

# Predicting Malaysian University Performance Through Intranet Quality: A Review on Mediating Role of Enterprise Risk Management

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## Abstract

There is a limited study that investigate the impact of intranet quality (IQ) and enterprise risk management (ERM) towards performance of Malaysian university. Therefore, the purpose of this study is to predict Malaysian university performance through IQ by reviewing the ERM as a mediator. The results of this study demonstrate that intranet quality and ERM contribute to improving the Malaysian university performance. Malaysian university performance includes the income generated from research projects, consultancies, government and private funding, commercialization and fees from program offered. Within the research fields of IQ, ERM, and Malaysian university performance, this study proposes a conceptual model that was created based on findings of a literature review. By linking the IQ to ERM in order to boost university performance, this work enriches the body of existing theories. This study presents a model where IQ positively affects university performance; and ERM mediates the relationship between IQ and university performance. This study considers IQ and ERM as an important attribute of university, thus may have significant implications for practitioners in university to implement ERM in their organization. The conceptual model presented in this study could be helpful to risk practitioners and higher education who are considering implementing ERM in their institutions to improve performance. This study provides new perspectives through examining the relationship between IQ and ERM towards Malaysian university performance.

**Keywords:** Intranet quality, enterprise. risk management, university performance, Malaysia.

## Introduction

Higher education has been known as the critical and strategic sector, and it is one of the major contributors towards the country's growth as they are striving towards knowledge-economy. Phoong et al. (2017) stated that there are greater positive effects of higher education on economic growth in Malaysia. Therefore, this sector has potential to boost up the economy in Malaysia. However, in 2020, report by universities 21 (U21) Ranking of National Higher Education Systems shows that Malaysia's return on investment ranks only 44th out of 50 countries and this shows that the sources of income such as government funds might not be utilized efficiently by the higher education. Hence, this results in the unsatisfactory of performance of higher education with lower levels of expenditure than other countries such as Singapore and Thailand. Thus, this indicates that Malaysia has yet to be efficient in its expenditure on education (Phoong et al., 2017) as most of Malaysian university are funded by the federal government which is Ministry of Higher Education (MOHE)

and the Ministry of Science, Technology and Innovation (MOSTI) through the allocation of budget for annual operation as well as lump-sum funding for development expenditure.

Therefore, the new funding mechanism has been introduced by government in Twelfth Malaysia Plans (2021-2025) and also in line with Malaysia Education Blueprint 2015-2025. This is to reduce the reliance of Malaysian PHE on the government funding. They will be encouraged to expand alternative financial pathways. This will include refining and facilitating the management of funds sourced from waqf, endowment, donations and crowdfunding. For this purpose, a comprehensive policy and financing model will be formulated and a mechanism to monitor income generating activities will be developed. Furthermore, university will be urged to develop a new financing model to source contributions from the industry, multinational companies (MNCs), MSMEs, financial institutions and the community. Nevertheless, this new funding mechanism resulted a massive competition in higher education market to generate income, thus exposed them to the multidimensional risks such as financial and reputational risk which then lead to the unsatisfactory performance particularly in Malaysian university. These are due to limited knowledge and information (Tan & Md. Noor, 2013) to self-generate income as they are fully relying on government funds before (Wan & Morshidi, 2018).

Therefore, Malaysian university must have high quality of intranet to collect and store the information as well as providing an access of information across the organization in order to enhance the knowledge towards achieving better organizational performance (Hosseini et al., 2014). Other than that, university also need to have holistic risk management or ERM as a tool to mitigate the multidimensional risks that involved, and able to sustain their competitive advantage in the market while achieving better financial performance specifically income generation. By implementing ERM in organization particularly in higher education, it can sustain the competitive advantage and enhance their organizational performance (Ariff et al., 2014; Rauf, Jabar & Mansor, 2020a). Therefore, it shows that ERM implementation in university is vital in order for them to cater the multidimensional risks that involved. In light of this discovery, the following research question is formulated:

RQ1. What is the relationship between the intranet quality and Malaysian university performance?

RQ2. What are the relationships between intranet quality, ERM and Malaysian university performance? RQ3. Does ERM mediate the relationship between intranet quality and university performance?

By providing a conceptual analysis that includes a thorough evaluation on the relationship of IQ and ERM towards university performance, this study aims to contribute to the body of knowledge that is limited. This will be accomplished by identifying and thoroughly presenting the findings of the previous study on the relationship between IQ and ERM and university performance in section of literature review, in accordance with the pertinent logic of a conceptual study. Then, a detailed discussion of the suggested conceptual model that connects the findings of the literature review will be provided. Last section of this study will provide the conclusions.

## Literature Review

### *Intranet quality*

Intranet is known as an explicit knowledge under knowledge management (KM), and it is useful and suitable to be used as a strategic tool within the framework of KM in order to boost the knowledge sharing processes particularly in higher education (Agarwal & Marouf, 2014). Hence, as stated by Ali et al. (2019) and Rauf, Jabar and Mansor (2021), organization need to have high quality of intranet in order to provide the access to risk data or information as well as supporting the risk communication. This is to motivate and give the opportunities to employees to share their knowledge so that the risks could be mitigated successfully and lead to successful of ERM implementation particularly in university. Furthermore, the functions of intranet were similar to the Internet. However, it was limited only to the employees in the organization.

The Intranet has been widely utilized in various types of organizations including business enterprise, government as well as higher education. This is because, before the Intranet has been invented in organizations particularly in higher education, most of these organizations were struggling to provide the manual documentations that were implemented in paper-based system back then. They need to type the documents and disseminate the information within organization so that everyone reads that information. Plus, the information also requires to be given to the quality audit. Therefore, Intranet is crucial in higher education as stated by Rajalampi (2011) and Rauf, Jabar and Mansor (2020b), as it is the most effective platform to access the knowledge and to communicate the information as well as encouraging paperless within organization.

### *Intranet quality and university performance*

The intranet is seen as the platform for interaction between employees in the organization and providing an access to the data or information as well as facilitating the interaction in problem solving process and supporting the communication among employees. It was suitable to be used in organizations as a strategic tool that boost out the knowledge sharing processes in organization particularly in higher education (Agarwal & Marouf, 2014).

Initially, it allows the real time of sharing the information and data access across the level of organizations. They further stated that the quality of intranet could be achieved in organizations if they know how to fully utilize this system. Empirically, Iyengar et al. (2015) found that the usage of intranet acted as an important learning mechanism for organizations and the knowledge that effectively transferred through intranet, will eventually enhances the financial performance. Similarly, Emmanuel and Chijoke (2016) also revealed that intranet quality positively affects the organizational performance, as it leads to better and faster work fulfilment. This finding can be supported by Rauf et al. (2019) and Roshan and Rao (2016), which indicated that the better quality of intranet will lead to the better organizational performance as the task can be completed within the desired time frame.

Therefore, from the benefit of Intranet towards the organizational performance that been discussed, this indicated that the Malaysian PHEs also need to have high quality of intranet in their organization in order to access the information related to funding for self-generate their income as well as enhancing their financial performance. This was supported by Urazbaev and Kholmatov (2019) which stated that high quality of intranet in higher education will allow the employees to access the supporting documents easily in a way to self-generate income. Hence, the strategic goals and objectives could be achieved, and enhancing their financial performance at once. Hence, it is posited that:

*H1 Intranet quality positively affects university performance*

### *Enterprise risk management*

The definition of ERM by COSO (2004) is the most widely used as it had been published in 2004 guidance document Enterprise Risk Management—Integrated Framework, by defining ERM as process involving the board of directors, management and other personnel. It is applied in strategy setting and across the enterprise in order to identify unfavorable events that may affect the organization, manage the risks to be within its risk appetite, and to provide reasonable solution which in line with the organizational objectives. Meanwhile, ISO 31000 (2018), which is the other common standard used for ERM implementation, offers the precise definition which is the process that involves activities of communicating and consulting, establishing the context and assessing, treating, monitoring, reviewing, recording and reporting risk that integrate into all activities, functions and decision-making in order to create and protect the organizational value.

The implementation of ERM in higher education has many benefits in terms of sustaining competitive advantage, responding effectively when there is a significant event or risks occurs, avoiding financial surprises, strengthening their reputation from other competitors and many more (Abraham, 2013; Kageyama, 2014). Particularly, ERM aims to identify potential events that may negatively affect university (Ariff et al., 2014), reduce the multidimensional risk (Sum & Saad, 2017) and ensure the funds of university are well managed (Ahmad, Isa & Tapa, 2016). Moreover, ERM is regarded as a holistic approach towards achieving sustainability in higher education (Kageyama, 2014).

However, most ERM studies have covered the corporate sector such as insurance (Ahmed & Manab, 2016b; Nguyen & Vo, 2020), banking (Angote, Malenya & Musiega, 2015), and construction (Mustapha & Adnan, 2015; Zhao, Hwang & Low, 2016). Furthermore, previous studies that investigated practices in Malaysian university also revealed that ERM implementation is still less developed (Ahmad, Isa & Tapa, 2016) and uncertain (Sum & Saad, 2017) due to several factors such as limited understanding and knowledge towards the concept and importance of ERM as well as the risk terms that were usually based on corporate terminology (Association of Governing Boards of Universities and Colleges (AGB) and United Educators (UE), 2014; Ahmad, Isa & Tapa, 2016).

### *Intranet quality and enterprise risk management*

Lou, Tian and Fu (2016) stated that the organizations that implement their own intranet must be aware of the constant changing in the environment, including new threats and risk will arise from day by day. Therefore, they need to have high quality of intranet in order to assess and manage the within organization, thus lead to successful of ERM implementation. Rodriguez and Edwards (2014) further stated that the better quality of intranet within organization is crucial in order to have a better interpretation of the meaning of risk information and better risk knowledge which then will lead to successful implementation of ERM. This is because, high quality intranet allows the employees and risk management committees to

communicate to each other and right to access to the risk data or information through the private web-channel or organized dashboard easily. This is vital in a way to enhance their knowledge as well as improving the process of problem solving so that the risk could be managed and mitigated effectively and efficiently (Rodriguez & Edwards, 2014).

This is also in line with study by Fugini, Hadjichristofi and Teimourikia (2016), when they are also agreed on the importance of intranet in benefitting the ERM implementation as well as notifying the risks that might occur through the private webchannel within the organization as well as providing the strategy and solution on how to cater those risk through the organized dashboard. This is because, intranet provides supports for risk management controls and provide an access to risk management applications as well as risk data in order to communicate, to describe and evaluate the various types of risks (Rauf, Jabar & Mansor, 2021). Therefore, it can be concluded that the high intranet quality is crucial in the organization as well as Malaysian university in order to mitigate various types of risks so that the ERM can be implemented successfully. Hence, the following hypothesis is posited:

*H2 Intranet quality positively affects enterprise risk management*

### *Enterprise risk management and university performance*

By implementing the ERM, the organization will have a better knowledge and understanding towards the critical risk that arise as they can easily monitor, reporting and control the risk which then will give the positive impact towards their performance (Acharyya & Mutenga, 2013). Rasid and Sofian (2014) further stated that the ERM implementation will allow the organizations to have better preparation to manage all types of risks which then will and maximize their productivity. Additionally, Deck (2015) which studied the impact of ERM implementation towards performance of higher education stated that ERM is a vital strategy that could enhance the performance through the improvement of risk management practices, decision-making processes, and crisis planning in the organization.

On the other hand, Malik et al. (2020) in their investigation of ERM and organizational performance among the listed firms in UK established that the ERM positively and significantly related to the organizational performance. Additionally, Chen et al. (2019) confirmed that a positive relationship exists between ERM and organizational performance in Taiwanese industry is similar to the finding of other studies such as Ai, Bajtelsmit and Wang (2018), Florio and Leoni (2017), Hanggraeni et al. (2019) and Saeidi et al. (2020).

Analogous to this, it can be inferred that the scope of study in ERM field and organizational performance was majority investigated among developed countries such as United Kingdom (Malik et al., 2020), Italy (Florio & Leoni, 2017), and Taiwan (Ai, Bajtelsmit & Wang, 2018). Meanwhile, there are few studies that conducted in developing countries such as Indonesia (Hanggraeni et al., 2019), Malaysia (Rauf, Jabar & Mansor, 2020a; Teoh et al., 2017) and Brazil (Silva et al., 2019). Therefore, conducting study in Malaysian university could be of great help in indicating the impact of ERM implementation towards their performance in terms of income generation. This is because, it is belief that ERM is a comprehensive and better approach than the traditional risk management as it can manage the multidimensional risks that have been exposed to the Malaysian university due to massive competition in higher education market to self-generate their income. Thus, the following hypothesis is anticipated as below:

*H3 Enterprise risk management positively affects university performance*

### *Mediating variable of ERM*

Based on the previous study, there were no trace that ERM has been treated as a mediator variable between intranet quality and financial performance relationship particularly in university. Though, there are various previous studies that treated ERM as mediator towards organizational performance but it was in different sectors with different exogenous variables such as corporate governance (Agustina, Aisjah & Indrawati, 2016) in Indonesian manufacturing company, balance scorecard (ElDalabeeh & ALshbiel, 2019) in Jordanian Industrial Public Shareholding company, business strategy (Rehman & Anwar, 2019) in Pakistani SMEs, and cost leadership (Soltanizadeh et al., 2016) in Malaysian public listed company.

Therefore, in order to strengthen the concept of ERM as a mediator between intranet quality and Malaysian university performance, this study has provided various empirical finding that emphasized on the relationship between intranet quality towards performance of higher education such as Asma and Abdellatif (2016), Ngoc-Tan and Gregar (2019) and Rauf et al. (2019) as well as the relationship between intranet quality and ERM (Abaoud, 2019; Rahman & Adeleke, 2018; Rauf, Jabar & Mansor, 2021) and the impact of ERM implementation on performance of higher education (Al-Subari, Ruslan & Zabri, 2020; Rauf, Jabar & Mansor, 2020a; Setapa et al., 2020;) and as far as related previous studies is concerned.

Hence, the hypotheses below reflect the theoretical gap of this study, where there is no trace from previous study that has treated ERM as a mediator between IQ and Malaysian university performance relationship. Hence, this study proposing the following hypothesis:

*H4 Enterprise risk management mediates the relationship between intranet quality and university performance*

**Proposed Conceptual Model**

Figure 1 illustrates the proposed conceptual model among IQ, ERM and Malaysian university performance based on the findings from previous research. Based on this conceptual model, it can be noted that ERM mediate the relationship between IQ and university performance. In this regard, the IQ have 6 items which are 1) collaboration tools, 2) access to applications, 3) access to proper data, 4) interaction in problem solving, 5) communication and 6) system control. For ERM, there 10 items that has been identified which are 1) embedded in practices, 2) part of process, 3) integrated into strategic plan, 4) embedded in culture, 5) tailored to practices, 6) comprehensive understanding, 7) explicit consideration, 8) effective governance, 9) comprehensive reporting and 10) to achieve goals, meanwhile, Malaysian university performance have 6 items to be considered which are the 1) income generated from research projects, 2) consultancies 3) government funding, 4) private funding, 5) commercialization and 6) fees from program offered.

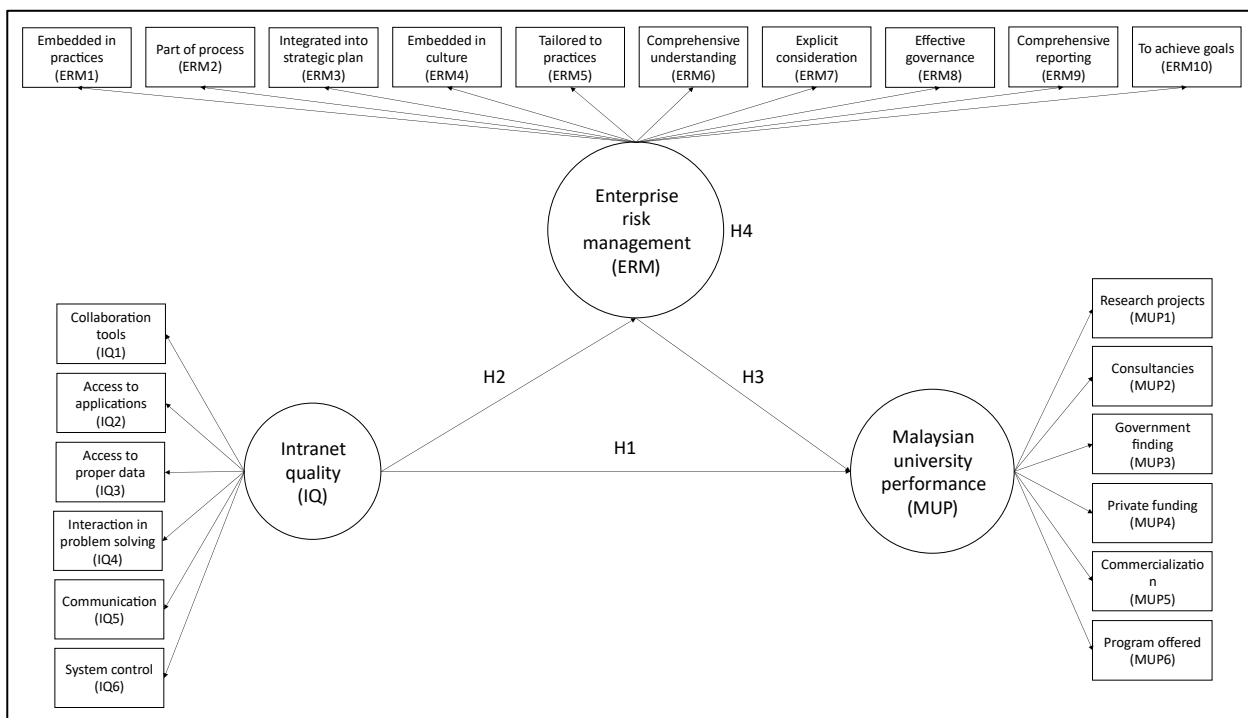


Figure 1: Proposed conceptual model

**Practical Implications**

The development of this model in this study is to encourage the ERM implementation as well enhancing the Malaysian university performance. Specifically, this study provides an insight on the impact of ERM implementation towards the Malaysian university performance, thus narrowing the gap in the ERM literature as it was scarcely exploited on performance in the higher education sector, and there was rarely any ERM studies found to have used the same model. This model also can be used to test and highlight the impact of IQ towards the improvement of university performance, which mediated by ERM. Last but not least, as the ERM is still a new field spreading in academia, hence, it is hoped that the proposed model in this study can be adapted and applied by university as a framework in real world to improve their performance. Furthermore, this proposed model also beneficial to them as additional source of information to measure their performance as well as a guideline for risk practitioners in implementing ERM in university, while concerning the impacts on the financial performance.

By having this guideline, the risk practitioners are able to develop policies, acts and regulations to enhance the best strategies available in implementing the effective ERM, thus improving the university performance. Other than that, the

proposed model in this study will act as a framework and guidelines for other researchers in the field of technology management on how to measure performance and encourage ERM implementation in the education sector. Further, this study provides some useful recommendations and strategies for the government (MOHE) and policymakers to strengthen the linkage between the corporate sector and university in creating more opportunities to involve in implementing the ERM.

## Conclusion

Based on the discussion above, it can be concluded that ERM can be successfully implemented through the IQ in order to improve the university performance. ERM is an approach that is able to identify potential events that may negatively affect university, to ensure their funds are well managed, and also to manage the risks by assessing, monitoring and controlling within the risk appetite which then will lead to the achievement of their mission, objectives and better organizational performance. It has been further stated that ERM is an effective management tool that helps universities to reduce the multidimensional risk after been granted with autonomy status, thus leads them to achieve their strategic goals. Hence, ERM implementation needs to be considered as vital and need to be supported by top-level management in the university.

Therefore, from all the benefits that have been discussed, it can be concluded that ERM implementation is regarded as a source of better university performance. Hence, as stated by Lou, Tian and Fu (2016), high quality of intranet is needed in order to assess and manage the data within organization, thus lead to successful of ERM implementation. This is because, high quality intranet allows the employees and risk management committees to communicate to each other and right to access to the risk data or information through the private web-channel or organized dashboard easily. This is vital in a way to enhance their knowledge as well as improving the process of problem solving so that the risk could be managed and mitigated effectively and efficiently (Fugini, Hadjichristofi & Teimourikia, 2016).

Nevertheless, even though ERM has many benefits, putting them into practice can be expensive. Consequently, in order to avoid the waste that can arise from an unsuccessful ERM implementation, it is imperative that universities perform thorough studies of both their internal processes and their overall position in relation to the external environment prior to system deployment.

Last but not least, this study specifically focusing on IQ because of its limitations. Given this restriction, it is advised that future research be conducted by other scholars in order to determine any additional variables that might have an impact on the ERM implementation and improve the Malaysian university performance. This will allow for greater clarification in this area of study.

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