

Learning Journal 2

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Course: SOEN 6841 Software Project Management

Journal URL: [Link](#)

Dates Range of activities: 09/15/2024 – 10/04/2024

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Key Concepts Learned

Concept: Effort and Cost Estimation (Experience-based techniques)

A common approach is to assess new projects by drawing comparisons to similar past projects, often breaking down the estimate into smaller components for greater accuracy.

Application in Real Projects: Various techniques such as **function point analysis** are employed to estimate effort in software projects. The choice of an appropriate estimation technique depends on the project's specific requirements.

Challenges Faced: One of the main challenges in effort estimation is the uncertainty in project requirements and scope.

Goals for the Next Week: I will go through relevant chapters and materials on effort estimation techniques to deepen my understanding and refine my skills.

Concept: Function Point Analysis

Function Point Analysis (FPA) is a technique used to measure software size and complexity based on the functionality delivered to users.

Application in Real Projects: Function Point Analysis (FPA) is a method used to measure the size and complexity of software projects based on the functions that the system provides to users. Instead of just looking at lines of code, FPA focuses on the features and functionalities from the user's perspective.

Challenges Faced: One challenge with Function Point Analysis is that figuring out and categorizing functions can be pretty subjective, meaning different people might have different interpretations

Concept: Algorithmic cost modelling

Cost is estimated as a mathematical function of product, project and process attributes whose values are estimated by project managers. **Examples : Cocomo, Cocomo 2**

Application in Real Projects: This approach allows for more structured and quantitative cost predictions, aiding in project planning and budgeting. When project costs are based on clear mathematical models, it makes it much easier to explain and justify budget requests.

Challenges Faced: One challenge in algorithmic cost modeling is ensuring the accuracy of the input data.

Goals for the Next Week: I will go through relevant chapters and materials to deepen my understanding and refine my skills.

Concept: Risk Management

- **Risk assessment**
- **Risk Categories**
- **Risk Tradeoffs**

Application in Real Projects:

Risk Assessment: In real projects, risk assessment involves identifying potential risks that could impact project success and evaluating their likelihood and potential impact. This process helps teams prioritize risks and develop strategies to address them effectively.

Risk Categories: Risks are often categorized into various types, such as technical, organizational, external, and project management risks. This categorization helps teams better understand the sources of risk and tailor their mitigation strategies accordingly.

Risk Tradeoffs: When managing risks, teams must often consider tradeoffs between risk and reward. For instance, taking on certain risks might lead to greater innovation or faster project delivery, but it also requires careful evaluation to ensure that the benefits outweigh the potential downsides.

Challenges Faced: One challenge in risk assessment is accurately predicting the likelihood and impact of risks, which can lead to underestimations or overestimations.

Goals for the Next Week: I will go through relevant chapters and materials to deepen my understanding and refine my skills.

Concept: Risk Mitigation

Mitigation lowers the likelihood and/or impact of a negative risk to an acceptable level. Acting proactively to minimize a risk's probability and/or effects is generally more effective than responding after it.

Application in Real Projects: In real projects, risk mitigation means putting strategies in place to reduce the impact of known risks. This might involve setting up clear processes for handling change requests and using configuration management to monitor different versions of the software.

Challenges faced: One challenge in risk mitigation is accurately identifying all potential risks and assessing their impact, as some risks may be overlooked or underestimated.

Concept: Configuration Management

Managing change requests and different versions of the software product is done in configuration management.

Application in Real Projects: Configuration management is important for managing change requests because it allows us to document and evaluate changes to the software. This helps us understand how those changes might impact functionality and the overall project before we actually make them. Plus, it helps us keep track of different software versions, making it easier to update or revert changes when necessary.

Challenges faced: It requires extensive documentation and one challenge is to maintain proper documents for this.
