



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Everyone's Smart University

Project (Spring 2021)

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Section

Master

Date

Thursday

18 / 03 / 2021.

Course Code

(PMG506)

Advanced project Management

Instructions:

- آخر موعد للتسليم هو يوم الخميس ٢٠-٠٥-٢٠٢١ في تمام الساعة ٩ مساءً.
- الإجابة متاحة باللغة الإنجليزية أو اللغة العربية مع مراعاة أن تكون المصطلحات العلمية باللغة الإنجليزية.
- مع الالتزام نموذج الجامعة ولن تقبل أي مستندات أخرى.pdf يتم تسليم المشروع في صيغة ملف .
- طريقة البحث Literature Review ، دراسات علمية سابقة Introduction يجب مراعاة أقسام البحث الرئيسية (مقدمة ، وان كان هناك ملحقات References ، وأخيراً المراجع Results and Discussion ، النتائج والمناقشة Methodology Appendices) يتم إضافتها
- موحد كما يلي: Theme يجب الالتزام بـ
- حجم الخط ١٢.
- نوع الخط Arial.
- لون الخط أسود.
- line spacing 1.5 المسافة بين الأسطر
- عدد صفحات البحث (لا يقل عن ثلاث صفحات ولا يزيد عن ست صفحات).

Instructor's Name: Eng. Amaal Aburumman

Project:

You are required to document your role in administering a project. The project may be set in a business, social, sporting, or family environment but must be of a significant size and scale. If you do not have an actual project to write about you may complete the project hypothetically. **This report will be between three to six pages in length.** This is a significant research project.

Your report must address each of the following issues:

1. Identify and describe the purpose, scope, and objectives of the project. **Display this information using an appropriate tool.**
2. Describe how the team is given an outline of the project.
3. Describe the strategies that are going to be set up to maintain communication with the team members.
4. Describe the tools that are going to be used to monitor the goals, time frames or milestones.
5. Identify project milestones and activities. **Display this information using an appropriate tool.**
6. Create a budget and link the costs to the key milestones for a project.
7. Describe how you are going to divide tasks and resources amongst a project team. **Display this information using an appropriate tool.**
8. Briefly describe how the progress will be monitored.
9. How are current project records maintained? Who has responsibility for this? provide some recommendations on how this process could be improved.
10. Describe the current procedure for finalizing projects. Create your own procedure and identify how you will evaluate the success of the project.
11. Legislation that may affect the project including health and safety, and anti-discrimination legislation.

Best of luck...

المشروع:

مطلوب منك توثيق دورك في إدارة مشروع. قد يتم تعيين المشروع في بيئة تجارية أو اجتماعية أو رياضية أو عائلية ولكن يجب أن يكون بحجم مناسب. إذا لم يكن لديك مشروع فعلي لتكتب عنه ، فيمكنك إكمال المشروع افتراضياً. سيكون هذا التقرير من ثلاث إلى ست صفحات

يجب أن يعالج تقريرك كل من القضايا التالية:

1. تحديد ووصف الغرض والنطاق والأهداف من المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
2. صف كيف يتم إعطاء الفريق مخططاً تفصيلياً للمشروع.
3. وصف الاستراتيجيات التي سيتم وضعها للحفاظ على التواصل مع أعضاء الفريق.
4. صف الأدوات التي سيتم استخدامها لرصد الأهداف أو الأطر الزمنية أو المعالم.
5. تحديد معالم المشروع والأنشطة. اعرض هذه المعلومات باستخدام أداة مناسبة.
6. إنشاء ميزانية وربط التكاليف بالمعالم الرئيسية للمشروع.
7. صف كيف ستقوم بتقسيم المهام والموارد بين فريق المشروع. اعرض هذه المعلومات باستخدام أداة مناسبة.
8. صف بإيجاز كيف سيتم رصد التقدم.
9. كيف يتم الاحتفاظ بسجلات المشروع الحالية؟ من المسؤول عن هذا؟ تقديم بعض التوصيات حول كيفية تحسين هذه العملية.
10. وصف الإجراء الحالي لإنهاء المشاريع. قم بإنشاء الإجراء الخاص بك وحدد كيفية تقييم نجاح المشروع.
11. التشريعات التي قد تؤثر على المشروع بما في ذلك الصحة والسلامة ، وتشريعات مكافحة التمييز.

..مع تمنياتي بالتوفيق

E-learning Center

The Center for Teaching and Learning Excellent (CTLE) at Everyone's Smart University will have an upcoming project for developing e-learning content in a project management course. The project should be started on October, 10th 2021. The outcome will be e-learning content for project management course no later than November, 27th 2021.

The CTLE has set the objective that e-learning content is a must and e-learning content will cover all the learning outcomes in the course. There are 13 learning outcomes in the course. The CTLE has predicted the project will be possible to finish within the given time. The outcomes of the project are 13 learning outcomes in the course must be converted to video-based learning. The project is relevant to the organization goal to make learning even better. The project is led by Bader. As the project manager, he will lead the project team to deliver the project. The project scope is divided into two categories. The first one is in scope. It consists of planning the project management plan, designing and developing the video learning, and delivering the final product. Out of the scope will be creating e-learning content for other courses. The project focuses on delivering the video-based learning. The budget has been set. It may not be increased. Consider to finish the project without additional budget. The acceptance criteria will be e-learning content, which supposed to be video learning, by the end of the project. The project should be on a budget or under budget and on time or under time. Multiple constraints are applied to this project. They are project budget, project time, and project resource. The following assumptions were made for simplifying the project management plan which consist of, the allocation cost does not change, the project timeline does not change, and there will 13 learning outcomes to be converted to video-based learning. As for the schedule, the Center for Teaching and Learning Excellent has estimated the duration for each activity to be carried out until it is finished (see Table 1). The duration of the project is expected to start on October, 10th 2021 and end no later than November, 27th 2021.

TABLE 1 DURATION ESTIMATED BY CTLE

Code	Activity name	Predecessor	Duration (days)
A	Define the project objective	None	1
B	Define Scope	A	2
C	Estimate schedule	B	3
D	Estimate cost	C	5
E	Identify stakeholder and communication	D	3
F	Identify risk	B	4
G	Generate ideas	E	4
H	Choose concept	G	1
I	Determine requirement	H	1
J	Design video	I	4
K	Testing content	J	7
L	Evaluate content	K	3
M	Publish content	L	1

The project manager can decide just how many resources should be assigned to. There are 4 members in the project team including project manager. How many members are assigned to activity will not change the allocation of cost (see Table 2). Resources who are assigned to an activity will be under the project manager decision.

TABLE 2 RESOURCES ESTIMATED BY CTLE

Activity	Assign resource s (unit)	Resources
A	4	James, Member 1, Member 2, Member 3
B	4	James, Member 1, Member 2, Member 3
C	2	Member 2, Member 3
D	3	James, Member 2, Member 3
E	2	James, Member 1
F	4	James, Member 1, Member 2, Member 3
G	4	James, Member 1, Member 2, Member 3
H	4	James, Member 1, Member 2, Member 3
I	4	James, Member 1, Member 2, Member 3
J	4	James, Member 1, Member 2, Member 3
K	4	James, Member 1, Member 2, Member 3
L	4	James, Member 1, Member 2, Member 3
M	4	James, Member 1, Member 2, Member 3

The Center for Teaching and Learning Excellent has set the estimated cost for each activity. The project budget is \$ 1,500. As stated earlier, there will be no additional fund for this project, therefore the project must be completed within the given budget (see Table 3). The estimated cost will not be changed due to the fixed price set by CTLE of Telkom University.

TABLE 3 COST ESTIMATED BY CTLE

Code	Activity name	Estimated cost
A	Define project objective	\$ 30
B	Define Scope	\$ 50
C	Estimate schedule	\$ 60
D	Estimate cost of the project	\$ 60
E	Identify stakeholder and communication	\$ 40
F	Identify risk	\$ 80
G	Generate ideas	\$ 20
H	Choose concept	\$ 200
I	Determine requirement	\$ 400
J	Design video	\$ 300
K	Testing content	\$ 150
L	Evaluate content	\$ 70
M	Publish content	\$ 40

The project consists of 15 stakeholders. Each stakeholder has a role. As for the project team, one, as project manager, while the other four are team members. The project owner is also an internal stakeholder whose current state and desired state are supportive. While two experts are external ones. Participants are required for testing e-learning.

The project should be led by the project manager. The current state for the rest of the project team member is unaware while the desired state is supportive with the only exception, the project manager should be leading the project and the current state of him is supportive. The experts are neutral although the desired state for them will be encourage to be supportive. The same goes for all the participants involved in this project.

The risks may occur in any event impacting the project. The risk management will include threat and opportunity. It will be identified by paying attention to assumptions which are used in the scope statement. The risks of developing e-learning content are spending more or less cost, spending more or less than the expected time to execute the project, and having more or less than 13 videos.

Project Objective

TABLE 4 SMART OBJECTIVE

Specific	E-learning content for project management course for students. It will be started on October, 10th 2021
Measurable	There are 13 e-learning contents which are video-based learning for project management course for all learning outcomes on November, 27th 2021
Attainable	The project is still possible to do within the given time
Relevant	E-learning aligns with organization goal to create better learning
Time-Bound	The project must be completed before November, 27th 2021

Based on the case study, the specific goal is to deliver the e-learning content for a project management course. The expected outcomes are 13 e-learning contents for all learning outcomes in the course. The project is possible to execute. The project supports the organization goal to create better learning. And the project must be completed before or no later than November 27th.

Project Scope Management

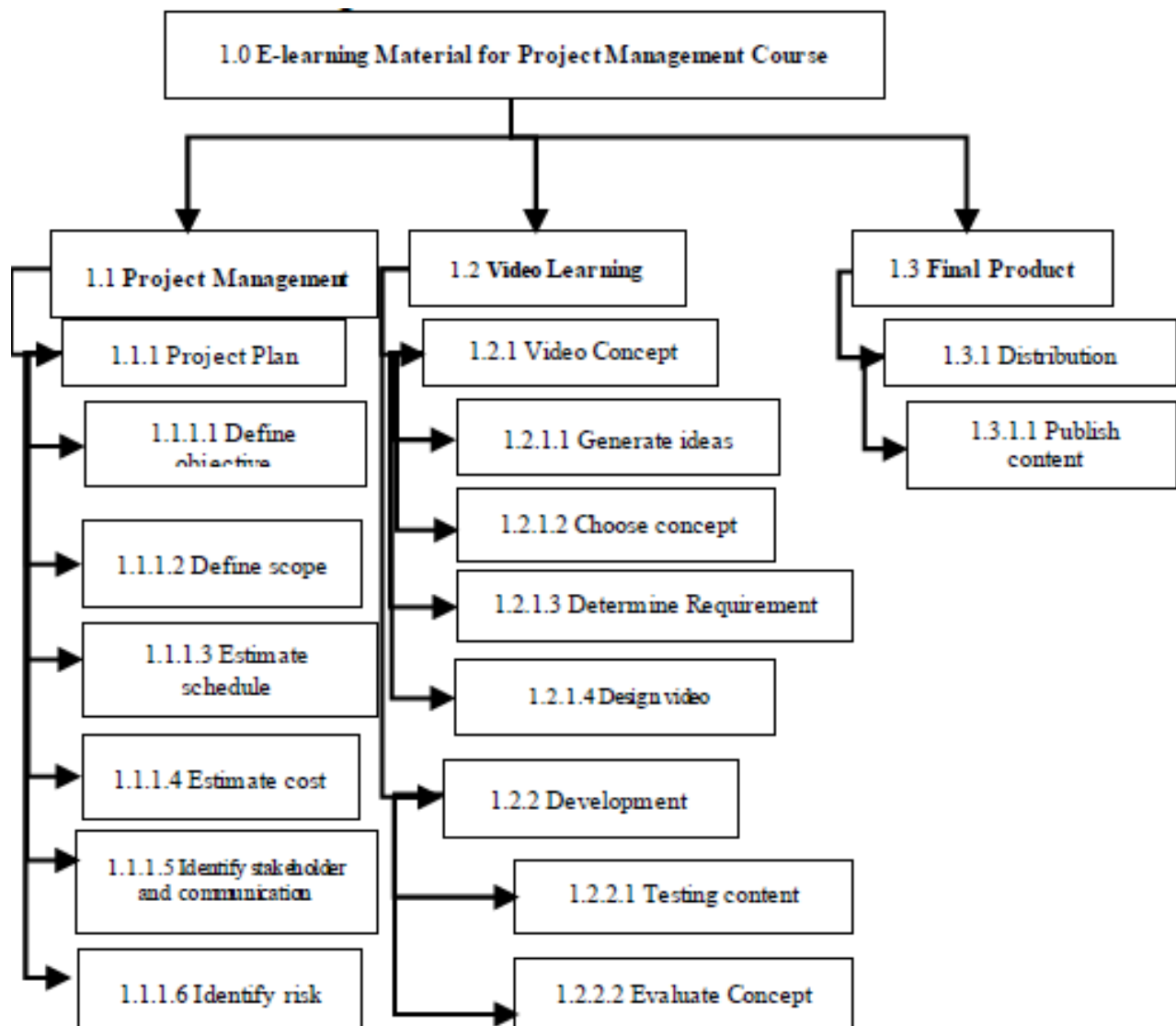
TABLE 5 SCOPE STATEMENT

Project name	Developing e-learning content for project management course
Prepared by	Bader
Date	October, 10th 2021
Product scope description (product, service or result)	There will be 13 e-learning contents, which are video-based learning, in project management course for all learning outcomes
Project scope	In scope: 1.Create a project plan 2.Design and develop video learning 3.Publish video learning Out of scope: 1.Design and develop e-learning content other than project management course
Project deliverables	Major deliverables are project management, video learning, and final product.
Acceptance criteria	1. The outcomes are 13 video-based learnings 2. E-learning should be done before or on November, 27th 2021. The project must be completed on time or under time 3. The project must be completed on budget or under budget
Constraints	1. Budget, 2. Time, 3. Resource
Assumptions	1. The allocation cost does not change 2. The project timeline does not change 3. 13 learning outcomes must be converted to video-based learning

Based on a case study, the product or result of the project is video-based learning for a project management course. All learning outcomes will be converted to video learning as many as 13 videos. The project focuses on creating project management plan, designing, developing and publishing video learning.

Project deliverables consist of the project management, video learning, and final product. All are included in the work breakdown structure (see Fig. 1). Acceptance criteria for this project are 13 video-based learnings, the product must be done before or on November, 27th 2021, it must be completed on time or under time and the project must be completed on or under the budget.

Fig. 1 Work breakdown structure



The assumptions were made based on a case study. The cost of the project does not change, the project will not end late, deliverables are added, and there will be 13 video-based learning for all learning outcomes in the course.

Project Schedule Management

Figure 2 shows the timeline of the project starting on October, 10th 2021 to November, 27th 2021. The timeline is shown in Gantt Chart (see Fig. 2). Based on Fig. 2, the duration of the project is 38 days. The red color indicates the critical path or the longest path the project is going to take. Based on the critical path, the expected duration of the project can be shortened by 4 days or just 34 days to end the project (see Fig. 4).

Meanwhile, Fig. 3 shows the precedence diagram. All the activities are quite similar to each other. Their relationship is finish to start. Activity B cannot be started unless activity A

is done. And so on. Activity B is the predecessor of activity C and F. Both of them have a finish to start a relationship with activity B with the only exception is activity F has no successor.

Fig. 2 Project timeline

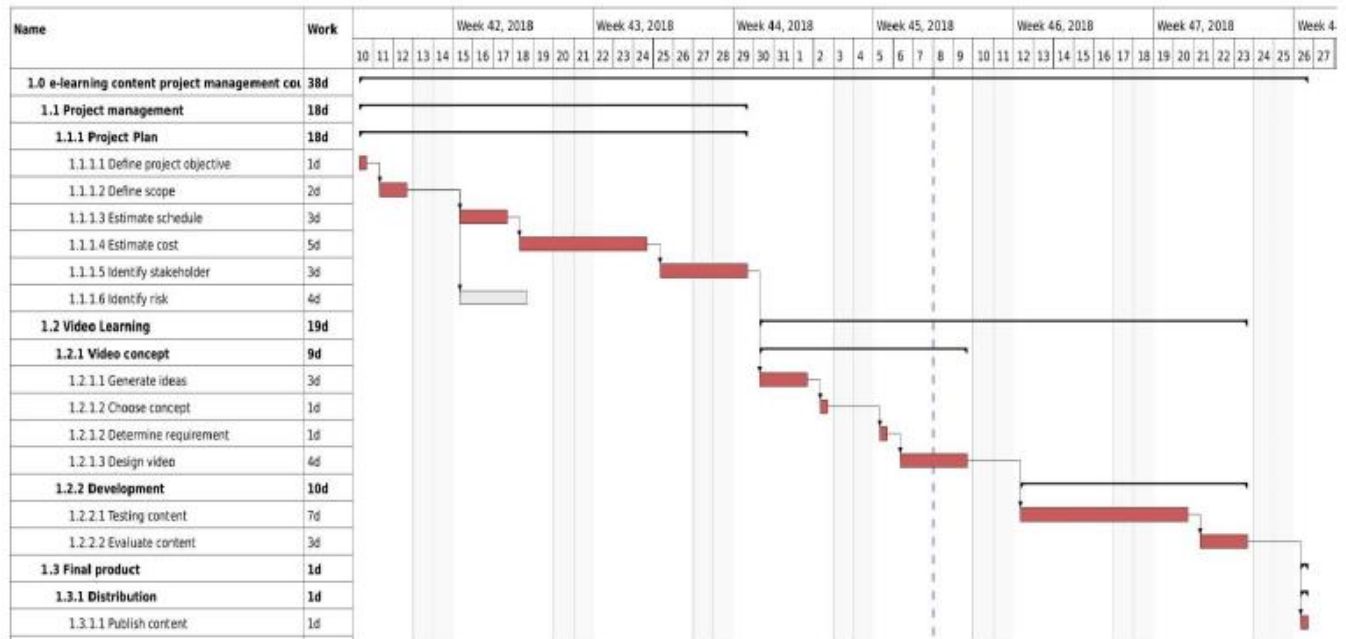


Fig. 3 Precedence diagram

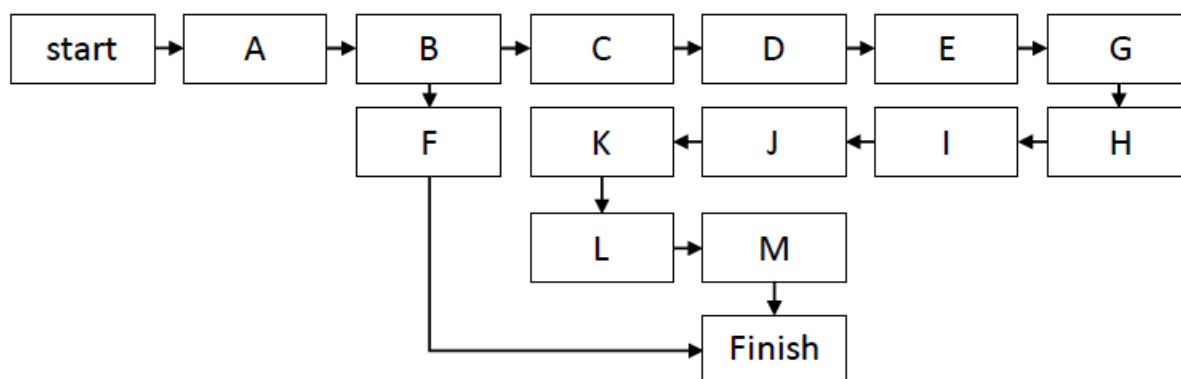
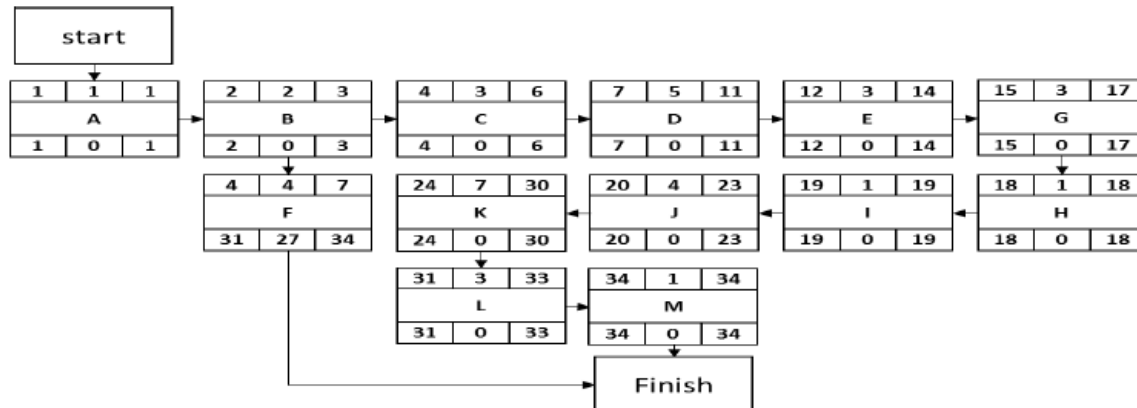


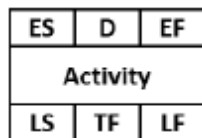
Fig. 4 Critical path



Critical path method network is activity based [17]. Of which, the longest path has zero total floats. Fig. 4 shows the selected critical path is start-A-B-C-D-E-G-H-I-J-K-L-M-Finish. It can be obtained by comparing the longest duration of all possible paths.

From there, the critical path will have no total float. As shown in Fig. 5, there are 6 elements in the box. The upper left is the earliest start, the upper right is the earliest finish, the bottom right is the latest finish and the bottom left is the latest start. Between the earliest start and earliest finish is the duration of the activity and between the latest start and latest finish is a total float

Fig. 5 Example of boxes used in the critical path



Suppose in this case, there are two critical paths. The first one is start-A-B-C-D-E-G-H-I-J-K-L-M-Finish and the other one is start-A-B-F-Finish. The first one duration is 34 days while the other one is 7. Therefore, the selected critical path is start-A-B-C-D-E-G-H-I-J-K-L-M-Finish.

For activity F, due to the expected minimum duration of the project is 34 days, therefore, the latest finish is as same as the expected minimum duration to end the project. Then, the total float of activity F will be the difference between the latest finish of activity F and the earliest finish of activity F. The total float is 27 days. That means if the activity has not finished yet, the activity still can be delayed or extended for 27 days without delaying the project finish date.

For the latest start of activity F, it can be obtained by subtracting the latest finish of activity F with duration of activity F and adding 1. The latest start is 31 days. That means the activity can be started as late as 31 days of the project without delaying the project finish date.

TABLE 6 ESTIMATED COST

Work Breakdown Structure	Assign Resources (n)	Resources	Cost per activity	Days
<u>1.0 E-learning content for project management course</u>				
<u>1.1 Project Management</u>				
1.1.1 Project plan				
1.1.1.1 Define objective	4	Bader, Member 1, Member 2, Member 3	\$ 30	1
1.1.1.2 Define scope	4	Bader, Member 1, Member 2, Member 3	\$ 50	2
1.1.1.3 Estimate schedule	2	Member 2, Member 3	\$ 60	3
1.1.1.4 Estimate cost	3	Bader, Member 2, Member 3	\$ 60	5
1.1.1.5 Identify stakeholder	2	Bader, Member 1	\$ 40	3
1.1.1.6 Identify risk	4	Bader, Member 1, Member 2, Member 3	\$ 80	4
<u>1.2 Video Learning</u>				
<u>1.2.1 Video concept</u>				
1.2.1.1 Generate ideas	4	Bader, Member 1, Member 2, Member 3	\$ 200	4
1.2.1.2 Choose concept	4		\$ 20	1
1.2.1.3 Determine requirement	4		\$ 400	1
1.2.1.4 Design video	4		\$ 300	4
<u>1.2.2 Development</u>				
1.2.2.1 Testing	4		\$ 150	7
1.2.2.2 Evaluate content	4		\$ 70	3
<u>1.3 Final Product</u>				
1.3.1 Distribution				
1.3.1.1 Publish content	4	Bader, Member 1, Member 2, Member 3	\$ 40	1
Total cost			\$ 1,500	

Project Cost Management

The project cost is based on activity-costing of which the activity cost the project some amount of the money and will be used to produce deliverables to accomplish the objective. All activities can be found in the work breakdown structure (see Fig. 1). Resources here, whom are assigned to the project, are the project team.

For the project plan, statement of work will be divided into smaller ones. They are defined as defining objective, scope, estimating schedule, cost, identifying stakeholder and communication, and risk. Each activity is given the estimated cost to produce deliverables. The estimated cost for each deliverable can be seen in Table 8. Each deliverable is

estimated by estimating each activity cost. The total budget will be \$ 1,500 for the project. No additional budget will be increased, consider to finish the project within the budget.

Deliverable number 1, project management, consists of creating document related to project management. Each activity in deliverable number 1 uses different numbers of resources. Each activity will not change the allocation of cost. Therefore, the activity must be completed either on or under budget. Estimated cost for project management deliverable is \$ 320 (see Table 7).

TABLE 7 ESTIMATED COST FOR DELIVERABLES

No	Deliverable	Estimated cost
1	Project management	\$ 320
2	Video learning	\$ 1,140
3	Final product	\$ 40

The same goes to deliverable number 2. Deliverable number 2, video learning, will use 4 resources for each activity. Its resources will not change the allocation of cost. Estimated cost for video learning is \$ 1,140. As stated earlier, there will be no additional budget in this project. As for the last deliverable, the final product, the cost of deliverable is \$ 40. The activity in this deliverable is publishing the content. Four resources are up to publish the content. The final product will be video-based learning for project management course. Table 6 shows each activity is given the estimated cost. The number of resources is under project manager decision. Based on the case study, any decision the project manager makes to assign resources will not change the allocation of budget. Otherwise, the cost will remain the same. Days for each activity are based on Gantt Chart (see Fig. 2). The total budget of the project, as stated in the case study will be \$ 1,500 (see Table 6). The acceptance criteria are the project must be completed on or under the budget. It can be inferred that activity-costing may help to estimate the budget for the project. By estimating the cost for each activity, the cost can be determined. Based on case study, the allocation cost will not change by adding or reducing resources and it can simplify the estimated project cost.

TABLE 8 STAKEHOLDER AND COMMUNICATION MANAGEMENT

Name	Stakeholder type	Role	Current State	Desired State	Contact	Communication
bader	Internal	Project Manager	Supportive	Leading	0812xxxxxx PM@xxx.com	Consider to use phone number and email. And then, regular meeting.
Member 1	Internal	Project Team Member	Unaware	Supportive	0812xxxxxx Member1@xxx.com	Since the current state is unaware, use face-to-face to be able to engage with stakeholder

Member 2	Internal	Project Team Member	Unaware	Supportive	0812xxxxxxx Member2@xx.com	Since the current state is unaware, use face-to-face to be able to engage with stakeholder
Member 3	Internal	Project Team Member	Unaware	Supportive	0812xxxxxxx Member3@xx.com	Since the current state is unaware, use face-to-face to be able to engage with stakeholder
Owner	Internal	Project owner	Supportive	Supportive	0812xxxxxxx Member4@xx.com	Consider to communicate with phone number or regular meeting.
Expert 1	External	Expert	Neutral	Supportive	0812xxxxxxx	Face-to-face and encourage the stakeholder to be supportive
Expert 2	External	Expert	Neutral	Supportive	0812xxxxxxx	Face-to-face and encourage the stakeholder to be supportive
The rest of student	External	Participant	Neutral	Supportive	0812xxxxxxx	Face-to-face and encourage the

Project Stakeholder Management

Project stakeholder management tells how each stakeholder involves on the project. As stated in the case study, the project team is internal stakeholder which consists of 4 members. The project manager will have a role to deliver the project while the rest of the team will support him delivering the project. The current state of the project manager is supportive but the desired state is leading the project. The other members are unaware but their desired states are supportive (see Table 8). The project owner is an internal stakeholder. The current state of the project owner is supportive. The desired state is also supportive throughout the project. As for experts, they are external stakeholders because they get impacted by the project. They are neutrals as for now but their desired state will be wished for supporting the project. For participants, they will remain neutral unless a proper approach takes place. Their desired states are supportive because they are required for testing e-learning. They will help the project team to provide some feedbacks to create a better e-learning. It is better to understand each and every stakeholder state to be able to engage with them during execution.

Though stakeholder management can give information about the role and their state toward the project, they cannot be managed. But, the engagement level toward the project can be controlled because it is based on interest and needs of each stakeholder. From there, the proper plan to communicate with them can be determined.

Project Communication Management

Project communication tells how to communicate with each stakeholder during execution. The proper plan to communicate with each stakeholder is determined by looking into the current state of each stakeholder [27]. Unaware, resistant, and neutral need a proper

treatment to drag them to be supportive or leading. While, supportive and leading should be remained strong toward to the project (see Table 9).

As for the project manager, since the current state is supportive toward the project, communicate with him with phone number or email will be perfect since his support toward the project is good. The desired state is leading. The project team members need to be taken care of with meeting or face-to-face since the current state is unaware Communication with project owner remains easy since the current state is supportive. With experts remain neutral, consider to meet them in person. All participants need to be met in person to be able to engage in the project.

TABLE 9 RISK ANALYSIS

Potential risk	Risk owner	Threat/opportunity	Probability	Impact	Result	Risk response
The allocation cost is expected to overrun the estimated cost	Project team	Threat	0.50	0.80	0.40	Consider seeking additional funding to complete the project and reduce the scope without decreasing the quality of the result.
The project timeline is expected to overrun the schedule	Project team	Threat	0.30	0.80	0.24	Reallocate the schedule to finish the project and inform the client and negotiate about the new schedule.
The e-learning material will be made over 13	Project team	Threat	0.10	0.20	0.02	Consider telling the client, there will be some changes in scope, schedule, and cost. Try to mitigate the potential changing that might add some works to the project.
The allocation cost is expected to underrun the estimated cost	Project team	Opportunity	0.70	0.80	0.72	Consider reallocating the remaining money to prototyping and as a contingency reserve.
The project timeline is expected to underrun the schedule	Project team	Opportunity	0.30	0.80	0.24	Consider to take just a few days to give more time for testing video-based learning
The e-learning material will be made less than 13	Project team	Opportunity	0.50	0.40	0.20	Consider telling the client, there will be some changes in scope, schedule, and cost. Because the change seems reducing some works without delaying the project finish date, the project manager and project team member may accept that.

Project Risk Management

The risk management is used to identify potential risks and implement best responses. Based on a case study, this risk management is looking for responses to overcome the occurrence of risks. To get started, assumptions in scope statement are being analyzed to minimize the negative risks or threat while trying to increase the positive risk or opportunity. The color red in the table 10 indicates the risk is high. The yellow color indicates the risk is medium while the green color indicates low. From there, the risk response can be given for each potential risk. There are 4 high risks, 3 medium risks, and 1 low risk. The risk response for allocation cost which is expected to overrun is to seek additional funding to complete the project. It may not keep the project from going over budget, but additional funding will help the project team to complete the project.

While it remains a threat for the project with high risk, the opportunity of the project going under the estimated cost is also high. The probability is given 0.70 as high and its impact is given 0.80 as high, the result is high risk. This is an opportunity for the project team. The

risk response is considering reallocating the remaining money to prototyping and as a contingency reserve. The other high risks are project timeline is expected to underrun or overrun the project schedule. For underrunning the project schedule, the risk response is reallocating the schedule to finish the project and inform the client and negotiate about the new schedule. And for overrunning the project schedule, the risk response is considering to take just a few days to give more time for testing video-based learning. On the other hand, the medium risk is e-learning material will be made less than 13 videos. The risk response is considering to tell the client that some changes might impact scope, schedule, and cost. Since, it reduces some works, the project manager may accept that; it is also an opportunity. The lowest risk is e-learning content to be made over 13, and since it is risky, consider to tell the client it may impact the scope, schedule, and cost (see Table 9).

CONCLUSIONS

Through examining the project management plan for this project, the study found that the project plan is useful as a guide for the project manager to get things done. The authors highlighted the project management plan to be made clear for the project to execute. The project management plan in this study consists of scope statement, schedule management, cost management, stakeholder management, communication management, and risk management. By paying attention project management plan, the project team may have a better view on what is going on the project.

In this regard, this study suggests by applying project plan in creating e-learning allows the authors to be more prepared in preparing the project. Through the creation of the project, relying on facts and evidence can make the project to be more specific in details. The more details of it, the better project management plan will ever be created.

Though this study appears to be just a project plan, the execution of the project and how the student performance is achieved by students remain unanswered. Besides, risk management is based on assumptions in scope statement and need to be widened in order to overcome the occurrence of other untold risks.

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