Learning Journal

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Course: Software Project Management SOEN 6841 Winter 2024

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Week 1: 28/01/2024 - 03/02/2024

Key Concepts Learned:

1. **Project-Specific Tailoring:** Recognizes the uniqueness of each project, emphasizing the need for diverse and tailored effort estimation techniques to suit project-specific characteristics.

2. **Critical Role of Method Selection:** Highlights the importance of selecting suitable techniques, stressing alignment with project characteristics for accurate effort and cost estimation.

3. **Specialized Techniques:**
    - **Function Point Analysis:** Positioned as a specialized technique for nuanced project assessment beyond traditional size-based metrics.
    - **Wide Band Delphi:** Introduced as an estimation technique leveraging expert opinions for informed effort estimation.
    - **COCOMO:** Breaks down the COCOMO family, exploring Basic, Intermediate, and Detailed models for diverse project applications.
4. **Adaptation to Methodologies:**
    - **Waterfall Model–Based Planning:** Explores tailored considerations for estimating effort in linear and sequential projects.
    - **Iterations Model–Based Planning:** Examines nuances in estimating effort for iterative projects, accounting for refinement cycles.
5. **Strategic Cost Estimation:**
    - **Cost Factor Analysis:** Explores intricacies in analyzing factors influencing project costs.
    - **Activity-Based Cost Estimation:** Introduces a strategic approach based on project activities, clarifying cost distribution.
6. **Resource Estimation:** Clarifies the concept of estimating resources, emphasizing strategic allocation for project success.
7. **Artifacts and Practical Considerations:** Highlights the significance of documentation, artifacts, and practical insights for transparency and effective communication.
8. **Product Development Context:** Places effort and cost within the broader landscape of product development, underscoring their pivotal role in overall success.

Applications in Real Projects:

Effort and cost estimation in open-source projects present unique challenges due to collaborative, community-driven development. Key points:

1. Estimation Challenges: Collaborative nature demands unconventional approaches.
2. Approach: Expert judgment and community consensus prevail.

3. Effort Estimation: Relies on volunteer contributors, skills, and project complexity, tracked on platforms like GitHub.
4. Cost Estimation: Involves non-monetary resources, e.g., volunteer time. Examples include Apache Software Foundation's community-driven cost management.
5. Linux Kernel Project Example: Highlights complexities, Linux Foundation's reliance on community input, historical data, and financial records.
6. Methodology: In open source, a blend of qualitative and quantitative methods, community input, and historical data is crucial for effective estimation.

Pever Interactions:
This week, our team dedicated efforts to advance our AI-driven academic advisor project. In team discussions, I discussed the project that I prepared similar to our current project, and my teammates discussed emphasizing its drawbacks. Analyzing it through a project manager's lens, we brainstormed enhancements. Concurrently, I partnered with a classmate to explore the case study in Chapter 3, focusing on a SaaS vendor's project advancements in intricate appointment scheduling logic. Having completed chapters 1 and 2, our strategy involves weekly case study discussions to seamlessly incorporate lessons into our ongoing project.

Challenges Faced:
After the initial week, grasping conceptual aspects of cost estimation posed no major challenge. However, practical implementation, involving intricate calculations, presented difficulties. In project discussions, we considered utilizing a cost estimation model for financial projections based on planned functions. Struggling with a previous class, I dedicated time to understanding Chapter 4 and associated slides, gaining insight into technical aspects and project risk management. Challenges arose in market analysis due to the domain's novelty. To address this, I proposed incorporating case studies and research papers for a deeper understanding of the market landscape relevant to our project solution.

Personal development activities:
The progression of the course has transitioned my thought process from a traditional developer role to a managerial perspective. The gradual exploration of various topics and devising solutions for the project necessitated extensive research, prompting a comprehensive understanding of the project from a business standpoint. As previously discussed, in the context of initiatives like (GSoC) that revolve around open-source projects, I actively engaged in identifying issues within their codebase to contribute my insights which will also help me in another course.

Goals for the Next Week:
- My objective for the forthcoming week is to advance the tasks related to project initiation and market analysis, given the impending deadline.
- I plan to conduct a thorough revision of the preceding chapters to ensure a quick and comprehensive review.
- Scheduled meetings with project teammates are in place to address any challenges about the initial project deliverable.
- Additionally, I intend to delve into similar case studies provided in our materials to enhance my understanding and prepare for the upcoming chapter in the next class.