



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

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Course Code

(PMG510)

Project Risk Management

Instructions:

- آخر موعد للتسليم هو يوم السبت 2021-05-08 في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الانجليزية.
- يتم تسليم المشروع في صيغة ملف pdf مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.
- يجب مراعاة أقسام البحث الرئيسية (مقدمة Introduction، دراسات علمية سابقة Literature Review، طريقة البحث Methodology، النتائج والمناقشة Results and Discussion، وأخيراً المراجع References. وإن كان هناك ملحقات Appendices يتم إضافتها)
- يجب الالتزام بـ Theme موحد كما يلي:
- حجم الخط 12.
- نوع الخط Arial.
- لون الخط أسود.
- المسافة بين الأسطر line spacing 1.5
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Mosaab M. Hamed

Project:

Risk Identification and Analysis (Based on the project you chose in APM)

The objective of this report is to identify project risks, prepare a risk probability matrix, and carry out an analysis of selected risks. Referring to the project you select in **Advanced projects management APM course**, your task is to prepare a risk management plan that identifies potential risks in **the selected stage of the project** and identify risk management strategies.

From the course content and readings, you know that the overall purpose of risk planning is to anticipate possible risk events and be ready to take appropriate action when risk events occur—to eliminate or reduce negative impacts on the project.

You may wish to begin this exercise with a brainstorming about potential risks to get candidate risks “on the table” for consideration. And then identify and refine that wording for risks that have some realistic chance of occurring in this stage. For example, potential weather problems present a real obstacle to completing field data collection by the planned completion date. It is also an issue that the project manager will ultimately have to plan for, as opposed to other issues such as a major disaster (e.g., your office burning down), is not a high-enough probability event that requires much time in planning. As described below, you will select several of the identified risks and carry out a risk analysis.

You will use the distilled list of risks to make a risk probability/impact matrix. The matrix will have at least three categories (high/medium/low) for probability and impact.

Remember that it is important to name risks effectively—use words that describe the risk event and point to the impact on the project (e.g., “injury of field technician disrupts data installation work”).

After completion of the risk matrix, document a risk analysis for the selected risks. This detailed documentation for that selected risk will include:

- a description of the risk and potential impacts (schedule, quality of work, cost, etc.) on the project.
- indicators or triggers that would be monitored to help identify the risk as early as possible.
- specific risk response strategies to take.

Using probability and impact matrix calculate the **Expected Monetary Value (EMV)** for all risks that have the impact in terms of cost \$\$.

Best of luck...

المشروع:

التعرف على المخاطر وتحليلها (بحث مبني على مشروعك الذي اخترته في مادة ادارة المشاريع المتقدمة)

الغرض من هذا التقرير هو التعرف على المخاطر المحيطة بالمرحلة التي تختارها المرحلة من مراحل مشروعك (نفس المرحلة التي اخترت التطرق لها في مشروعك لمادة إدارة المشاريع المتقدمة Advanced project management) حيث أن مهمتك هي تحضير خطة متكاملة لإدارة المخاطر تشمل التعريف بالمخاطر المحتملة التي تحيط بتلك المرحلة وتحضير مصفوفة احتمالية المخاطر ومن ثم القيام بالتحليل لهذه المخاطر المختارة وتحديد استراتيجيات ادارة المخاطر المناسبة لكل خطر على حدة.

من محتويات المقرر والمصادر الأخرى المتاحة أصبحت تعلم الان أن الغرض العام لمرحلة التخطيط للمخاطر هي توقع أحداث المخاطر المحتملة والتجهز لاتخاذ ردة الفعل المناسبة عند وقوع الخطر – لمنع أو تقليل الآثار السلبية على المشروع.

قد تحبذ بداية هذا البحث بعصف ذهني عن ماهية المخاطر التي قد تحيط بتلك المرحلة من مراحل مشروعك, وذلك للحصول على قائمة بتلك المخاطر. ومن ثم تحديد وتصفية هذه القائمة للوصول إلى قائمة مختصرة بالمخاطر التي لها فرصة واقعية أكبر في الحدوث. على سبيل المثال: المشاكل الجوية المتوقعة والتي تمثل عقبة حقيقية أمام اكتمال جمع البيانات من المواقع في أو قبل الوقت المحدد، هذه تعتبر مشكلة على مدير المشاريع أن يضعها في الحسبان. من ناحية أخرى، فإن المخاطر غير الواقعية مثل الكوارث الطبيعية والأعاصير (تلك التي تسبب حريقاً بمكتبك وفقدان الأوراق المهمة) ليست لها احتمالية وقوع عالية وبالتالي لاتستدعي تضيق الكثير من الوقت في التخطيط لها. كما سيتبين لك، ستقوم باختيار عدة مخاطر من تلك التي قمت بالتعرف عليها لتحليلها.

ستقوم باستخدام هذه القائمة المختصرة لعمل مصفوفة المخاطر (الاحتمالية/الأثر). المصفوفة ستحتوي على الأقل على ثلاث تصنيفات (عالي/متوسط/منخفض) للإحتمالية والأثر.

لاتنس استخدام أسماء تصف طبيعة المخاطر بصورة فعالة – قم باستخدام كلمات تصف الحادثة الخطرة وتشير الى أثرها على المشروع (مثل: إصابة أحد الفنيين في الموقع مما يؤثر على أعمال التركيب).

بعد انتهاءك من مصفوفة المخاطر، قم بتوثيق تحليلك للمخاطر المختارة. هذا التسجيل المفصل للمخاطر يجب أن يتضمن:

- وصف للخطر واثاره المحتملة (الجدولة، جودة العمل، التكلفة، الخ)
- المؤشرات والمحفزات التي يجب مراقبتها للمساعدة في التعرف على هذا الخطر قبل وقوعه
- تفصيل للاستجابة المقترحة للتصدي لهذا الخطر

باستخدام مصفوفة الاحتمالات والتأثير ، احسب **القيمة النقدية المتوقعة (EMV)** لجميع المخاطر التي لها تأثير من حيث التكلفة \$\$.

مع تمنياتي بالتوفيق..

Risk Identification and Analysis of Educational center project

1. Introduction

The construction of the school or university, the nature of education, and the mixture of educational and non-educational staff, along with the environment of the educational centers, produce conditions that are necessary for the search and estimate the state of safety to develop and extend the conditions and possibilities for the educational process. Hence, the educational safety and action in educational centers require a constant and effective process started by the management and the included staff, students, parents, and the local society.

Every year, several educational centers suffer from disasters and many students and staff members of these centers are victims of disasters. In a report, which was done using the data gathered from the Marsh's Higher Mental Health Risk Management study, risk in finances, competition among students, international enrollment, population, and deficiencies in the understanding of risk and safety management programs were represented as key issues of safety management programs at higher education centers. Moreover, in practicing guide of risk management at the University of London, a departure from the budget, the collapse of key markets which drive to notable loss of earnings, college trouble with customer service and college purposes, failure to manage dormitories (power outages, firefighting, etc.), and damage to university status by negative media coverage was considered as the dangers of university and higher education centers. Hence, it is important to have a specific structure of safety management for preventing disasters and coping with risks, taking into consideration the health and safety of staff, clients, and other stakeholders in higher education centers or schools.

Safety management is the manner of recognizing, analyzing, and forecasting risks that are regarded as a threat or risk for organizations. Therefore, safety management is an organized approach to risk management in the educational center. Following the systematic ways in safety management can guide the educational center to reach the reasons for disasters logically and lead them away from pursuing an unorganized approach based on mental and intelligence thoughts that lead to waste of time.

In general, safety management is an essential part of the actions of an excellent educational center, in addition to taking benefit of it and avoiding many disasters, to prevent damage to financial resources and equipment of the educational center, and consequently creating trouble.

2. Literature Review:

A search of the literature for works on the topic of risk management in educational centers provides very little results. In the references that are found in the literature that merges the words “risk” and “academia” (in many forms - academia, educational center, etc.), most texts deal with the teaching of risk management to learners (i.e., to others...). See, for example, Menoni (2006), Watson (2004), Garven (2007), Gabel (2008). Only a very limited number of scholars write about the risks essential to educational centers themselves. Here, again, even the small number of works that deal with this problem explicitly are almost all are focused on the financial risks associated with the educational center's management, as indeed there are financial risks in managing an educational center - for-profit or not-for-profit - that must be directed and managed, usually by the educational center's leader. See, for example, Culcleasure (2005) and Query (2000).

Query (2000) also talks about what may be termed “insurable risks”, and lists accidents, student drinking, drug abuse, using liability practices, learner lawsuits, and more - but does not discuss many of the risks discussed above, which may be called “academic-specific risks”. He discusses the financial risk which is the result of some educational centers. Some other scholars, like Helsloot and Jong (2006), refer to safety, security, and disaster management, but not to academic risks.

Of a strange nature is the work by Hargreaves (2008). This scholar advocate taking a calculated number of risks in the curriculum plan, even in educational governments that champion the predictability of learning results and their potential for being transported to other educational centers without paying a fine for that transfer.

She explains a few of the risks of educational centers but does not offer a general risk management approach to the educational center.

Shanahan & McParlane (2005) produce risks to Australian universities which try to set up overseas departments or branches.

This work looks at universities trying to increase abroad as businesses and estimates the risks involved in such experiments and their impacts on the universities.

3. Methodology:

The present research is a qualitative descriptive study that used reviewing various systems and the Delphi method to design an SMS for educational centers.

This study was done in three main phases: Study stage, formation of the primary model and pattern validation.

4. Results and Discussions :

The first phase, study stage

In this stage, all of the world's educational and non-educational centers that had been given a system for safety and risk management as well as all articles, reports, and related studies were estimated. Official websites, essays, articles, guidelines, and authoritative guidance worldwide were used for gathering search data. the Persian (SID database), and Magiran (and Google) were adopted to find reports and studies written electronically and without time restrictions. The search estimate was done randomly to estimate the non-deletion of the studies. Finally, relevant articles were chosen and acted to remove nonrelated items.

The second phase, formation of the primary model

In this phase, by determining the purposes of sharing and differentiation of the security and risk management indexes obtained in the first phase, a preparatory draft was created to discover the elements of safety management in the educational centers of Saudi Arabia. The draft was also analyzed by three specialists in the area of safety and risk management

The third phase, pattern validation

The third phase was the last step of safety management and validation of this pattern by the Delphi technique. All experts in the departments of educational management, risk, and safety management were the study population in this phase. Sampling was targeted in the area of expertise and was practiced by those who had the expertise and knowledge needed in this field. In this phase, the information criteria of the study include at least one of the following:

(1) having associated researches in safety and risk management or membership at specific risk and safety committees.

(2) having work experience in similar educational centers with the problem of safety and risk or having work experience in higher education centers.

Participants in two steps were rated each of the sub dimension under study using a researcher-made questionnaire on the 5-point Likert scale (very low value = 1, low value = 2, average value = 3, high value = 4, very high value = 5). The number of participants involved 20 people of experts. Three follow-ups were conducted to improve the response rate to a questionnaire by one of the researchers.

The scores received in the questionnaire were inserted into the SPSS software version 21. It was obtained by International Business Machines Corporation (IBM). In the first step, indexes were removed with a score of <50%, and also indexes were taken with a score of over 50%. Moreover, indexes with a score of 50%–75% were held in the second step questionnaire after the proposed modifications recommended by the study group. After redistributing and recollecting questionnaires, the indexes that were scored over 80% were submitted as final indexes for entering the last pattern. In other words, those elements were considered as the key element to entering the last model by consulting 15 scholars, and 12 of them showed these elements as very important. The determination of face validity was made through reviewing the texts, the consensus of the scholars' comments and the three experts discussed in the second phase of the research, and the cases of complexity level. Measuring the content validity quantitatively practicing content validity ratio (CVR) and content validity index (CVI). The content validity reveals that to what degree the questions include the content and its purpose with the topic.

In the first step, 108 indexes were recognized by reviewing the studies and estimating the SMS in the world's educational and non-educational centers for the 12 central categories of SMS. In the Delphi phase, 83 elements were known as a key index of the SMS in higher education centers of Saudi Arabia. Moreover, the common mean of participants' views on the dimensions of the SMS for education centers has been 4.32, with the highest average mean of 4.59 associated with the dimension of the facility and the firefighting department and the lowest mean of 4.10 for the learner dimension.

The indexes shown in this study will give a fairly complete tool for designing SMS in greater education centers, which by using it will provide a good opportunity to increase the performance of these systems over time.

Row	Dimensions of safety	Indexes
1	-	Number of students and reports related to occupational safety and health.
2	Fires and settlement	The type and measurement of the materials used, the discharge time, the design building, the number of people in the building, the ability to diagnose the risk or the probability of detection (the safety measurement), the frequency of the fire and the accidental settlement. Fire alarm system, emergency and floors evacuation plan, warning signs in outlets, construction control due to combustion, adequacy of storage of combustible materials and extinguisher caps, and status of electricity servi15
3	Building and the building environment	Dimensions and lists of rooms and all requirements for protection and maintenance such as (roof, plumbing, etc.), release of noise, smoke and odor, the correctness of building structures, obstruction in pipes, sliding surfaces
4	Earthquake	Fire alarm system, emergency and floor drain plans, alarm system, emergency alarm signs on emergency exit, locked cabinets, and drainage areas
5	Flood	Supply and access to upper floors during floods, creating a warning system and supplying warning signs for highlands
6	IT	Communication systems, data protection, final user education, disasters responsiveness, network integrity, privacy, security, supportive, system capacity,[17] data

		security, business, affiliation, data recovery, IT resource allocation
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		Impact				
		Insignificant (1)	Moderate (2)	Major (3)	Severe (4)	Catastrophic (5)
Likelihood	Definite (5)	Medium 5	High 10	Extreme 15	Extreme 20	Extreme 25
	Likely (4)	Medium 4	High 8	High 12	Extreme 16	Extreme 20
	Possible (3)	Low 3	Medium 6	High 9	High 12	Extreme 15
	Unlike (2)	Low 2	Medium 4	Medium 6	High 8	High 10
	Rare (1)	Low 1	Low 2	Low 3	Medium 4	Medium 5

Risk Description	likelihood	Impact	Severity	Severity level
Fire in the educational center which disrupting the building	3	5	15	Extreme
An individual is infected with the COVID-19, which stops working in educational center.	2	4	8	High
Flood from the near water source which damage machines and equipment	2	3	6	Medium
IT problems which stop the systems	1	3	3	Low

No.	Risk	Probability	Impact cost (SR)	EMV
1	Fire in the educational center which disrupting the building	0.6	80,000	48,000
2	An individual is infected with the COVID-19, which stops working in educational center.	0.35	9,000	3,150
3	Flood from the near water source which damage machines and equipment	0.2	30,000	6,000
4	IT problems which stop the systems	0.1	3,500	350
Total			122,500	57,500

The EMV should be used as a contingency budget that should be add to the project budget and use it when any risk happen.

References

1. Kageyama A. The implementation process of enterprise risk management in higher education institutions. *Int Rev Bus.* 2014;14:61–80.
2. USA: World Bank Group; 2010. IFC. Disaster and Emergency Preparedness: Guidance for Schools; pp. 1–72.
3. Frankenberg E, Sikoki B, Sumantri C, Suriastini W, Thomas D. Education, vulnerability, and resilience after a natural disaster. *Ecol Soc.* 2013;18:16.
4. Aiello M. Risk in Canada's Higher Education Landscape a Survey of Canadian Universities and College. *Marsh Risk Consulting.* 2012
5. University of London; 2009. The University of London Guide to Risk Management.
6. Grote G. Safety management in different high-risk domains—all the same? *Saf Sci.* 2012;50:1983–92.
7. Taghdisi MH. Health, safety, and environment management; a creative approach to sustainable development. *Iran Occup Health.* 2006;3(2):1–5.