Learning Journal

Student Name: Nimisha Mavjibhai Jadav (40267767)

Course: Software Project Management

Journal URL: https://github.com/nimijdv10/SPM-Winter24

Week 7: 18 Feb 2024 – 09 Mar 2024

Date: 07 March 2024

Key Concepts Learned:

- Project plan is the baseline against which progress of any project is measured. Work progress is measured by comparing the baseline start and end dates for completion of any project milestone as project execution progresses. *Earned Value Management (EVM)* is the best tool for measurement of schedule and budget progress report for any project as well as for project tasks.
- Project monitoring and control provides the means by which the project manager can know the progress and status of the project at any given time. It also provides the framework for action planning.
- *Monitoring* is about collecting sufficient data to measure progress and making sure that the project team implements the plan correctly.
- *Control* is the process of ensuring that the project delivers everything it is supposed to according to schedule, cost, scope, contracts and quality by taking corrective action when necessary.
- As discussed in the chapter, the things that can be controlled are *performance, costs, time, quality, scope, risk, team*.
- To design a project monitoring and control system, following steps are followed:
  - **i) Establishing baseline:** Any changes to baseline like WBS, budget, time, performance is only made after review and approval using change control system.
  - **ii) Monitor and measure performance:** Project progress is measured regularly to identify the variance.
  - **iii) Compare performance to the baselines:** Do variance analysis i.e., difference between actual performance and planned performance.
  - **iv) Take corrective action:** Once variation is identified the necessary corrective actions are taken.
- Below mentioned are the basic operations that can be done for corrective measures:
  - i) Finding alternative solution (rearranging the workload)
  - ii) Compromise cost
  - iii) Compromise time
  - iv) Compromise scope
  - v) Abort the project
- To gather the information about the project progress team meetings can be conducted, delivering regular project reports or have a specific technical meeting.

- Two tools used for project monitoring are:
  i) **S-curve**: An S-curve is a visual tool that allows project managers to identify trends and make data-driven decisions to ensure projects stay on track.
  ii) **Earned Value Analysis (EVA):** EVA evaluates the projects progress by merging the cost and time constraints together. EVA breaks down the project task by task or by work packages and allocates a dollar value to each. Progress is measured in terms of dollar value earned not in days. EVA monitors progress by comparing the value earned from completing a task to the planned value that should have been derived from that task. If the actual value earned is less than the value that should have been derived then the project is in jeopardy. If the actual value earned is greater than the planned earned value then the project is in a good situation.
- Project control techniques are:
  i) **Resource Levelling:** It is employed to resolve resource conflicts during project execution. Sometimes, it so happens that a resource is to do more than one task. Now it is found that one task will get delayed due to the delay in the other task. If there is a slack found in the schedule, the other task that has not started yet can be taken to some other time frame so that it will not be affected due to delay in the first task. Or if this is not possible, then adding some more resources to the task can resolve this issue.
  j) **Schedule optimization:** We can determine the critical path of the project. But before drawing the critical path, the project manager should ascertain that there is no unnecessary slack in the project plan. If there is any slack anywhere on the critical path, it should be removed to make the project plan optimized. Similarly, as there could be many critical paths for the same project plan, unnecessary slack on all paths should be identified and removed. Now the longest path out of these will be the critical path for the project.

Reflections on Case Study:

- The project team faced a significant challenge due to the component's complexity and a lack of prior testing experience. They showed resilience by quickly recognizing the problem and making necessary changes, such as replacing test engineers with experienced business analysts.
- The decision to develop a pseudo logic for the component and conduct exploratory testing proved to be successful strategies. This emphasizes the value of adaptability and the ability to pivot when confronted with unexpected challenges. Furthermore, the team's thoroughness in developing an elaborate suite of test cases, as well as their dedication to ensuring that the component met requirements, were critical to their success.
- Overall, this success story demonstrates the importance of taking a proactive approach to problem solving, leveraging team expertise, and conducting thorough testing to ensure the success of complex software development projects.

Peer Interactions/collaboration:

We discussed about the project monitoring tools. We discussed how S curve helps project managers identify the trends in the project performance. It's called an S-curve because the graph typically resembles a 'S' shape, representing cumulative progress over time. Earned Value Analysis, on the other hand, measures project progress by combining cost and time constraints. It divides the project

into tasks or work packages and assigns dollar values to each. This allows us to measure progress in terms of value earned rather than days. I also interacted with my project team members and divided the task for phase-2. We also discussed about the how the budgeting, planning and risk management is to be done.

Application in Real Projects:

- Setting a baseline in any project is critical for accurately measuring progress. This baseline includes the Work Breakdown Structure (WBS), budget, timeline, and performance metrics. Implementing a change control system ensures that any changes to the baseline are thoroughly reviewed and approved, thereby preventing scope creep and ensuring project alignment.
- Regular monitoring of project progress is required to identify deviations from the baseline. This may entail tracking key performance indicators (KPIs), milestones, and deliverables. By gathering enough data and measuring progress against predefined metrics, project managers gain insights into project health and can identify potential problems early.
- When deviations are discovered, corrective actions must be taken immediately to get the project back on track. This could include finding alternative solutions, compromising on cost, time, or scope, or, in extreme cases, abandoning the project entirely.

Personal Development Activities :

Setting aside a specific amount of time each day to learn something new, whether it's about new topic covered in lectures, coding skills, or personal interests. I am also doing revision on what all I have learned in the whole week, focusing on areas that requires more understanding. I am using to-do list to effectively manage my tasks, ensuring that I keep track of assignments, projects, and deadlines.

Challenges Faced:

I got confused about some of the concepts and techniques mentioned in the material. Specifically, I found it challenging to understand the implementation of Earned Value Analysis (EVA). I began conducting additional research to improve my understanding. I explored various online articles to gain different perspective on this project monitoring techniques. I also reached out to my friends in the class for clarification of certain things. I also understood how they are applied in real life. A practical example helps more to understand it better.

Goals for the Next Week:

My goal for next week is to revise Chapter 7 and start making notes for Chapter 8. Also, finishing the risk management document for project phase 2. I will begin drafting the document, with a focus on identifying and analyzing potential risks and proposing mitigation strategies. Set aside some time to review and finalize the document, ensuring that it meets the project's specifications and deadlines.