Peer Review of Academic Papers

Paul Magnuson
July 2016

The past two summers I've thoroughly enjoyed being an adjunct professor for Endicott College in their international masters in education program. In the program, students take four one-week long face to face courses in the summer. Each course lasts five days, eight hours daily. I've taught - and hope to continue teaching - a course called Strategies for Change in International Schools.

The major project in this weeklong course is a paper of approximately 15 pages on a change process that students could implement in their own school setting. Last summer, for example, a teacher at a school in the Mideast presented the rationale and necessary change process to introduce a string program to his school. This fall he contacted me to say that his proposal was indeed accepted and that the program was underway. Success!

That student, and his colleagues in class, followed a "peer and prof" editing process that I hadn't used before. But the possibility of individual kanban boards to make classwork visible gave me an idea for an agile peer review of their academic papers.

The paper had a number of required sections, including abstract, introduction, background, problem statement, literature review, change framework, conclusion, references, and appendices. Students shared their papers, as Google docs, with each other and me to facilitate the peer review.

Agile at work

The students each created a personal kanban (on an A3 piece of paper) with four columns:

- To write
- Writing
- Ready for peer review
- Under review
- Just reviewed

The students then made a sticky note for each section they had chosen for their paper. (The sections generally followed the teacher suggestions as described above, but with a bit of personalization allowed). Students placed their stickies in the "To write" column.

On Wednesday (day three of the five day class) the students began peer reviews. This was their process:

1. Students updated their personal kanban. It was easy to see at a glance that all students now had some sections of their paper in the "Ready for peer review" column. (1 minute)
2. We agreed on a time box of forty minutes. Students and the instructor, as peer reviewers, selected the first section they wanted to work on from any one of the students' kanban boards. To show which section they were working on, they wrote their initials directly on the sticky after moving it to Under Review.
3. When students finished their peer review of that particular section, they (a) moved the sticky to the Just Reviewed and chose a new section, either from the same student's kanban or a different student's kanban. (40 minutes; Steps 2 and 3 together)
4. Nearly all the sections had been reviewed when the forty minute time box expired. Using a thumbs up, thumbs down vote, students either decided to finish the remaining few sections or leave them for later. (1 minute)

What worked well

- The students were able to learn from each other by having to focus on how their peers were handling each required section and seeing the academic writing of their peers.
- Each individual review was relatively short, emphasizing short bursts of attention.
- There was a degree of collaborative competition (Evans, 2011): Students were motivated to be ready with sections of their paper in Ready to Review and to focus on their reviewing.
- At the same time, the peer review could start regardless of how much each individual student had already written, and all students could be productively involved during the entire 40 minutes.
- The instructor could choose to focus attention on students who most likely needed the most help.
- The instructor could choose to focus on sections of the paper, across students, which were presenting the most difficulties.

Beneficial side effects

- The students and instructors worked side by side.
- Students had a natural energy break between each short period of review because they had to stand up to move the finished post it to Just Reviewed and initial a new sticky for their next peer review.
- Students asked each other clarifying questions or made oral suggestions as they worked, creating a focused working group atmosphere.
- The stickies clearly showed (by the initials of the peer reviewer) which student had completed the peer review for that section.
- During additional peer reviews (the next day), the instructor was free to choose how best to assist students, for example: (a) by reviewing a section from a kanban, (b) by helping an individual student with a specific question, or by setting up the activity that logically followed. Key here is that the cognitive load of the instructor was reduced because the

students were all self-organized, all involved,and all productive. The instructor could effectively "take stock" of how best to shape the ongoing flow of the class.

Extensions

After the first review, students had some time in class and of course time that evening to review comments and continue writing.

The next morning, students updated their kanban boards using the same stickies. Of course, all stickies in the Just Reviewed column had the initials of one other person from the class. Students could now reposition the stickies from the Just Reviewed column, moving them either into the Writing or Ready for Peer Review column, according to their personal preference and where they stood in their writing process.

Students then decided on a time box for the second round of peer review and started like the previous day.

References

Evans, R. (1996). The Human Side of School Change: Reform, Resistance, and the Real-Life Problems of Innovation, Jossey-Wiley, San Francisco, CA.