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CSS 566: Software Management

Paper Draft 1

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Research Questions for Literature Review:

1. What are the challenges of adopting agile Software Management?
2. Does agile leadership matter in successful agile adoption and projects? What can leaders do in agile adoption to increase likelihood of success, especially in the relationship between agile leaders (Product Owner and Scrum Master’s relationship with development team, encourage team norms)? How do we foster agile leadership and culture?

Keywords: agile challenges, agile teams, psychological safety, agile team norms, agile leadership

Abstract:

High-level Flow:

Don’t overemphasize framework. When adopting Agile, tailor the process to company or team-specific needs while maintaining core Agile principles

References

Challenges and Success Factors

Kalenda, M., Hyna, P., Rossi, B. Scaling agile in large organizations: Practices, challenges, and success factors. J Softw Evol Proc. 2018; 30:e1954. <https://doi.org/10.1002/smr.1954>.

*Success factors: company culture, prior agile and lean experience, management support, value unification*

*Challenges: resistance to change, overly aggressive roll-out time frame, quality assurance concerns, integration into preexisting nonagile business processes*

*Don’t overemphasize framework. When adopting Agile, tailor the process to company or team-specific needs while maintaining core Agile principles*

Hekkala, Riitta & Stein, Mari-Klara & Rossi, Matti & Smolander, Kari. (2017). Challenges in Transitioning to an Agile Way of Working. 10.24251/HICSS.2017.707.

*Adopting iterative and incremental development approach was the least challenging while team-work, leadership and culture were much harder to address*

Stray V., Moe N., Hoda R. (2018). Autonomous agile teams: challenges and future directions for research. In Proceedings of the 19th International Conference on Agile Software Development: Companion (XP ’18). Association for Computing Machinery, New York, NY, USA, Article 16, 1–5. <https://doi.org/10.1145/3234152.3234182>.

*Four topics of challenges: not having clear and common goals, lack of trust, too many dependencies to others, lack of coaching and organizational support*

*Future research directions: leadership, coordination, organizational context, team design and team processes have emerged to address these challenges,*

K. Conboy, Carroll N. (2019). "Implementing Large-Scale Agile Frameworks: Challenges and Recommendations," in IEEE Software, vol. 36, no. 2, pp. 44-50, March-April 2019. <https://doi.org/10.1109/MS.2018.2884865>.

*Challenges: Defining concepts and term (shallow/no understanding agile completely), comparing and contrasting frameworks, readiness and appetite for changes, balancing organizational structure and frameworks, top-down versus bottom-up implementation, overemphasis on 100% framework adherence over value (prefer flexibility while maintaining core agile principles), lack of evidence-based use, maintaining developer autonomy, misalignment between customer and frameworks*

Thorgren S, Caiman E. (2019). The Role of Psychological Safety in Implementing Agile Methods across Cultures, Research-Technology Management, 62:2, 31-39, <https://doi.org/10.1080/08956308.2019.1563436>.

*Main challenges stem from* ***workplace culture*** *and lack of* ***psychological safety*** *(inclusiveness, collective responsibility, openness) Culture differences related to attitudes toward inclusiveness (good to note for multi-site, global multi-teams), cultural differences related to perceptions of and trust in collective responsibility, cultural differences related to openness in communication*

*After 18 months, some changes happened such as improved communication and colocation but other challenges remained such as general culture’s emphasis on control rather than self-organization (manager must protect team from middle management)*

Success

Stray V., Tor F., Moe N. (2016). Exploring Norms in Agile Software Teams. <https://doi.org/10.1007/978-3-319-49094-6_31>.

*Success related to team dynamics/team interactions: Some team norms encourage productive and collaborative behaviors while others hinder. Regular team reflection helps on developing and changing norms to increase team effectiveness.*

Lenberg P., Feldt R. (2018). Psychological safety and norm clarity in software engineering teams. In Proceedings of the 11th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE ’18). Association for Computing Machinery, New York, NY, USA, 79–86. <https://doi.org/10.1145/3195836.3195847>.

*The paper explores how strong psychological safety and team norms are as predictors of team performance and job satisfaction. Team norm clarity is showed to have stronger influence. This implies encouraging the development of team norms can aid in successful adoption of agile methodologies. This also has important leadership implication for management.*

The more that is flushed out the better feedback I will be able to provide.  So, please make sure your abstract is done, there are a number of references already found and in place, formatting is correct, and a number of key ideas have been written.

first page (clearly stated research question, conceptual and literature framing) and high-level conceptual flow.