Project 1

Tyler Ellis

CS-250 Software Development Lifecycle

[Tyler.ellis1@snhu.edu](mailto:Tyler.ellis1@snhu.edu)

Professor Nicholas Schnack

Dec 15, 2024

The SNHU Travel project aimed to develop a cutting-edge application that would help the travel agency expand its client base by offering innovative tools and features. To achieve this goal, the Scrum-Agile approach was adopted, marking a shift from the traditional Waterfall methodology previously used by ChadaTech. This transition allowed the team to work iteratively, adapt to changing requirements, and focus on delivering value incrementally. Each team member took on a specific role—Product Owner, Scrum Master, Developer, or Tester—contributing to the project’s success through collaboration and clear communication. This Sprint Review and Retrospective reflects on the work completed during the project, highlights how Agile principles supported the development process, and evaluates the effectiveness of the Scrum-Agile framework for meeting the project’s objectives. By examining the lessons learned, this retrospective will also provide insights for ChadaTech as it considers transitioning all development teams to Agile.

Each role on the Scrum-Agile team played a critical part in the success of the SNHU Travel project. The Product Owner, Christy, ensured that the team stayed aligned with the stakeholders’ needs by prioritizing and refining the Product Backlog. For example, Christy gathered feedback from users like Nick, Maria, and John during the focus group to identify key features such as customized destination lists and budget filtering. Her clear direction allowed the team to focus on delivering high-value functionality.

As the Developer, my role was to build the application incrementally, starting with the most critical features outlined in the backlog. For instance, I developed the budget filtering feature in small, testable increments, ensuring that functionality was aligned with the acceptance criteria. The Tester, Brian, played a crucial role by defining clear test cases and running them to identify potential issues early. His tests, such as those checking for invalid budget inputs, ensured the software was robust and user-friendly. Lastly, as the Scrum Master, I facilitated communication through daily standups and ensured the team remained focused and unblocked. By fostering collaboration and adaptability, each role contributed to delivering a product that met the evolving requirements and priorities of the SNHU Travel project.

The Scrum-Agile approach was instrumental in ensuring the completion of user stories by breaking down the development process into manageable and focused tasks. Each user story was tied to specific customer needs and included clear acceptance criteria, which provided the team with a defined goal to work toward. For example, the user story “As a budget-conscious traveler, I want to set a price limit for vacation packages so that I can view destinations and deals within my budget” was completed by first developing the input field for the budget filter. This was followed by implementing the logic to filter destinations based on the budget and, finally, testing the feature to ensure accuracy and error handling.

The iterative nature of Agile allowed the team to prioritize and complete high-value stories first while gathering feedback throughout the development process. During sprint reviews, the Product Owner provided valuable insights to refine the functionality of completed stories, such as ensuring error messages were clear and helpful for invalid budget entries. Additionally, collaboration between roles made it easier to adjust stories as new requirements emerged. For example, when sorting destinations by popularity was added as a priority, the team was able to incorporate it into the backlog and complete the user story without disrupting the flow of the project. This incremental approach ensured that each story was fully developed, tested, and aligned with the project’s goals before moving on to the next task.

One of the strengths of the Scrum-Agile approach is its ability to handle interruptions and changing priorities effectively. During the SNHU Travel project, we encountered a situation where the customer requested an additional feature to sort destinations by popularity midway through the sprint. Instead of derailing the entire development process, the team was able to reprioritize the Product Backlog and add the new feature without significantly impacting the timeline. The iterative nature of Agile allowed us to focus on completing high-priority features while planning the integration of new requirements in subsequent sprints.

The daily standups and close collaboration between team members helped ensure that the change was communicated clearly and that the team could adjust their plans quickly. For instance, the developer paused work on a lower-priority feature to focus on implementing the sorting functionality, while the Product Owner refined the new user story to ensure it aligned with customer expectations. This flexibility demonstrated how Agile supports project completion even when interruptions occur, ensuring that the product continues to deliver value to stakeholders.

Effective communication was at the heart of the SNHU Travel project’s success. Daily standups allowed the team to stay aligned by sharing updates, identifying blockers, and collaborating on solutions. For example, during one standup, the developer raised a concern about how to handle invalid inputs in the budget filtering feature. The tester and Product Owner were able to provide immediate guidance, ensuring the feature met both technical and user expectations.

Additionally, written communication, such as emails, played a significant role. For instance, when the developer needed clarification on edge cases for budget filtering, an email to the Product Owner and tester provided a documented request that ensured all details were addressed. This mix of real-time discussions and written communication created a transparent environment where everyone had access to the information they needed to collaborate effectively. This open communication fostered trust and alignment, leading to a more cohesive team effort.

Agile project management tools were essential for organizing and tracking the team’s progress throughout the project. Tools like JIRA allowed the team to break down user stories into smaller tasks, assign responsibilities, and monitor progress in real time. The Kanban board within JIRA provided a clear visual representation of the workflow, showing tasks in progress, completed work, and remaining backlog items. This transparency ensured that all team members were aware of the project’s status and could focus on their priorities.

Additionally, burndown charts helped track the team’s progress toward sprint goals, making it easier to identify potential bottlenecks or delays. These tools, combined with Agile principles like iterative development and daily standups, enhanced efficiency and accountability within the team. For example, when the new sorting feature was introduced, it was added to the backlog in JIRA, and its status was updated as the team worked through the implementation. These organizational tools provided structure and clarity, ensuring the team remained productive and aligned throughout the project.

The Scrum-Agile approach proved to be highly effective for the SNHU Travel project, but it came with both advantages and challenges. Pros included the flexibility to adapt to changing requirements, continuous feedback from stakeholders, and incremental delivery that reduced risks and improved the product’s quality. The ability to reprioritize the backlog and focus on high-value features ensured that the product met customer needs, even as new requests emerged.

However, there were cons as well. The iterative nature of Agile required frequent communication and coordination, which could be challenging when balancing competing priorities. Additionally, smaller teams often felt the pressure of handling multiple responsibilities, such as development and testing, simultaneously. Despite these challenges, the benefits of Agile far outweighed the drawbacks for this project.

The Scrum-Agile approach was the best fit for the SNHU Travel project. The evolving requirements and the need for frequent feedback would have been difficult to manage with a traditional waterfall model. Agile’s iterative structure allowed the team to deliver a functional product while continuously improving it based on customer input. This process not only enhanced the product but also created a more collaborative and adaptable team dynamic, making it an ideal approach for this type of project.

The SNHU Travel project demonstrated the strengths and adaptability of the Scrum-Agile approach in software development. By assigning clear roles and responsibilities, the team was able to collaborate effectively and deliver a product that met evolving customer needs. Practices such as breaking down work into user stories, conducting daily standups, and leveraging Agile tools like JIRA ensured that progress was steady and transparent. Despite challenges such as interruptions and the need for frequent communication, Agile’s flexibility allowed the team to reprioritize and stay aligned with the project’s goals. Overall, the iterative process not only improved the final product but also fostered a culture of collaboration and continuous improvement. These lessons and successes can provide valuable insights for ChadaTech as it considers transitioning all its development teams to Agile.

**References**:  
  
Beck, K., Beedle, M., van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R., Kern, J., Marick, B., Martin, R. C., Mellor, S., Schwaber, K., Sutherland, J., & Thomas, D. (2001). Manifesto for Agile Software Development. Agile Alliance. Retrieved from https://agilemanifesto.org/

Fowler, M., & Highsmith, J. (2001). The Agile manifesto principles. Software Development Magazine. Retrieved from https://agilemanifesto.org/principles.html

Hoda, R., Noble, J., & Marshall, S. (2017). Agile project management. Communications of the ACM, 60(3), 40–45. https://doi.org/10.1145/3057277

Serrador, P., & Pinto, J. K. (2015). Does Agile work? A quantitative analysis of Agile project success. International Journal of Project Management, 33(5), 1040–1051. https://doi.org/10.1016/j.ijproman.2015.01.006

Vision Quest Software. (2024). CS 250 Case Study: Vision Quest Software. Southern New Hampshire University.

Wysocki, R. K. (2019). The project manager’s guide to mastering Agile: Principles and practices for an adaptive approach. Wiley.