



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

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(PMG510)

Project Risk Management

Virtual Education Platform Project

Study to discuss "The main risks of the project and how to manage"

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1- Introduction:

1.1 What's our project?

In light of the COVID-19 pandemic, the world has moved towards adopting distance education (ON-LINE learning) as an alternative to traditional education, in order to preserve the safety of students and their families.

Saudi Arabia was a pioneer in this field, as it developed and launched, within a record period, distance education platforms for various school levels.

Our company "TETCO" as a technical arm of MOE "Ministry of education" has implemented the virtual education platform and Mobile App for preschools level named as "Virtual Rawdah" platform.

MOE has identified the need in building a platform to automate the state-of-the-art online education solution for all KSA pre-school students. This system main objective, aside from the automation itself, is to enable KSA students to avail its Education Virtual Rawda content to the public via Mobile Application as well as keeping track of each and every activity running on the platform. The system should provide a common framework for MOE staff of various disciplines to manage the solution more efficiently and to make full use of data captured by the system. An important business need as well, is to have an advanced reporting on the level of students and the parents as well.

Coming from the above understanding of MOE requirements, We proposed to build an effective and well-engineered platform that will enable MOE to offer its education content to KSA students and to increase the students learning efficiency, increase visibility on education related activities, enhance educational content publishing workflow and communications and also will tremendously participate in cutting cost and saving time.

1.2 My Role in the project:

I was assigned as a project manager for this important project, for supervising the project from initiating to closing.

My main responsibilities are:

- Day-to-day management of the project and its resources.
- Providing regular reports to the Project Board and stakeholders.

- Project designing and restructuring, if necessary.
- Identify the project risks and prepare risk management plan.
- Monitoring and controlling management processes.

The one of main project management responsibilities is risk identification and analysis to prepare risk management plan.

Now, we are in the last phase of this project and it will be handed over to MOE during the coming 2 months inshallah.

I already identified and listed the uncertainty risks from the initiation phase of the project, and I update the risk register periodically as it's an iterative procedure throughout the project lifecycle.

I'll present in this report the methodology that we followed to identify the project risks, and tools that we used to analyze the probability and impact for each risk, and how we calculated the expected monetary value "EMV".

1.3 Purpose & Objectives:

- In this type of programing projects, it's very important to identify the all uncertainty or expected risks to avoid as possible as can any effect of schedule, cost and quality.
- As I have wrote in the report of APM, I have discussed the dividing tasks and resources amongst the project team, the one of hazard risk that we faced in this part was infected the project team with COVID-19 Virus.
- In this study we'll see how the importance of identification risks from the beginning and preparing response plan to reduce the impact of high probability risks.

2- Literature Review:

• Risk Management Methodology

Engaging project stakeholders and project team should identify risks effectively in order to obtain a comprehensive risk register.

- Risks should be prioritized by using qualitative approaches considering the probability and impact of risks.
- Quantitative analysis should only be performed if needed.
- Risk response planning should be conducted.
- Unconditional responses should be updated in the project management plan.
- Trigger conditions should be defined for conditional responses.
- Responses should be implemented as planned.
- Risks should be monitored, assessed for validity, and new risks should be identified and analysed. (Dr. Ahmed Alsenosy – Egypt)

- The effect of intervening conditions on the management of project risk

Specific risk-related interventions strongly influence the effective use of project risk management: project managers tended to deny, avoid, ignore risks and to delay the management of risk. Risks were perceived as discomforting, not agreed upon. IT project managers were unaware of risks and considered them to be outside their scope of influence and preferred to let risks resolve themselves rather than proactively engaging with them. As a consequence, factors such as the lack of awareness of risks by IT project managers appeared to constrain the application of project risk management with the result that risk had an adverse influence on the outcome of IT projects.

The underlying rational assumptions of project risk management and the usefulness of best practice project risk management standards as a whole need to be questioned because of the occurrence of interventions such as the lack of information. IT project managers should first prevent risk-related interventions from influencing the use of project risk management. However, if this is not possible, they should be prepared to adapt to risks influencing the project outcome. (Elmar Kutsch, School of management, Cranfield university, UK, 2008)

3- Methodology:

In our project, we classified the level of risks as below:

Catastrophic	High	High	Very High	Very High
Severe	Medium	High	High	Very High
Major	Medium	Medium	High	Very High
Moderate	Low	Low	Medium	High
Insignificant	Low	Low	Medium	Medium

And we classified the risk types based on PESTEL factors:

- Political factors.
- Economic factors.
- Social factors.
- Technological factors.
- Environmental factors.
- Legal factors.

Full List of PESTEL Factors

Political Factors	Economic Factors	Social Factors
- Government policy - Political stability or instability - Corruption level - Tax policies - Freedom of press - Government regulation and deregulation - Special tariffs - Government involvement in trade unions and agreements - Competition regulation - Level of government subsidies - Bilateral relationships - Import-export regulation/restrictions - Trade control - Size of government budgets - Foreign trade policy - labor law - Environmental law - Trade restrictions.	- Growth rate - Interest rate - Inflation rate - Exchange rate - Availability of credit - Level of disposable income - Propensity of people to spend - Federal government budget deficits - Gross domestic product trend - Unemployment trend - Stock market trends - Price fluctuations	- Population size and growth rate - Birth rates - Death rates - Number of marriages, divorces - Immigration and emigration rates - Life expectancy rates - Age distribution - Wealth distribution - Social classes - Per capita income - Family size and structure - Lifestyles - Health consciousness - Average disposable income - Attitude towards government - Attitude towards work - Buying habits - Ethical concerns - Cultural norms and values - Gender roles and distribution - Religion and beliefs - Racial equality - Use of birth control - Education level - Attitudes towards saving, investing, retirement, leisure time - Attitudes towards product quality, customer service, foreign people
Technological Factors	Environmental Factors	Legal Factors
- Technology incentives - Automation - R&D activity - Technological change - Access to new technology - Level of innovation - Technological awareness - Internet infrastructure - Communication infrastructure - Life cycle of technology	- Weather - Climate - Environmental policies - Climate change - Pressures from NGO's - Natural disasters - Air and water pollution - Recycling standards - Attitudes towards green products - Support for renewable energy	- Discrimination laws - Antitrust laws - Employment laws - Consumer protection laws - Copyright and patent laws - Health and safety laws - Education laws - Consumer protection laws - Data protection laws

The risk which we are talking about in this report is “Infecting the project team with COVID-19 Virus”, and it falls under social factors.

To evaluate the impact of this risk, We used Probability & Impact matrix and schedule, then we calculated the EMV “Expected monetary value” as below:

Table1

NO	List of risks	Probability	Impact	Severity	Response plan
1	Changing scope by MOE	0.3	0.6	Medium	Update RBS document and signed from both parties to avoid any changed without CR, and will update

					implementation plan based on the scope changing
2	MOE infrastructure not compatible with the hosting requirement	0.2	0.45	LOW	Find temporary solution to host the platform and content in external cloud server till update the client's infrastructure
3	Education content not deliver on time from production team to upload it on the platform	0.5	0.35	Low	Upload dummy content and follow up with the production team to deliver content with right specifications
4	Delaying payments from MOE financial management	0.5	0.77	High	Stop delivering new phases till collect the required payments or find external investor
5	Infecting project team with Covid-19 Virus	0.6	0.82	High	Transfer to outsourcing provider during the sickness period of the team.

Table2:

No	Risk	Probability	Impact cost SAR	Contingency reserve
1	Changing scope by MOE	0.3	350k SAR	105,000 SAR
2	MOE infrastructure not compatible with the hosting requirement	0.2	45k SAR	9000 SAR
3	Education content not deliver on time from production team to upload it on the platform	0.5	10k SAR	5000 SAR
4	Delaying payments from MOE financial management	0.5	250k SAR	125,000 SAR
5	Infecting project team with Covid-19 Virus	0.6	300k SAR	180,000 SAR
TOTAL			955,000 SAR	424,000 SAR

4- Results & Discussion:

The following objectives were addressed in the risk response plans:

1. Risk reduction
2. Reduces the risk probability
3. Reducing the risk impact on project objectives

By classifying the uncertainty events from the initiation phase, and preparing the response plan and reserving contingency risk budget, We avoiding the drop of project and reducing risk impacts.

Now we are in the closing phase of this project and all requirements delivered successfully.

5- References:

- Elmar Kutsch,2008, School of management, Cranfield university, UK.
- Carbone, T. A., & Tippett, D. D. (2004). Project risk management using the project risk FMEA. Engineering management journal.
- Mohsen Sayed,2019, Risk management professional course, PM-Tricks.
- Misra C. Subhas, Kumar Vinod, Kumar Uma (2006). Different Techniques for Risk Management in Software Engineering: A Review, ASAC, Banff, Alberta.