Title of Paper: Textbook Review

Group Members:

Alafia Branker-Baptiste- 320051780

Shernell Gill- 320047695

Sasha Griffith- 409000419

Celia Neufville- 315425277

Malissa Bovell- 01617332

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Elements of Time Management

A project's time management's component involves analyzing and developing a schedule and timeline for its completion and will assist in formalizing and determining task adjustment, and the allocation and management of resources throughout the project. The Project Management Institute (PMI) places the elements comprised in a project's time management component within six sequential units:

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(A) Define activities - The process of definition of activities entails the utilization of the project's most prominent work breakdown schedule (WBS) to identify and document the specific actions to be performed to produce the project deliverables. In addition to the WBS, this component of the project plan is dependent on additional inputs including the project's scope statement, constraints, historical information, and assumptions.

(B) Sequence activities – The process of sequencing activities is the identification and documentation of relationships among project activities by finalizing the interrelationships of activities to complete the project scope and achieve the task objectives. In determining task sequencing, the project manager determines the most logical sequence that will produce the highest project efficiency by employing the following techniques and tools: Precedence diagramming method (PDM), dependency determination, and leads and lags.

(C) Estimate activity resources – This component of managing the project's time and schedule is a critical process of identifying and estimating the type and quantities of material,

people, equipment, or supplies required to effectively execute each activity. The process of estimating the project's activity resources is dependent on key inputs, tools, and techniques such as the project's activity list, resource calendars, bottom-up estimating and project management software.

(D) Estimate activity durations – Activity duration estimating entails a detailed examination of the project's scope and resources and then developing realistic durations for input to the project schedule. This estimation is critical to the entire project management plan as this forms the foundation around which schedules are created, and deliverable times are determined. It is therefore crucial that there be a high level of accuracy surrounding this endeavour. Consider the following ways duration can be estimated for selected tasks.

Analogous Estimating - Where better to start than from a point of reference! This is essentially what is meant by analogous estimating. If this activity was completed before, then your team has a general idea of what the possible duration of this task can be. This is the best source of information because actual work completed, even if it requires adjustments, is extremely reliable (Roseke, 2016).

Parametric Estimating - This involves the use of a far more accurate technique for estimating duration and cost. It takes into account the variables involved in the task and its predefined relationship. The task or activity is decomposed into unit cost or duration and then the number of units the activity or task will require.

Expert Judgment - With this method, reliance is placed on the experts in the field to determine the task duration based on knowledge, experience and expertise.

Three-point Estimation - Three-point estimating involves the use of optimistic, pessimistic and most likely calculations. They can be converted into final estimates with a triangular or PERT/Beta distribution. For example, using the formula $\frac{O+(4M) + P}{6}$

Group Decision Making - This technique involves a group effort, where the team approaches may involve brainstorming, use of the delphi technique or any other technique that may afford a measure of accuracy towards the estimation of duration.

Reserve Analysis - Duration estimates can allow for contingency reserves. According to the PMBOK Guide, contingency reserves are the estimated duration within the schedule baseline, which is allocated for identified risks that are accepted and for which contingent or mitigation responses are developed.

(E) Develop schedule – Developing the project's schedule is the amalgamation of a keen analysis of the project's sequences, duration, resource requirements, and constraints to create the time plan for the execution of intended events. The created schedule determines and documents the planned start and end dates for activities and milestones with the purpose of tracking the project's progress.

(F) Control schedule – The process of controlling the schedule represents the culmination of the components of the project's time management. This element entails consistently monitoring the schedule to determine its current status, as well as identifying factors which may influence schedule changes and instituting mitigative controls to the baseline as they occur.

Earned Value Management

Earned Value Management is a simple technique used to determine whether a project will be finished within budget and on time. To calculate Earned Value Analysis, three principal

formulas must be considered which include Planned Value, Actual Cost and Earned Value. These will be looked at in more detail in the Cost Management Plan.

Quality Management

There are many examples where the quality management discipline has fast tracked improvements in its approaches to achieve the goal of gaining and retaining customers, and by extension creating a competitive advantage for organizations, customers and employees.

Quality - Quality encompassess all project activities that are necessary for designing, planning and implementing a project that is effective and efficient**.** As the project develops, the project team usually seeks to make sure that what it set out to do was actually achieved. The team is responsible for the quality of the project and the Project Manager is ultimately responsible for project outcomes.Whether it is the form of delivering the product or service quality is the objective of the project. There is always a need to verify and measure whether further improvements will deliver a greater benefit. In doing so, the project team may use the Post-Implementation Review (PIR) Process. This type of process may be executed by both an internal review agent and an independent reviewer. Some of the activities include: reviewing key project documents and expected deliverables; using surveys and interviews to collect information; reviewing the project charter to remain within the scope; assessing the project costs and benefits and assessing further development into future opportunities, changes and benefits.

Verification - Continuous verification is expected and is an ongoing process in the project. A simple traceability matrix can be used so that we can verify the requirements gathered from the customers and whether they are being incorporated when designing, coding and testing. At this

point it is important to not only focus on the backwards disability but the forward stress factors as well.

Precision and Accuracy- Precision refers to being consistent.When it is done consistently right then precision is ensured. When we consistently execute and achieve targets then we are not only precise but accurate. This however has to be reflected in the deliverable to be consistent as it relates to producing the same outcome.

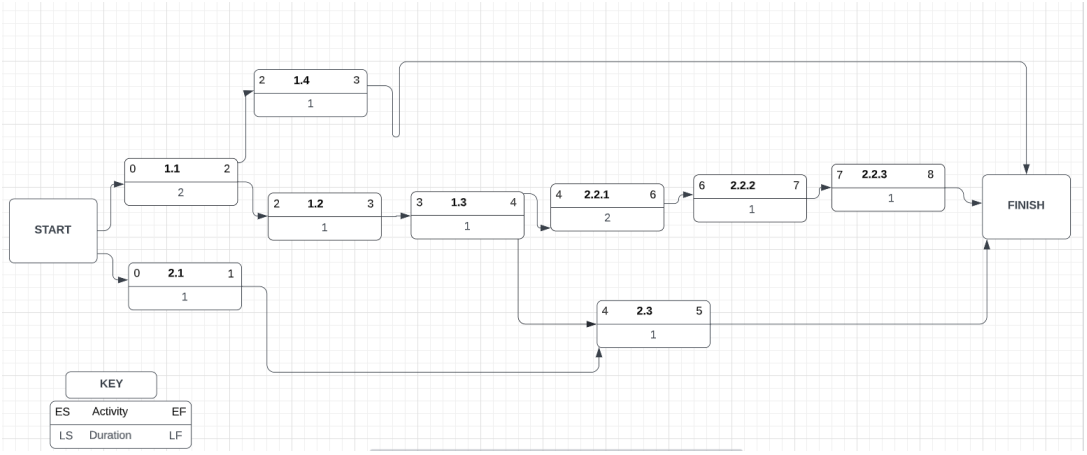
Quality tolerance- We set the tolerance limits and we come up with sort control charts in order to understand the outcome that we have produced. Does it fit into tolerance limits?
There are upper and lower specification limits on the product that we have produced. If there are too many deliverables that I am producing which are not accepted by the customer, obviously, it's going to cost me and that's going to be the cost of quality.

Validation - Continuous validation and verification are important. They are integral parts in monitoring and ensuring quality while working on any project. So whatever the requirements that a customer has given , once we build that feature, we need to make sure that their future is validated as for the acceptance criteria given by the customer .

Section 8.3- Critical Path and Float

Using the network diagram, Figure 8.9, given in Section 8.2, we will now calculate the duration of the project using the forward pass method.

The forward pass method



Calculation for project duration

1. To obtain the project duration, the activity early start and early finish times must be calculated on all activities.
2. The early finish for one activity becomes the early start time for the succeeding activity.

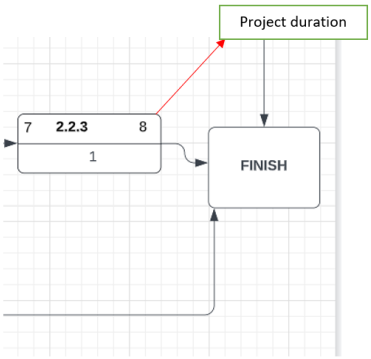
Early Finish (EF)= Early Start (ES) + Activity Duration

Using Activity 1.1, the Early Start is = 0, the duration is = 2

Activity 1.1 = (EF) = 0 + 2 = 2

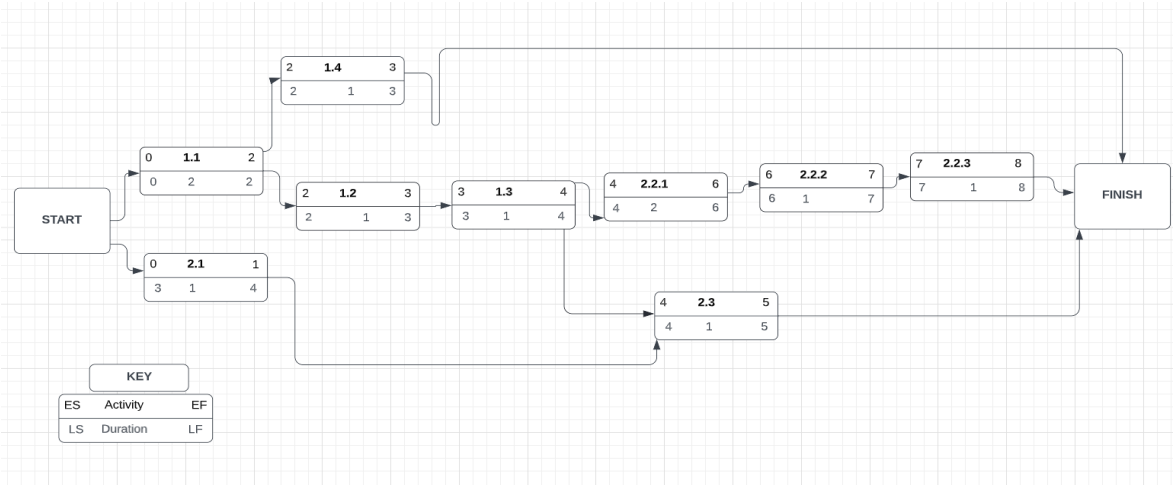
Now practice using this method to calculate all the activities listed in the network diagram.

Note that if an activity has two preceding activities, you will use the higher (EF) for the (ES) to the activity.



The project duration is 8 days

The backward pass method



The backward pass is calculated by using the Early Finish and duplicating that number for the late finish. The Duration is then subtracted from the Late Finish to obtain the Late Start.

Late Start = Late Finish (LF) - Duration

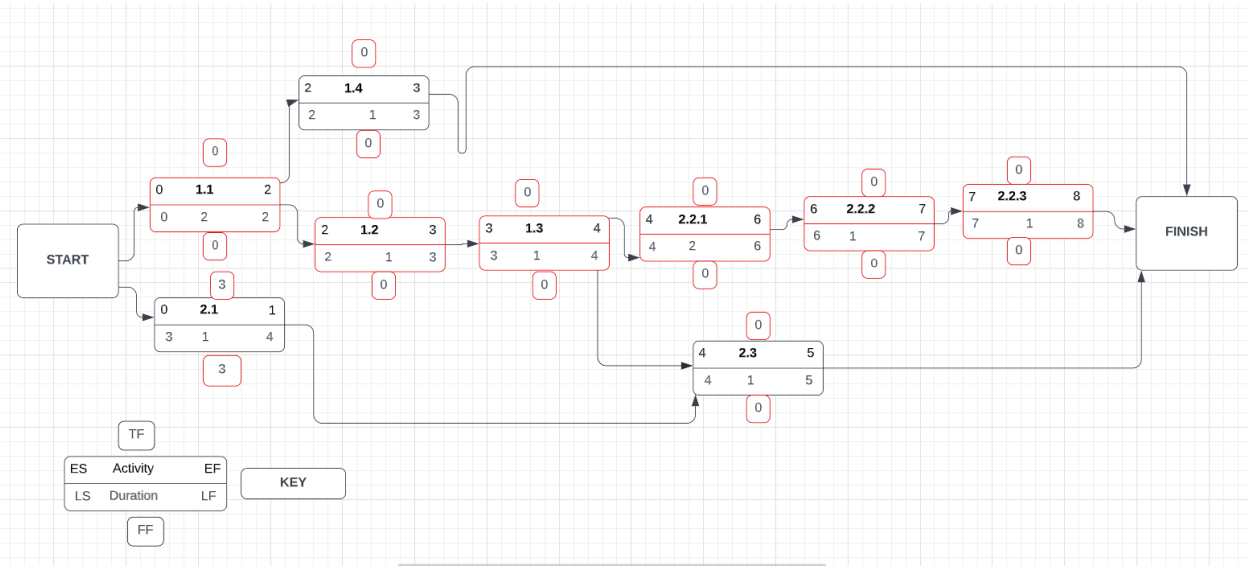
Using Activity 2.2.3, the Early Finish is = 8, the duration is = 1

Activity 2.2.3 = (LS) = 8 -1 = 7

Now practice using this method to calculate all the activities listed in the network diagram.

Note that if an activity has two succeeding activities, you will use the lower (LS) for the (LF) to the activity.

The Critical Path Method



Finding the float or slack of the project, allows you to find the critical path.

Total Float (TF) = Late Finish- Early Finish

Free Float (FF) = Minimum E.S Successor - ES for Activity- Duration Activity

The critical path is then determined by the longest stretch of dependent activities measuring them from start to finish. It is the path with no slack or the greatest total duration.

Justification of Proposal

Presently, the content presented in chapter 8.2 may be disorganized and confusing to readers. As such, the proposed redesigned content includes a more organized presentation of the

various stages included in the time management component. Reigeluth's Elaboration Theory posits that for information to be most beneficial to the user, its content must be organized and presented in a specific order with the user being presented the most rudimentary ideas first (Pappas, 2014).

Thus far, there is one very short paragraph that attempts to summarize how estimation of duration is calculated that is limited to defining the concept and proffering the idea of expert judgment. It omits the various ways duration can be estimated for different projects which is critical to project management plan. This makes the information outdated and excludes audiences from the data necessary to make an informed decision about how best duration can be estimated for their specific project. The information presented to the reading audience should be current and applicable to the needs of project managers and their teams. Since no two projects are executed alike and managers' approaches to project activities differ, providing viable and varied options will afford managers the opportunity to select the best suited option or options for estimating duration.

Moreover, the chapter lacks information that amalgamates the project management's triangle. Van Wyngaard, Pretorius and Pretorius (2012) advanced that the triple constraint model, which includes cost, scope and time, helps key project stakeholders to consider the importance and the interrelatedness of each element and how changes in one section impacts another. Therefore, by alluding to calculations as it relates to Earned Value Analysis, this would make readers more receptive to the concept of having a holistic connection among cost, time, scope and even quality to a project's goal or outcome.

Section 8.3 could give the reader better insight and understanding at how to arrive at the float and the critical path with more images and diagrams to explain to the reader, instead of just text.

As Instructional Designers, we understand the importance of connections especially during instruction. Images close to text help assist the reader in understanding how to perform a function or series of tasks. Moreover, using Merrill's First Principles of Instruction, for how-to tasks, it is imperative that an example is given to perform such tasks especially if the reader is asked to replicate. Debell (2020) highlights, with reference to Mayers 12 Multimedia Principles, that the spatial contiguity principle states that humans learn best when relevant text and visuals are physically close. Furthermore, the multimedia principle, which is the groundwork for all of Mayer's Principles, suggests that images and words are more effective than words alone (Debell, 2020).

References

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Appendix

Group Members	Contribution
Sasha Griffith	Relationships Between Cost , Schedule and Time/Quality as per Chapter 8.2
Malissa Bovell	Relationships Between Cost , Schedule and Quality as per Chapter 8.2
Celia Neufville	Introduction of sequential elements of project time management
Alafia- Branker-Baptiste	Estimating Duration as per Chapter 8.2
Shernell Gill	Section 8.3- Critical Path and Float

	Project Scoring Guide Scoring Guide (25% of Total Course Grade)

Grading Scale:
5= Sophisticated demonstration of skills
4= Above average demonstration of skills
3= Average/ Expected demonstration of skills
2= Somewhat naïve or limited demonstration of skills
1= Show no demonstration of skills
0= No submission

Requirement	Score (Out of 5)	Points	Maximum points allowed	Comments
Book Contribution - 25%				
Content to be considered		5	5.0	
Correctness of content		7	7.0	
Justification of proposal		6	6.0	
Effectiveness and Craftsmanship		4	7.0	
Total		22	25.0	
Total				
FINAL SCORE			25.0	