7-1 Final Project

Tabitha Pawlowski

Computer Science Department, SNHU

CS- 250 Software Development Lifecycle

Professor Vianelis Martinez

February 21, 2024

Throughout the time that our group worked on the SNHU Travel project, the different Scrum-agile roles uniquely contributed to the success of the final deliverable. In an agile team, individuals work together to collaborate and complement each other to create a desired product that meets the client's needs and wants. As the Scrum Master, it was my responsibility to facilitate communication, keep the team focused on applying scrum principles, and guide the team through any changes, concerns, or obstacles. A time when as the Scrum Master I had to fulfill my duties was by implementing daily stand-ups that helped our team communicate more easily and feel more comfortable working with one another. Daily stand-ups, and all scrum events, are a way to ensure you are following the scrum-agile framework through-and-through and encourage team members to engage with each other. The Product Owner also played an extensive role in applying scrum-agile principles that led to our project's success. As the Product Owner, it is their job to keep the team on schedule and serve as a communicator between the team and the client or stakeholders. One way to accomplish this is by creating and maintaining a product backlog. In week three of the sprint, the client discussed with the Product Owner their biggest desires and needs for the product and the Owner organized that into a backlog for the rest of the team to view and focus on. The Product Owner also kept constant communication with the client by holding continuous meetings to discuss progress and changes and by communicating via email throughout the sprint.

The developer's role is to take the client's needs and wants and incorporate them into a usable deliverable. In agile, there may be changes, and it is the developer's responsibility to make sure that all changing requirements are met. For example, the SNHU Travel company realized that they wanted to focus on wellness vacations, so the development team had to make a shift in the program to highlight different types of wellness results for each user. Lastly, in an

agile environment, the product tester is responsible for ensuring the product completely meets the expectations of the client, all while working functionally without any bugs. Cross-communication is an essential part of this process. The product tester must work closely with the development team, Product Owner, and Scrum Master to ensure they are aware of the exact product requirements needed to be met and guide the developers to meet those expectations more accurately. For example, when there are changes to the backlog, the tester can discuss with the development team how progress will be made to incorporate the new changes. Instead of waiting until the end of the sprint to ensure the product works, it is important in an agile environment that the tester is integrated into the design and development from the very beginning to prevent any big errors from occurring within the product.

Using a scrum-agile approach to the software development lifecycle significantly helped lead to the completion of the user stories. Agile emphasizes person-to-person communication and client-Product Owner meetings helped facilitate communication that led to a mutual understanding of what is to be expected of the product. For example, during the initial meeting, the client met with the team to discuss what they wanted their product to accomplish. The Product Owner then created a product backlog that contained all the user stories organized from most to least imminent. The team used this product backlog to focus on specific stories in that order. However, just as agile emphasizes, changes were made during consecutive meetings. When the client realized they wanted to focus on health and wellness vacations, this change was communicated, and the backlog was updated to reflect these changes. The team was able to view the product backlog, recognize the change, and shift their focus to making sure the modification was made. Agile encourages change, and a scrum framework provides the communication and tools needed to adapt to those changes.

During our time working on the SNHU Travel project, several changes were made. Fortunately, agile not only expects, but encourages, change throughout the process. During the second meeting between the client and Product Owner, changes were discussed regarding what type of results the company wanted to highlight to their users. Based on research, the company found that wellness vacations were becoming more popular and wanted to focus their website on those types of vacation packages. The development team therefore had to change their focus from showing results based on the suggestions of previous travel experiences to vacations that were related to wellness and health. Although the project changed direction, this change did not become a major obstacle thanks to the use of agile principles. Consistent communication allowed the change to be communicated before it became too large of a problem to fix easily. Agile also prepares team members for change, which helps prevent a mass "shock" when change is communicated. In addition, the website began as a page where the user could scroll up and down to look through the results. However, a change was made where the results would now be shown on their own page and the user could scroll left to right to view the different vacation packages. Changes made early on help prevent major product issues later in the project. The faster and more consistent communication is, the easier it is to fix errors.

Agile highly emphasizes communication among team members in order to collaborate in harmony. Effective communication is crucial when it comes to ensuring all team members understand what is expected of them and how, why, and when they need to accomplish it. One example of effective communication I used throughout this sprint was in week six during our discussion post scrum meeting. Effective communication not only shares your own ideas, but encourages others to share theirs, too. For example, I stated, "I want to thank my team members for reading my suggestions as we move from a traditional waterfall approach to a more modern agile approach. I ask that you provide feedback on what you agree we should implement as we

make this transition, or what you feel is not needed in this switch". After giving my ideas, suggestions, and concerns, I invited my teammates to consider my points and give feedback on whether they agree, disagree, or had anything to add. This helps promote proactive communication that leads to decision making. In addition, in response to one of my team member's posts, I said, "Since we are virtual, a virtual information radiator, such as a virtual whiteboard or collaboration software, can help serve as a visual reminder of what work has been done and what still needs to be completed... The question is, though, how often should this be done? If we still have our daily and sprint meetings, should we facilitate these extra meetings once a day? Once a week? Not at all? Let me know your ideas". This excerpt gives an example of how it is important to share ideas and suggestions, but also to allow others to give input as to how they feel about the situation, too. In doing this, you are encouraging the sharing of ideas without overpowering the rest of your team.

In addition, discussions via email can serve as an effective communication tool to share ideas or concerns. In week five, the product tester sent an email to the Product Owner and Client sharing that they needed more information before additional progress could be made. For example, the product owner sent an email stating, "...Do you have any different functionalities you would like to be provided within the program? This sprint we changed it to more of a slideshow style where each slide shows one vacation and users can scroll left or right. This is compared to the previous sprint where users scrolled up and down on one page to see all the results. Is there any other functionality you would like to see? For example, sounds, videos, or any special effects?" This email excerpt demonstrates the need to share progress made in order to get feedback on it. By asking for feedback early on, there is less time for big problems to occur. It is also a smart idea to give technical suggestions to the client that they might otherwise not

even be aware is an option. This way, you are providing the highest quality of knowledge and advice to the customer.

The organizational tools and principles provided by the scrum-agile framework helped guide our project to successful completion. One Agile philosophy that aided us was the emphasis on direct, face-to-face communication rather than written documentation. When initially learning about the project requirements and details, the in-person meeting between the Product Owner, client, and rest of the team helped ensure that as much detail as possible was given and no crucial information was left out. Additionally, when changes were thought of, another meeting helped clarify how these changes would be executed and what effect they would have on the project. When it came to tasks that needed to be focused and worked on, the product backlog was also a highly effective organizational tool that Agile emphasizes. The product backlog helped our team focus on that week's most important task and helped maintain organization while changing directions. During sprint planning events, referring to the backlog helped the team stay focused. In addition, daily stand-ups, such as the one we had in week seven, assisted our team in sharing ideas and concerns, as well as making sure we were all on the same page as far as how progress is being made and our projected thoughts for the product. Open communication made all team members feel comfortable sharing ideas and even failing or making mistakes during all our daily stand-ups and sprint planning events. Lastly, the Scrum method of timeboxing helped our team stay on schedule throughout the project. Our team sent out working deliverables at the end of week three and five. By timeboxing our project to only having about a week per deliverable, this helped ensure that the client was receiving frequent progress updates and that our team would not be drowned in unfinished work at the end of the sprint. This guided us in keeping a consistent, fast-paced velocity and delivering workable results to our client regularly.

Overall, a scrum-agile approach was the most effective method for the SNHU Travel development project. Throughout the project, however, there were some concerns about the use of Agile. For example, the learning process created an additional task for the team members to complete on top of the actual project work. Also, a lack of certain or extensive documentation could cause concern for confusion or uncertainty on what the details for the project are. Lastly, agile is such a highly flexible approach that it lacks the same amount of pre-planning as a more traditional approach. For that reason, one could be apprehensive that a scrum-agile process could hinder the progress of a project. However, despite these concerns, I believe agile was still the best approach for this project. Our project contained a lot of changes and transitions, and a waterfall approach would have inhibited our team in being able to effectively and totally address these changes. Since agile is flexible and embraces change, these transitions were warmly welcomed and even expected throughout the project. In addition, the direct communication offered through agile led our team to more closely work with the client and stakeholders, which led to better comprehension of what is expected of us and the program. The learning process of scrum-agile practices also led to encouraging and empowering our team members, while also growing their confidence, knowledge, and skill sets. Finally, the fast-paced nature of an agile project allowed our client to receive working deliverables in only a few short weeks. Although agile is not a one-size-fits-all type of method and different projects require different approaches, it is clear to see that the SNHU Travel development project benefitted immensely from the scrum-agile approach used.