

Software Project Management **Learning Journal**

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Course: Software Project Management

Journal link: <https://github.com/AdarshPawar/LearningJournal.git>

Date: 01/02/2024

Week 1: January 28 - February 3

Concepts Learned

* What are the different effort estimate techniques?

- **COCOMO Model** - Used when good information available for the current project but no data available for previous projects
- **FPA technique** - Used when data is available for both current as well as previous projects
- **Wide Band Delphi Model** - Used when some or all data available for the current project and is essentially is an experience-based technique

* How does a project manager balance project costs versus talent?

- **Utilize the time of your staff intelligently -**
 - Do not waste any money by not properly loading your staff with project assignments
 - Use PMO (Program Management Office) to share staff hours diligently. PMO should ensure that no overloading or under-loading of staff hours are done on any project or across projects
- **Use flexible teams to deal with extreme cases -**
 - Use flexible teams when either project work is less than staff hours available or project work is more than available staff hours
 - The flexible team can include contracted staff who can work when needed and can be removed when no work is available

* How is a resource estimate for a project made?

- A resource estimate is made by first obtaining a list of tasks, identifying required skills and experience for each task, and matching them with available resources.
- The amount of work for each task is calculated based on the organization's productivity factor and time duration. The number of resources required is determined by dividing the volume of work by the productivity and time duration for task completion.

* What are the risks that a project faces?

- Internal risks - Budget, Time, Quality, Technology, Resources
- External risks - Political, governmental, natural disasters, global pandemics

* How do you mitigate risks in a project?

■ **Budget risks -**

- Remedial action must be taken as soon as the project shows the risk of cost overrun, so as to prevent the problem from actually happening.
- To reduce the impact of budget risks, the budget allowance should include reserve funds. So when such risks occur, allowances can be taken up from the reserves to avoid the project from failing.

■ **Time risks -**

- To reduce the impact of schedule slippages, a schedule allowance should be taken for each time-related risk

■ **Resource risks -**

- This risk can be mitigated to some extent by implementing a knowledge management system that will store all the knowledge acquired by team members during the project

■ **Quality risks -**

- To deal with quality risks, the best policy is to have a check for quality integrated in the project schedule itself (quality planning).
- Peer reviews, code reviews, and other formal quality review processes should be strictly followed for all work products

■ **Technology risks -**

- When selecting technology tools and techniques, contact the vendors to make sure that they will be providing support in future as well

* What is a risk management document?

- The outcome of risk management planning is the risk management document. It contains the list of risks, their impact, probability, and what measures are to be taken to overcome them if they occur.
- Since risks are dynamic in nature, the risk management document should be updated regularly to keep risk information current.

Application in real projects

- * Implementing the described effort estimation techniques is crucial when dealing with real-world, complex projects as a project manager
- * Estimation of cost, resource, schedule is necessary to avoid unwanted hiccups during the project
- * Understanding the dynamics of project costs vs talent and how to deal with it, is essential for a project manager
- * Recognizing, categorizing risks at the time of project initiation is of utmost importance to avoid any hiccups in the project completion
- * Real-world projects require establishing risk mitigation strategies to ensure project can be completed within the given time frame
- * Formulating a risk mitigation document and constantly updating it helps tackle any issues that may arise in the project

Peer Interactions

- * My peers and I finalized our groups for the project. We then arranged a meeting to meet at the library and go over the project together.
- * In the meeting, we realized that we could view the project through two different lenses and hence decided further research was required to understand which perspective to finalize
- * We've also scheduled another meeting on the weekend to present our findings and decide the route we go with

Challenges faced

- * I had a hard time in understanding the effort estimation techniques and how they can be used in enormous organizational projects
- * Hence, I've decided to obtain additional information from a reference book and refer to a few YouTube videos

Personal Development activities

- * I have started assessing effort, cost and schedule estimate if the same mini-project was to be implemented in an enterprise setting
- * I conducted research for one of the perspectives' that would be really helpful for the group project and will be presenting the same during our group meeting the following week

Goals for next week

- * Understand the estimation techniques thoroughly
- * Begin writing the risk mitigation document for the mini-project
- * Finalize on how to proceed further in the group project
- * Go through chapter 5, Configuration Management and Cost Estimation and chapter 6, Project Planning