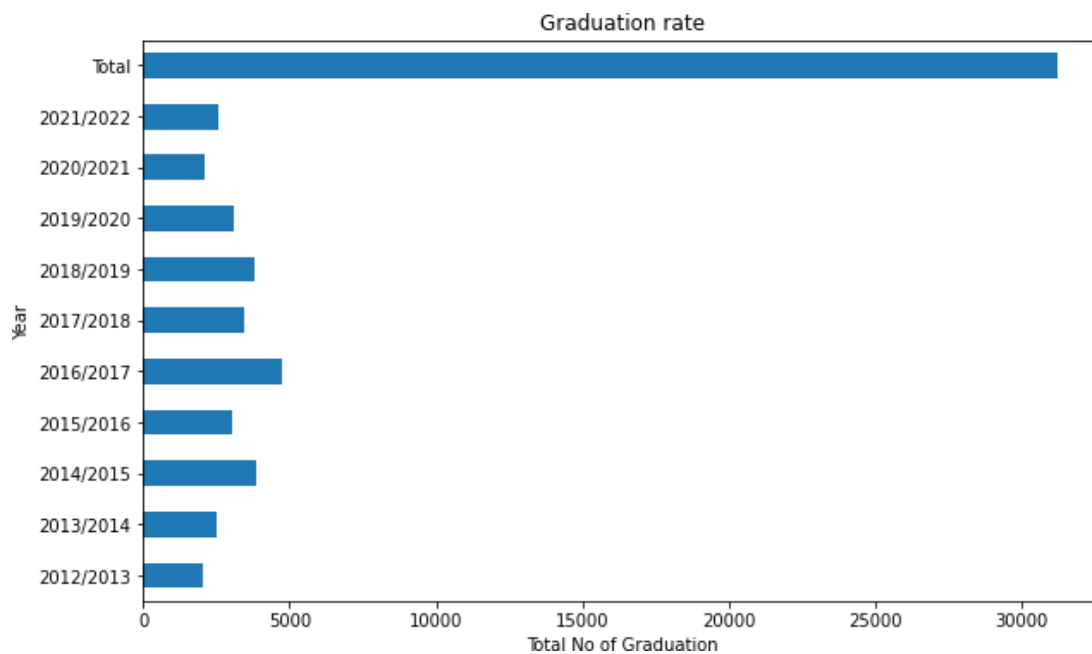
Figure 4.7 The graduation rates over time.

4.1.4 University's Capacity and the Number of students admitted.

This was to help us understand whether the school had enough resources compared to the number of students admitted each year. From the data collected, we concluded that from 2016/2017, the University admitted students that were lower than the expected capacity. The risks that the university faces were thus assumed to be the cause since it means that a lower number of students applied to join the University.

Figure 4.8 The difference between capacity and the total number of students admitted
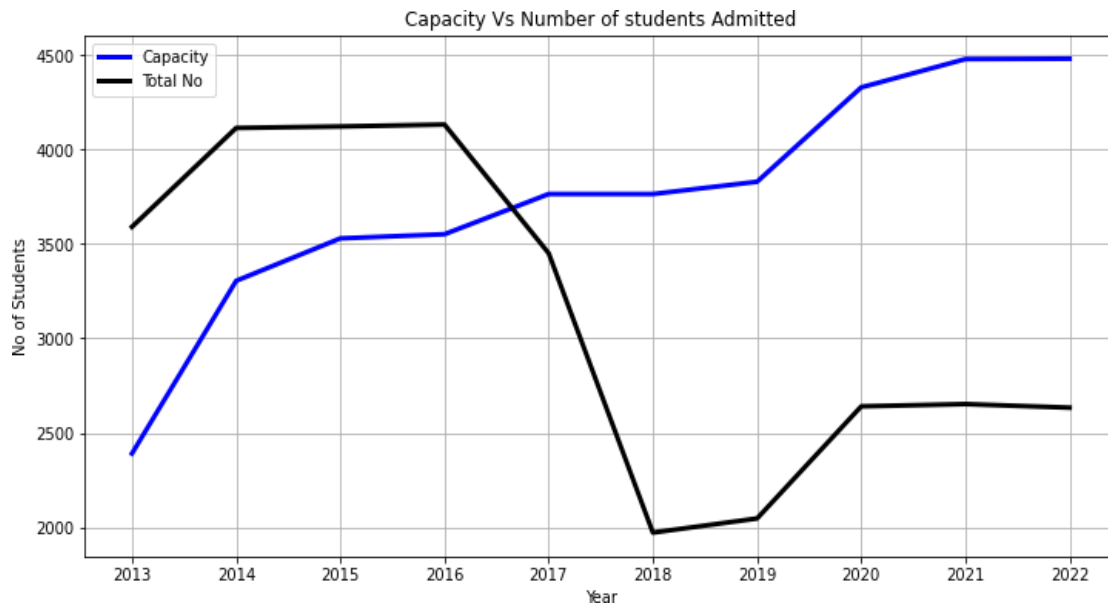
4.1.5 Trend between private and government sponsored students (PSSP) students (GSSP).

Private-sponsored students are those that pay their fees without any support from the Government. In most cases, they choose the University they wish to be admitted to, unlike those government-sponsored that the KUCCPS places.

Over the years, there was a drastic drop in the number of PSSP students in the year 2016/2017 due to the rising grade points in the country that year; therefore, a lesser number of students joined campuses in the whole country.

An increase in the number of students admitted as PSSP thus shows that the University had gained popularity and had a good reputation.

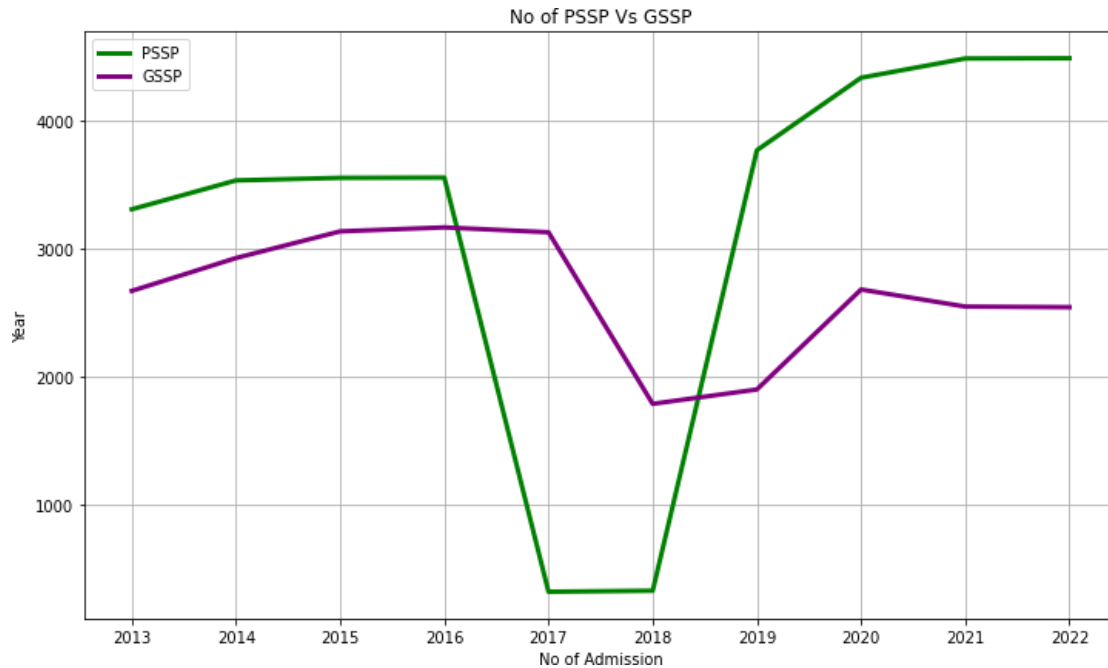Figure 4.9 The difference between PSSP and GSSP over the years

4.1.6 School dropouts

From the data collected, we found out the number of students that dropped out from school over the years, with 2016/2017 having the most dropouts. This showed that school dropout was one of the many reasons that led to a decrease in the number of students that graduated, which reduced the student retention rates of the University.
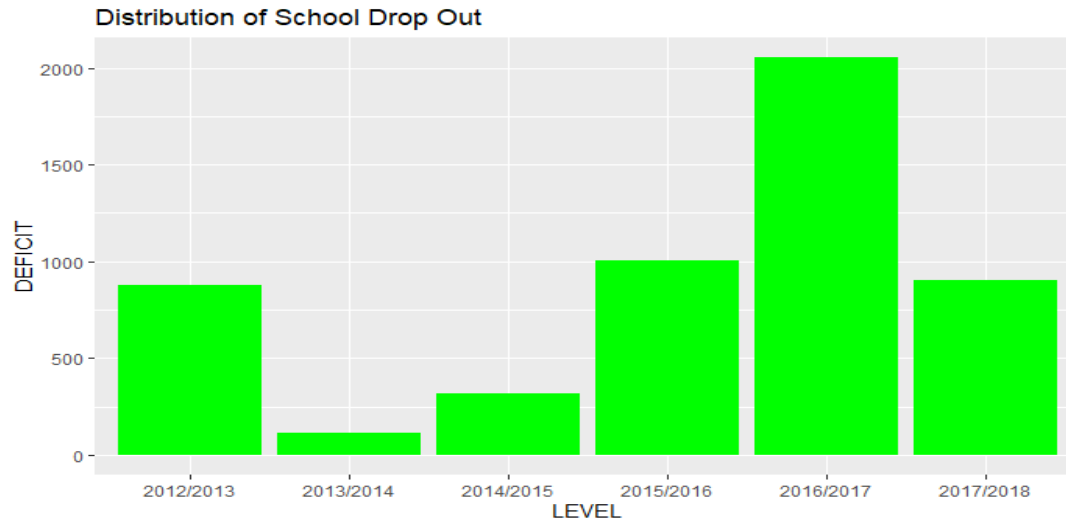
Figure 4.10 Distribution of School drop out

4.2 Methods of quantitative risk assessment

This is a systematic and mathematical approach to assess risk associated with a particular activity. It involved using numerical data and statistical analysis to evaluate or measure an event's effectiveness, quality, or performance through a collection of data through surveys, experiments, and other research methods and statistical techniques to analyze and interpret the results. It's also used to quantify the likelihood and impact of risks.

According to (R.M, 2013), there are different methods and techniques for performing quantitative risk analysis;

4.2.1 Event Tree Analysis:

Event tree analysis assessed the consequences of a specific event or series of events. It started with an initial event and then identified the possible consequences that could result from that

event. It was useful for identifying the potential consequences of a risk event and helped to prioritize risk mitigation efforts. However, it did not account for the likelihood of the initial event occurring.

We looked at the limitations and strengths of the analysis, which were as follows:

Limitations of Event Tree Analysis:

- Limited scope: ETA was only as good as the assumptions and data inputs used to construct it. This meant that ETA was limited by the scope of the data that was available and the accuracy of that data.

- Simplified assumptions: ETA relied on simplifying assumptions to make the analysis tractable. These assumptions were overly simplistic or unrealistic, which led to inaccurate results.

- Focused on specific outcomes: ETA was designed to analyze the probability and consequences of specific outcomes. It was not well-suited to assessing the overall risk of a complex system.

Strengths of Event Tree Analysis:

- Systematic approach: provided a structured and systematic approach to analyze the potential consequences of a particular event or series of events. This made it easier to identify the key variables driving the system's risk.

- Visual representation: Provide a visual representation of the sequence of events that could lead to a particular outcome. This helped to communicate the potential risks and consequences.

- Risk management: was used to identify the key risks in a system and to develop risk management strategies that reduced the likelihood or consequences of those risks

4.2.2 Steps of Event Tree Analysis.

Step 1: Identified the event

In the event of an academic institution, the major problems were poor academic performance and low student retention rates. These were the negative outcomes that every academic Institution had the risk of facing; thus, they became our events of focus.

Step 2: Create the event tree

An event tree shows the logical relationships between events and conditions that led to a particular outcome. The first step to creating an event tree analysis was identifying the initial event which was the cause of the analysis; in our case, it was poor teaching quality in the Institution.

The second step was determining the possible outcomes of the identified initial event, which were to be specific and measurable. They were low student retention rates and poor academic performance.

The other step was identifying the conditional events, which were events or situations that could occur due to the initiating event and increased the likelihood of the outcome occurring. In this case, for low student retention rates and poor academic performance, the conditional events were a lack of support services, inadequate resources, outdated technology, insufficient funding, and low staff morale.

1.1 Event tree analysis of risks facing the Institution.

Initiating Event: Poor Teaching Quality

Possible Outcomes:

Low Student Retention Rates; From the collected data, the number of students admitted to the Institution exceeded the number of exits over the years.

Poor Academic Performance

Decreased Reputation of the University

Conditional Event 1: Lack of Support Services

Possible Outcomes:

1. Reduced Student Motivation

2. Low Student Satisfaction

3. Reduced Student Success

Conditional Event 2: Inadequate Resources

Possible Outcomes:

1. Reduced Course Offerings

2. Insufficient Course Materials. For example, there were few computer labs for students who majored in computer science.

3. Overcrowded Classrooms

4. Reduced Faculty Availability; for example, the inability to offer technical and programming skills due to lack of adequate resources like labs.

Conditional Event 3: Outdated Technology

Possible Outcomes:

1. Inability to Deliver Online Courses

2. Inadequate Distance Learning Capabilities

3. Decreased Student Engagement

4. Reduced Faculty Productivity

5. Frequent Malfunctioning of the student portal.

Conditional Event 4: Insufficient Funding

Possible Outcomes:

1. Reduced Course Offerings

2. Reduced Faculty Salaries

3. Limited Staff Development Opportunities

4. Reduced Infrastructure Upgrades

Conditional Event 5: Political Instability

Possible Outcomes:

1. Student Protests and Disruptions

2. Faculty and Staff Strikes

3. Reduced Enrolment

4. Decreased Government Funding

Conditional Event 6: Student Misconduct

Possible Outcomes:

1. Reduced Student Retention Rates

2. Decreased Reputation of the University

3. Increased Disciplinary Cases

Step 3: Assessed the likelihood and severity of each consequence

After developing the event tree analysis, we assessed the likelihood and severity of each consequence, thus helping us to identify which risks to focus on first.

From our assessments and data collected, these were the most severe consequences.

Inadequate resources were a major event in the Institution since it caused reduced course offerings, insufficient course materials, and reduced Faculty Availability, for example the ability to offer technical skills. These consequences were the major cause of low student retention rates, poor reputation, and poor academic quality. This meant that the event could cause a lack of funds since when the students are few, the Institution will not receive funds in the form of school fees. If the quality of teaching is poor, the students and parents will not be satisfied; thus, the school's reputation is at stake.

Lack of support services was also a major event whose consequences affected the overall functionality of an institution. The consequences were reduced student retention rates, low motivation, and reduced performance. The event of consequences led to insufficient funding that was in the form of student fees since most students were at risk of dropout or even transferring; it could also lead to a poor reputation which later led to low student intake rates

since most parents would not want to admit their kids in an institution with poor quality of education.

Insufficient funding was also a major event since it led to a lack of resources, reduced course offerings, and unpaid staff at the risk of striking, which affected teaching and service offering to the students.

Outdated technology or poor technology was also a risky event. Today, we are experiencing more automation as days go by; technology is taking over to make work easier. When we were experiencing the pandemic and lockdowns, our friends from other institutions were learning, yet we were not. At some point, we tried to learn through our eLearning platform, but it was ineffective. After resuming, we experienced so much pressure since we had to study for a whole year without a long break to be on track again. This would not have been so if we had better technology. A similar case was our student portal, malfunctioning when we report or register our units. So many of our students were deferred since they could not report on time, and most of the cases were not out of ignorance, but rather they experienced frequent failures until they were caught up by the deadline. Portal failure also led to delays in paying school fees since if the portal was inaccessible, one had to wait to check the fee balance.

Step 4: Identified Risk Mitigation measures.

We identified the following mitigation measures that could influence the major events.

The lack of support services could be managed by holding events linking students to the professional world. For example, our major, which is Actuarial Science has professional exams, professional societies, and bodies that we ought to be part of. Thus as actuarial

science students, we should be exposed to talks and events by professionals in the field so that they can guide us on the professional expectations expected of us. Most graduates end up not majoring in our field since they do not have the required professional exams to even be an intern in the market, and they end up doing other things for survival. The Institution should therefore hold more specific career events, especially for demanding courses, and link us with the professionals in the market to help us be job ready by the end of our studies.

Inadequate resources were also risky and could be mitigated by utilizing our resources. Our Institution has so much land that could be used to invest and gain returns. An investment that can benefit the students and profit the Institution was deemed a good investment that could raise funds for the Institution. An example was renting out university facilities; this was one of the ways to fund an institution; if there were more facilities to rent out, the University would earn more.

In the event of poor technology, the only way was investing in better technology or supporting the students by holding a competition whereby our students could create and present their designed websites. The best website could be modified and negotiated to be our website since, as a university we had very innovative minds in technology that were very skilled in the field.

The increased student misconduct could be countered by developing a student-parent portal. The benefits of the portal were that it was to enhance accountability in that the parents could easily be accountable for their kids' performance and class attendance, and it was to also reduce the events of student dropout since most students drop out without their parent's consent. If the parents could track our performances, class attendance, and school fees payment, then most students would work harder, pay their school fees on time and attend

more classes since they were answerable to their parents and guardians. Misconducts such as exam cheating would be reduced since students would be careful not to be discontinued or punished since their parents would find out. Most universities in Kenya have employed this technique, which was very effective.

CHAPTER 5: SUMMARY, CONCLUSION, AND RECOMMENDATIONS.

5.1 Introduction.

This chapter's objective was to provide a shorter summary of some of the key findings and suggestions that had been drawn from the entire study.

5.2 Summary

In summary, our research was on managing risks at the University of Eldoret. To achieve this, we identified risks, assessed them, and mitigated them. The identified risks were; academic, reputational, operational, and financial.

5.3 Conclusion

One of the essential activities in educational institutions is risk management. Different risks may arise in different departments. They must be identified, defined, registered, and reported to the stakeholders. Also, these risks must be managed responsibly so that the Institution is not in danger of being closed, being bankrupt, producing half-baked students, loose most students, having a poor public image, and having poor academic performance.

From our findings, we concluded that:

- Financial and operational risks were the main risks that the University was facing. These risks resulted in low student retention rates, low student and staff satisfaction, poor teaching quality, and lack of resources which affected the achievement of the universities general objective.
- We also concluded that several students dropped out due to financial strains; thus, the University was to help reduce the number of dropouts

- The number of students that graduated after every period of study was lower than that of the admissions at the beginning of the period due to problems such as deferment issues and dropout cases.

- The number of students that graduated had reduced over the years.

- The school's capacity had increased over the years, but the number of admissions was reducing gradually.

- The enterprise risk management framework was effective and convenient for risk management.

4.5 Recommendations

We, therefore, recommended that the University:

- **Introduces the student-parent portal-** Parents' portal would indirectly improve the parent's involvement in their child's education. It would show parents an overview of their child's journey in school. It had been noticed that students did not present academic reports to their guardians; some asked for extra fees from their parents, some dropped out of school without informing their parents, and others did not even attend lectures. The portal would let the parent keep track of their kids' life on campus. The portal would comprise the student's fee, units per semester, results, and information section. This would help reduce the number of student dropouts and help the school by payment of fees early enough by the parents.

- **Builds more hostels –** building more hostels would cater to the continuing students' financial needs. This would help in reducing dropouts due to financial issues. The policy that a student should first clear fees before getting a room should be revised to at least

half of the payment so that they could get a room and reduce their expenditure since the school's accommodation facilities were cheaper than outside the school.

- **Improves technology-**The Institution was to work on the state of technology. It was to opt for efficient websites and applications.
  The student portal should be working throughout to avoid late reporting, thus reducing the cases of deferment caused by failure to report.

- The Institution was to pay workers on time to avoid strikes that led to academic risks such as failure to complete the syllabus.

- **Encourage foreign investors-** Investors and intrapreneurship were to be encouraged by the Institution. The large unutilized land should be kept in use. For example, Investors can build recreational facilities and business centers, which would create student employment and still yield returns to the Institution. This would reduce the financial risks of lack of funds faced by the Institution.

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Risk Questionnaire

Dear respondent,

The University of Eldoret Undergraduates has designed this questionnaire for their final year project. The main goal is to identify pools of risks facing the University of Eldoret and Come up with their mitigations.

Confidentiality is assured; your responses will only be used for academic purposes. Your responses are highly appreciated.

1.   Sex

   Mark only one oval.

   ◯ Male

   ◯

   ◯ Female

      Prefer not to say

2.   Age

   Mark only one oval.

○ Below 20

○
  20 - 30
○

○ 31 - 40

○
  41 - 50

  50 and Above

3.   Year of Study

      Mark only one oval.

○ 1st

○
  2nd
○

○ 3rd
○

○ 4th

  5th

  Other:

  _____

4.   School of Study

      Mark only one oval.

○ Science

○
Engineering

○
Business

○
Education Other:

_____

5. Have you EVER deferred?

Mark only one oval.

○ Yes

○
No

6. If Yes, State the Reason

7. What are the challenges you think the University is Facing?

Check all that apply.

☐ Financial Challenges

☐ Academic Challenges

☐ Operational Challenges

☐ Reputational Challenges Other:

8. To What Extent Do the Challenges below affect the Institution?

Mark only one oval per row.

	Low	Moderate	High
Financial Challenges	◯	◯	◯
Academic Challenges	◯	◯	◯
Operational Challenges	◯	◯	◯
Reputational Challenges	◯	◯	◯

9. Suggest Areas of Improvement

STAFF AND NON-STAFF

10. Field of Work

Mark only one oval.

○ Teaching

○ Non-teaching

○ Other:

_____

11.   Gender

Mark only one oval.

○ Male

○ Female

12.   How LONG have you worked with the Institution

Mark only one oval.

○ Less than 1

○ 1- 5

○ 6-10

11 and above

13.   To What Extent Do the Challenges below affect the Institution?