Learning Journal 1

Student Name: Waseem Ullah Jan

Course: Software Project Management SOEN-6841

Journal URL: https://github.com/WaseemJan063/SOEN-6481-SPM/blob/main/40262253_Learning_Journal_1.pdf

Dates Rage of activities: 16/01/2025 to 23/01/2025

Date of the journal: 28/01/2025

A. Important Ideas Acquired:

Chapter 1:

Project: A project is a collection of actions with a specific beginning and ending time that are intended to accomplish a set of predetermined objectives.

- Activities that have a predetermined start and end time and need time, money, and resources to achieve specific objectives make up a project. After completion, any unused monies and resources are released.

- Software engineering processes include requirement definition, design, construction, testing, and maintenance, whereas project management procedures include initiation, planning, monitoring, control, and closing.

- Software project management creates high-quality software quickly and at a reasonable cost by combining project management with software engineering methodologies.

- The tasks involved in software projects include design, coding, testing, deployment, requirements management, and maintenance.

- The first step is project initiation, which differs depending on the application, product, and product implementation. Whereas market possibilities drive product initiation, user requirements drive application initiation.

- Since project requirements establish the project's scope, effort, cost, and baseline quality, project planning takes place when all requirements are known.
- Project closure, control, and monitoring guarantee ongoing supervision, risk reduction, and appropriate documentation transfer for later use.

Chapter 2:

Project Charter: Outlines the main tasks, goals, and objectives of the project as a whole. It outlines the overall objective and anticipated results of the project.

- **Project Scope:** Establishes the features and standards of quality that the software product must have. In order to avoid scope creep and guarantee precise work estimation and scheduling, clear specifications are essential.

- Stakeholders must decide on SMART (Specific, Measurable, Achievable, Relevant, Time-constrained) project objectives. Success is defined as achieving these goals.

- **Initial Project Size Estimate**: This gives an approximate idea of the project's size and occasionally uses function pointers or lines of code to assist in creating an early project plan.

- **Effort and Cost Estimation:** Software development companies are asked to submit bids for project execution based on estimations provided by an expert.

Chapter 3:

The two categories of estimation approaches are algorithm-based techniques and experience-based approaches.

Methods Based on Experience:

- **Analysis-Based Estimation:** This approach makes an estimate for new projects by contrasting them with earlier, comparable initiatives.

- **Estimation by Judgment:** Makes use of expert judgment, as demonstrated by Delphi and FPA.
- FPA (Function Point Analysis) uses the formula FPA = UFP * VAF, where VAF (Value Adjustment Factor) is calculated using 14 system attributes and UFP (Unadjusted Function Points) are derived from function types.

- In the Delphi Method, team members estimate effort independently before having a group discussion to decide on a range of effort estimates.

- Techniques Based on Algorithms
- **COCOMO Model:** Used to estimate software costs.

  The basic COCOMO formula is:

  Effort = 2.94 * EAF * (KLOC)^E and

  Duration = 3.67 * (Effort)^SE.

B. Use in Actual Projects:

- How to estimate expenditures in advance and how to begin the project once goals and objectives have been established.

- By breaking down projects into distinct stages—start, planning, execution, and closing—software development may be maintained organized and under control.

- The Estimation Project Study offers a rough estimate of the resources required for the project, which is useful in the beginning.

C. Interactions with Peers:

- In a time-constrained setting, our project team deliberated on how to effectively estimate the project budget and produce deliverables with the highest level of satisfaction.

- Acquired the skills to draft a project charter and reviewed those of others to understand their methodology and identify recommendations.

D. Challenges:

- COCOMO Calculations: Estimating the number of lines of code (KLOC) at the beginning of a project was difficult, especially for complex systems with many unknowns.

E. Activities for personal development:

- To learn more about the Delphi technique and FPA, read a few articles.

- Improving my project management abilities by prioritizing lifelong learning and staying current with industry best practices.

F. Objectives for the Upcoming Week:

- Will begin working on group project deliverables and analyze the market to determine the impact of our problem description.

- Participate more actively in class activities and thoroughly read chapters 1, 2, and 3.

- I want to improve my abilities in project estimation and use them to tackle challenging estimation problems in real-world case studies, aligning this expertise with my career growth.

References: https://www.ijsrd.com/articles/IJSRDV2I5314.pdf

Time management: 5 hours/week going through lecture slides and participating in group project activities