

## EFFECTIVENESS OF RISK MANAGEMENT IMPLEMENTATION AT UNIVERSITI SELANGOR (UNISEL)

*Hashimah Ismail*

Faculty of Engineering and Life Sciences, Universiti Selangor  
[hashimah@unisel.edu.my](mailto:hashimah@unisel.edu.my)

*Mohd Arif Mat Norman*

Faculty of Engineering and Life Sciences, Universiti Selangor  
[mohd\\_arif@unisel.edu.my](mailto:mohd_arif@unisel.edu.my)

### **Abstract**

*Risk can be defined as an obstacle or challenge that can obstruct the ability of effective services to an organisation, especially in relation to the achievement of a set vision and mission. Thus, it is an essential strategy for many organisations to improve their performances. Risk management is considered a management tool or strategy to create a better pathway in achieving the organisation objectives by reducing the risk of ineffective processes, losses, and damage. Universiti Selangor (UNISEL) has implemented risk management using its risk management model based on contexts and issues derived from the SWOT analysis. All departments and faculties are required to apply this approach in their operations and quality objectives which support the university's strategic objectives. The achievements of the department's objective qualities are used as the performance indicator to measure the effectiveness of risk control. The model incorporates the risk management of all departments to control the risk of not achieving the university's strategic objectives. The likelihood of the risks is monitored and analysed. The effectiveness of the implemented risk management model based on the likelihood trend is presented in this paper. The model proves that the implemented risk management model can minimise the risks of not achieving the organisation's objectives. In general, it can be concluded that this study is practical and has contributed significant knowledge to better understanding the risk management implementation at UNISEL.*

**Keywords:** Risk Management, Risk Control Performance Indicator, Organisation Objectives

### **INTRODUCTION**

The impact of risks on the achievement of the organisation's objectives can be a negative impact known as threats or positive effects known as opportunities (Hillson, 2019). One example of unexpected events is the Covid-19 pandemic, and it dramatically affects individuals, family institutions, organisations, politics, social and economic problems of the country. A few risk management models had been proposed. Malik, Zaman, & Buckby (2020)

examined the impact of Enterprise Risk Management (ERM) on firm performance by examining whether firm performance is strengthened or weakened by the establishment of a board-level risk committee (BLRC). Other examples of the risk management application for other fields are in deep sea mining (Cormier & Jemma, 2020), Learning and Action Alliances (LAAs) methods for flood risk management (Maskrey, Vilcan, O'Donnell, & Lamond, 2020), flooding, and agricultural drought (Leiner, Babicky, Schinko, & Glas, 2020), risk governance in the offshore oil industry and diverse cultural and geopolitical context (Liaropoulos, Sapountzak, & Nivolianitou, 2019) and the risk governance practices of financial institutions cluster on the corporate governance characteristics of the corporation, particularly ownership structure and board independence (Dupire & Slagmulder, 2019).

One of the risk management models is Enterprise Risk Management (ERM). This model proposes that firms address all their risks comprehensively and coherently instead of managing them individually (Bromiley, McShane, Nair, & Rustambekov, 2015). Soltanizadeh et al. (2014) stated that ERM implementation varied across different industries, and the practice of having an ERM framework in place was more common among firms in the infrastructure, hotel, and technology sectors. Some examples are the effect of implementing ERM, firms experience lower risk and higher profits, simultaneously (Eckles, Hoyt, & Miller, 2014), and that firms with advanced levels of ERM implementation present higher performance, both as financial performance and market evaluation (Florio & Leioni, 2017).

University Good Governance Index (UGGI), introduced in 2011, requires Malaysian public universities to implement organised risk management. Md Sum (2018) studied the risks in the university environment, factors driving the emergence of risks, and benefits gained if the risks are managed. He also explained the risk management process or frameworks for risk management in the university setting. However, risk management is not limited to the coordination of activities to mitigate losses. It also involves integrated coordination activities to cope with any possibilities that could interfere with the organisation's operations, including development activities to enhance the professionals, organisational governance, infrastructure development, and development research. Othman, Mat Amin, & Kassim (2019) identified the risk of referring issues and relationships with the stakeholders. However, there is a lack of studies related to the risk management process in the education systems to date. A similar study using the same approach has been reported before. Other researchers could use the new technique and data generated in this study for validation, comparison, or reference purposes.

## METHODOLOGY

This study used commercially available Microsoft Office 365 software (Microsoft excel macro-enabled worksheet) to model the risk management system at UNISEL. Utilising the available built-in micro enabled functions, the risk assessment was analysed and presented using a spider-web graph and standard bar graph. For better organisation and clarity, the methodology adopted in this study would be explained in three processes; identifying risk and opportunities, identifying the risk level, existing and new risk controller, and evaluating the effectiveness of the new risk controller.

### Identifying Risk and Opportunities

These issues can be identified by creating a SWOT analysis of each strategic plan undertaken, and the context between issues with the strategic plan is shown in Figure 1. Then risks and opportunities are determined, as in Figure 2.

Misi							
PADU (EPDS) komited untuk menyediakan pengajaran pembelajaran berkualiti tinggi dalam kewujudan program asas, dan menawarkan kursus-kursus yang menarik dan cemerlang. "The centre is committed to provide a high quality learning experience in all of our foundation programmes, and to deliver enjoyable and excellent courses"							
Proses-proses Utama yang berkait dengan Misi/Strategik							
KEMAMPUAN PUSAT	KETERMURAHAN AKADEMIK	KELANGSINGAN KEWANGAN	FASILITI & INFRASTRUKTUR	PEMELIHAN	RENASARAN	KEBAHRIAN PELAJAR	
ISU DALAMAN (berkait dengan proses-proses)							
STAF KURANG SERBIMAT DALAM PEMELIHAN	PENCAPAIAN SEKORANG-DALAM TEMPOR (GGT)	BLANGKAM PENYARAF SEDIA ADA TIDAK MEMUKSI	PEMELIHAN INFRASTRUKTUR	PRODUKTIVITI PEMELIHAN YANG RENDAH (PROJEK & PENERBITAN)	RENASARAN (PELAJAR BELUM OPTIMUM)	PENCAPAIAN BERKORANG-DALAM TEMPOR (GGT)	
	REVISI KURikulum	PERENCANAAN KEWANGAN OLEH PUSAT	PERKONGSIAN MAHAL SAINS & KOMPUTER			BIAYA TAMBAH-REHABILITASI BANGUNAN KEPADA PELAJAR	
	TRANSFORMASI AKADEMIK NURSING BERKUALITI (BERKUALITI FAKULTI/FAKULTI/FAKULTI)						

Figure 1: Identifying the context between issue with the strategic thrust

The table is a risk matrix with the following structure:

- Columns (from left to right):**
  - 1. Issue/Category
  - 2. Description of the Issue
  - 3. Risk Level (e.g., High, Moderate, Low, Very Low)
  - 4. Opportunity Level (e.g., High, Moderate, Low, Very Low)
  - 5. Strategic Impact
  - 6. Financial Impact
  - 7. Reputational Impact
  - 8. Operational Impact
  - 9. Compliance Impact
  - 10. Environmental Impact
  - 11. Social Impact
  - 12. Other
- Rows (from top to bottom):**
  - 1. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 2. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 3. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 4. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 5. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 6. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 7. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 8. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 9. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 10. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 11. Issue: [Description], Risk Level: High, Opportunity Level: High
  - 12. Issue: [Description], Risk Level: High, Opportunity Level: High

Figure 2: Identifying the risk and opportunity for each issue

### Identifying the Risk Level

In identifying the risk level, the severity of risk and risk likelihood had been used. In this stage, each risk needed to be analysed due to the probability of risk and the impact of risk on the attainment of strategic thrust. Table 1 and Table 2 show the severity or impact of risk level definition and risk likelihood definition, respectively. Figure 3 shows the example of risk level determined for each risk. The level of risk had been determined using Table 3.

Table 1: Risk Severity Assessment

Severity/Impact Schedule		
	Severity	Definition
5	Extreme	The impact that causes key visions and missions university severely affected
4	High	Impacts that cause vision and mission of primary symptoms are severely affected
3	Moderate	Impact that can be handled normally by the university's top management
2	Low	Impacts that can be handled at the department level
1	Very Low	Ignorable impacts

**Table 2:** Risk Likelihood Assessment

Risk Likelihood		
Scale	Definition	
5	Very high	Certain to occur
4	High	Almost certain to occur
3	Moderate	May occur within the year
2	Low	Not likely to occur within the year
1	Very low	Not likely to occur within the next 10 years

**Table 3:** Risk Level Assessment

Keterangan	Risiko	Kemungkinan				
		1	2	3	4	5
	1	1 (R)	2 (R)	3 (R)	4 (R)	5 (S)
	2	2 (R)	4 (R)	6 (S)	8 (S)	10 (S)
	3	3 (R)	6 (S)	9 (S)	12 (S)	15 (T)
	4	4 (R)	8 (S)	12 (S)	16 (T)	20 (T)
	5	5 (S)	10 (S)	15 (T)	20 (T)	25 (T)

• Jika jumlah matirak sama, keutamaan diberi kepada nilai keterangan

Nama Projek / Unit		Maklumat tentang Sektor / Divisi / Jabatan		Tahun / Bulan / Hari / Waktu		Tahun / Bulan / Hari / Waktu		Tahun / Bulan / Hari / Waktu		Tahun / Bulan / Hari / Waktu	
No	Kategori	Uraian Risiko	Punca	Gejala	Kesan / Dampak	Arahan / Dokumentasi / Rujukan	Kategori / Jenis / Risiko	Tingkat / Skala / Risiko	Tingkat / Skala / Risiko	Tingkat / Skala / Risiko	Tingkat / Skala / Risiko
DALAMAN	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	
DALAMAN	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	
DALAMAN	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	
DALAMAN	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	Kejuruteraan / Teknologi	

**Figure 3:** Example of Risk Register

## Risk Controller

Most strategies aimed to control the risk used in avoid, mitigate, receive, transfer, share, and receive as well as mitigation. Table 4 shows the description of each strategy of risk controller that has been used to reduce the risk level of each risk in UNISEL. The examples of risk controllers were the development of policies, standard operation procedure, staff training, schedule of maintenance, periodic inspection, and commitment from top management of UNISEL.

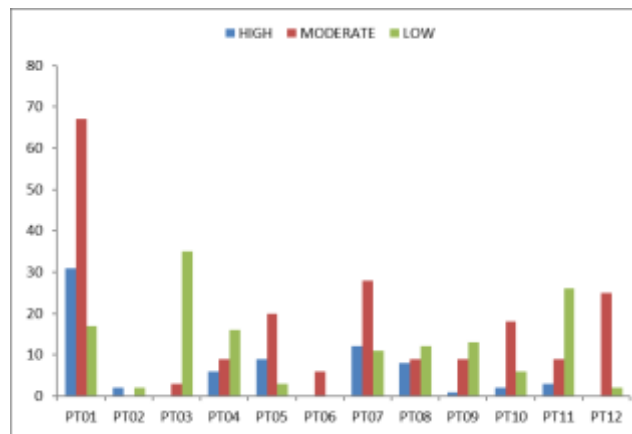
**Table 4:** The description of strategic risk controller

Strategy	Description	Risk Level
Avoid*	Additional Action/Control/Improvement aims to eliminate the risks faced	High
Mitigate	Additional Action/Control/ Improvement aimed at reducing net risk levels/risk impact/risk probability	High and moderate
Receive	The risks are received and the current controls are continuously monitored	Low
Transfer*	Additional Actions/Controls intended to transfer risks faced to third parties, within or outside Unisel	High and moderate
Share	Additional actions/controls aimed at addressing the risks faced jointly with other PTj	High and moderate
Receive and mitigate	Receive risks while performing current control improvements that can reduce risk levels/impacts/probabilities	Low and moderate

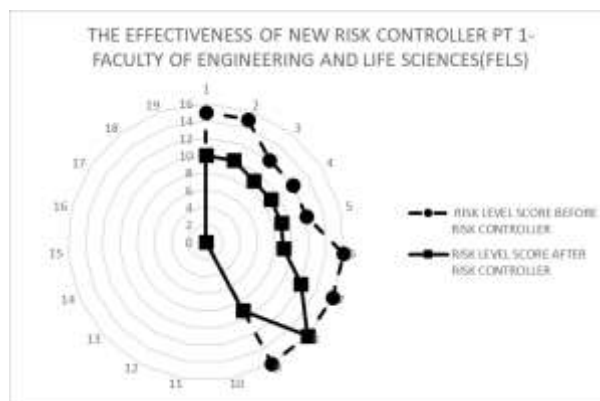
## RESULT AND DISCUSSION

The distribution number of a risk register for each core process at UNISEL was analysed and compared as shown in Figure 4. The core processes were the management of teaching and learning (PT01), research (PT02), human resources (PT03), infrastructure and properties (PT04), financial (PT05), commercialisation (PT06), student affairs (PT07), library (PT08), residential college (PT09), services (PT10), marketing and admission (PT11) and quality

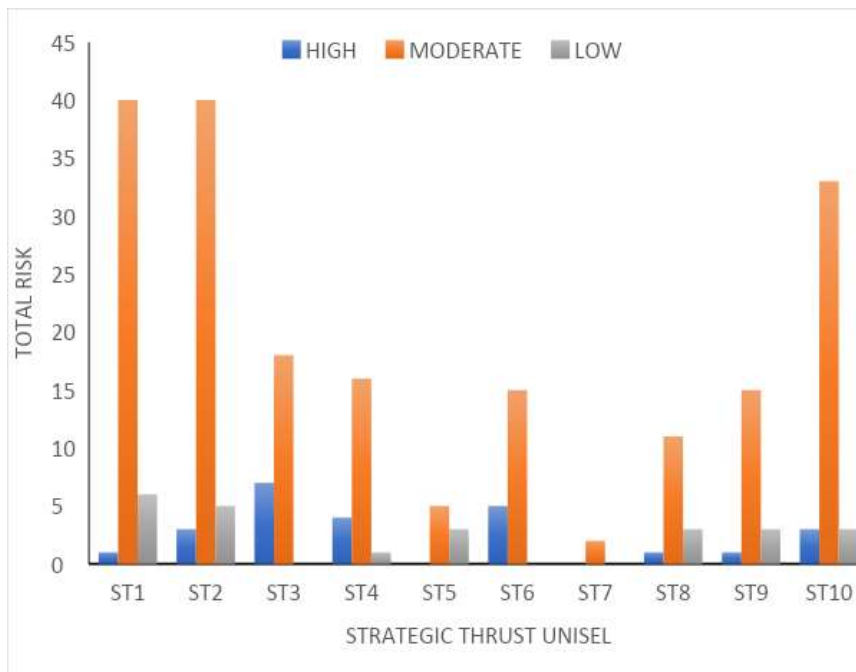
assurance (PT12). It can be observed that the highest number of risk registers for the core process was in teaching and learning management (PT01) and the lowest in the management of research (PT02). This is because PT01 involved the highest number of the responsible centres (PTJ) and the teaching and learning process was the core business for UNISEL. The effectiveness of new risk controller implementations was also analysed. The sample of the analysis of the results for one PTJ is shown in Figure 5. In general, it could be observed that the risk level had been reduced from high to moderate and moderate to low. It was achieved by reducing the probability of risk using the new controller that had been applied. Figure 6 shows the total risk for each strategic thrust of UNISEL. Each risk identity had set the performance indicator.



**Figure 4:** Risk level distribution for each core process at UNISEL

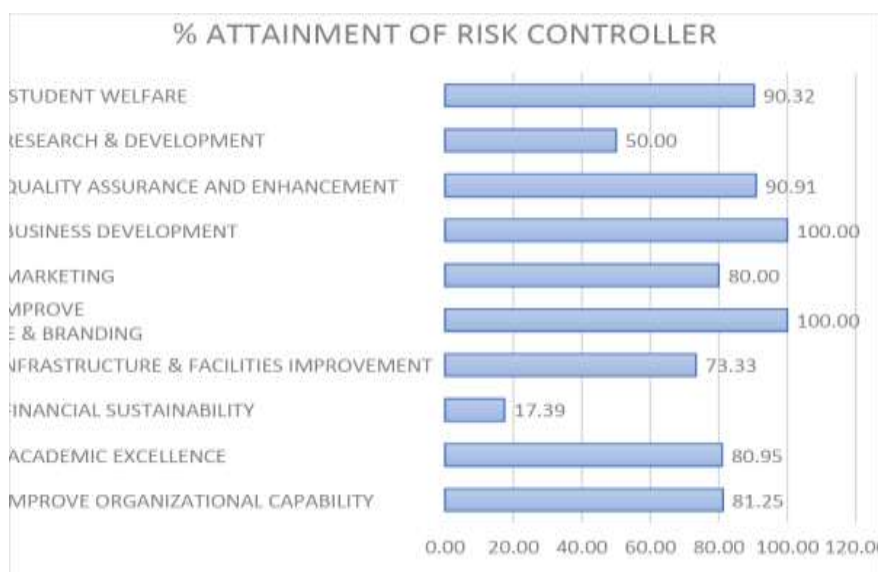


**Figure 5:** The effectiveness of risk assessment controller



**Figure 6:** Total Risk of Strategic Thrust

The purpose of the performance indicator was to measure the ability of the risk controller to reduce the risk level. From Figure 7, it was observed that the risk controller had been applied to reduce the risk level to achieve the performance indicator for each strategic thrust except the financial sustainability. The attainment of risk controllers for financial sustainability was 17.39 %. It meant the proposed risk controller was not fully applied or good enough to control the risk for financial sustainability in UNISEL. Thus, it needed to be reviewed.



**Figure 7:** The attainment of effective implementation of risk controller



## **CONCLUSION**

This paper presents the implementation of the risk management system at UNISEL. Based on the results, most of the risks could be controlled by reducing the probability of risk compared with the impact of risk. The implementation of risk assessment had been applied at the PTJ level and the university level. The effectiveness of the risk controller had been determined and analysed. From the obtained results, it was observed that most of the risk controllers who had been applied were able to reduce the risk level to achieve the performance indicator for each strategic thrust. The lowest achievement was on financial sustainability. The risk controller for this part should be reviewed and improved. From these findings, it can be concluded that this study is valuable and has contributed knowledge about understanding the implementation of the risk management system at UNISEL for each core process.

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