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Extra Credit: Article Summary

Extreme Programming is a very popular agile method of softwear engineering taught at North Carolina University. It goes in depth about the process and timetable that goes into creating a big project with multiple people. It allows you to structure your dreams and reality to make a set project that can be delivered on time. As we learn the same concepts in our class currently I see how universal this method of testing is and the benefits that stem from it. Extreme Programming mostly bases off the agile principle in a typical softwear engineering class. These cycles of testing tend to focus on the months rather than bigger time schemes as that is harder to imagine. “The changing environment of the software industry necessitates the need to quickly respond to change and to produce software assets quickly, while continuing to be repeatable, predictable and highly concerned with quality.” (1).

The article *Adapting Extreme Programming For A Core Software Engineering Course* focuses mostly on XP methodology as in their findings it is most popular among students and it is widely used in big companies over the past decade. Agility has gained much notice as it is followed by many political leaders not only in America but in many booming countries. XP was created to model off the agile methods that can be more split up and taught to lower levels over a longer period of time. As the school and the researchers found, a semester worth of knowledge cannot be enough. We may pick up an understanding of the concepts but overall being able to

replicate it in our world we would definitely need a second semester. This article is really influential not only for us students but also institutions who directly follow these methods now.

In this specific article the students at North Carolina University have a 16 week semester that includes completing 4 Java products over the course of the time. These projects focus on teaching more of the traditional softwear development practices which were heavily based off the Collaborative Software Process SM (CSP SM) developed by Laurie Williams, one of the authors of this article. The CSP helped many students model their case diagrams to brainstorm their starting illustrations and test cases that come prior to the code. They state for each XP practice there are 3 steps which include the intended steps, unique classroom instruction, and comments from the students adapting these concepts. This allows action as well as repentance as the studies found most students liked the "Collective Code Ownership, Simple Design, Testing and Coding Standard. Among the least used were Metaphor and Refactoring." (3).

What I also found the most intriguing and needed is the Collective Code Ownership which allows any member of said group to have access to code to add or delete at any given time with no permission needed. In my opinion I think this gives the same importance to each member of the group and the confidence to collaborate when they feel they have knowledge to contribute. Some of the other ranked concepts include metaphors, simple design, refactoring, release planning, continuous integration, on site customer, and of course unit testing.

The most important thing I read in the article was "Test early and test often," as this was as well the philosophy they stood by at every step along the way. Testing of course is the last step of every programmer's work but I learned each programmer must pass 100 percent of their given test cases, but most students tend to write their test cases after their code which is not what the

XP states and causes more issues further down the line. Sometimes we want to create this vision but with no proper organization we tend to fall short of that goal, which is the main case for the software development plan.

When we fail to focus on the steps that have been researched meticulously and have been modeled after countless previous projects, we may lose confidence to keep going. This is why this course for students and anybody interested in the intended field is so important and every step matters. Again everything is also open ended as we advance as a society so will our technology and findings which is an important factor to keep in mind. Just as they found one semester isn't merely enough time to complete the implementation process of the softwear development agile methods. If students are put through this agile method that is commonly used they will gain experiences with the practices. These engineering practices are gaining more and more popularity daily as they teach us many important life experiences presented in a way to apply for a project. I'm very glad we have the ability to learn these methods for not only personal projects but to be able to learn and create as a community for all.

Citations:

A. Shukla and L. Williams, "Adapting Extreme Programming for a Core Software Engineering Course," *Proceedings of the 33rd Annual Frontiers in Education Conference*, 2003, pp. 13–18.