

Collaborative Learning in Project Management; Experiences from a Master's degree program

Matti Karlsson

This article is about experimenting collaborative learning in master's degree program in International Project Management at TAMK, headed by docent Mauri Grönroos. Innovative learning methods were adapted from an inspiring TAMK course on Collaborative Learning Communities, organized as a part of TAMK 21st Century Educators program. The author of this paper, having a long professional career in ICT industry, but a short career as a teacher, took this as a unique opportunity to test collaborative learning concepts and tools in an MBA program called International Project Management (IPM). The experience for the teacher was really positive and feedback from the demanding and diverse group of students was much better than a newcomer in the teaching profession might expect.

Social constructivism -based learning theories

The foundations of modern learning were laid long before the education technology in use today. To give an idea of the theoretical framework, I refer to the learnings from the Collaborative Learning Communities course. The theory was nicely developed there starting from Vygotsky (1978) and ending to very recent concepts.

Vygotsky (1978) argued that knowledge is built in collaboration with peers who can support each other in the zone of proximal development. Scaffolding is another key concept, which refers to the support that the students need to reach their goals. Vygotsky emphasizes the social nature of knowledge construction instead of individual cognitive processes. Social construction of knowledge is core concept, which applied to the IPM courses.

Another important concept applied to IPM courses is communities of practice, which was introduced by Wenger (1998), meaning that the students learn by participating in the practices of social communities where they want to belong. Wenger (2012) defines a community of practice as:

“Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.”

“Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor: a tribe learning to survive, a band of artists seeking new forms of expression, a group of engineers working on similar problems, a clique of pupils defining their identity in the school, a network of surgeons exploring novel techniques, a gathering of first-time managers helping each other cope. “

Today's education technology is connected to social constructivist theory by Siemens (2005), who develops the concept into connectivism. It is about individuals being connected with each other and with technology in an online environment. Information is retrieved from various sources and knowledge is shared and constructed in collaboration. On IPM courses this concept was implemented by using blogs. The experience for the students may have been something similar that Siemens (2012) discusses on as follows:

“Teaching and learning in social and technical networks is difficult (at first) because many of the routines and activity markers from traditional courses and classrooms are not present. There is no centre, no one space where everything is held. Conversations are fragmented. The teacher's coherence or subject views aren't “duplicated” by students. Of course some basic knowledge elements exist, but the way we come to know them in networks is different from the process of coming to know them in classrooms.”

Active participation of students is needed, for which purpose the blog was working fine on the IPM courses. According to Littlejohn, Milligan & Margaryan (2011) active participation means to "consume, connect, create and contribute". In practice you are studying to understand (consuming content), connecting with others, creating new

content, and contributing these new resources back into the course for others to utilize (Littlejohn, Milligan & Margaryan 2013).

Putting theories into practice by using digital tools

The author of this article comes with over 30 years of professional work experience in the ICT (Information and Communication Technology) industry in specialist and management positions, but with very little teaching experience. Therefore, it was not a big pain to start using collaborative and narrative methods in teaching, at least compared with more experienced teachers, who are used to conventional methods.

The collaborative learning approach used on two project management courses in the IPM program can be described as the students' journey through an unknown landscape. Along the journey there are also "campfires", i.e. contact teaching and live sharing of the students' narratives. While out of the classroom, the students acquire knowledge by taking individual, different paths through the landscape, i.e. the "body of knowledge" of the course.

The students explore and learn different things according to their interest and goals, then they share the findings in the blog. The students learn meaningful things along their journey by participating in the collaborative learning community and making their learning visible in blog writing. By doing this they also build their professional identity.

International Project Management program

TAMK's *Master's degree program in International Project Management* is targeted at students with either business or engineering backgrounds. Engineering students participate only during the fall term, whereas the business students take both fall and spring terms. This makes design of the curriculum challenging, because the engineering students are supposed to know the basic principles and methods for project management in advance and to business students teaching is required. Our solution was to design the fall course with meaningful elements for both student groups, i.e. strategic project management, and the spring course addressed traditional and agile project management

methods. The fall course was named as “*Strategic Thinking in Project Management*” and the spring course was called “*Project Management Methods*”. These courses are described in the next paragraphs.

Strategic Thinking in Project Management -course introduces the fundamentals of effective project management and how to connect them to the corporate strategy. Projects are here considered as tools to enable strategic change and business transformation. When the student has passed this course he/she will know and understand the core concepts of strategic management, classical & contemporary tools for strategic management, strategy creation in traditional and lean organizations, how the strategic framework is connected to the project portfolio, and how to implement strategic change by using projects.

The *Project Management Methods* -course introduces traditional and agile methods of project management. It also provides the links between accounting, cash flow management and projects as enablers to reach the strategic goals. When the student has passed this course he/she will know and understand the core concepts of project management, the role of projects in different organizations, project management methods based on the waterfall model, project management methods based on agile thinking, project management processes and project life-cycle, basics of scope-, time-, cost-, quality-, human resource-, communications-, risk-, procurement-, stakeholder- and integration management in projects, and state-of-the-art ICT tools to support project management.

The “big narrative” for project management courses

Both project management courses used collaborative learning methods and contributed to the same “big narrative”, which aimed at making sense of project management by painting the big picture of strategic management. This narrative includes both traditional and modern approaches.

Starting with the strategy, we learned about Porter’s approach to strategic management, as well as developing agile strategies for environments of high uncertainty. We discussed

change by using Kotter's traditional 8-step approach, and more flexible approaches emerging from the organization itself. Last but not the least we learned how strategic change can be implemented by using projects and applying traditional and agile methods.

Conclusions

It was a very positive experience to teach these courses by using collaborative methods and implementing connectivist theories. The students' feedback was also very good. For example answering to the question "How much did the implementation of the course (assessment methods, learning methods, and materials) support your learning?" gave the responses below. Numerical evaluation on the scale 0-4 yielded an average score at the high end (3.6).

The students reflected the project management courses as follows:

- first learned theory and then applied it onto the case study
- I liked the articles and the possibility to apply the learned things into the case company
- It was just like real life, we can ask questions and discuss ideas freely, additionally additional information can then be obtained via the net (personal motivations are critical in this type of environment...if one is not interested they are in the
- the blog was really helpfull and trello is a platform usefull for working as team.
- course implementation was excellent!

There are a number of issues to improve for the next implementation, but this was an encouraging start and experimentation with the collaborative learning configuration. In the future there will be better technologies and learning solutions available, enabling even better learning outcome together with refined learning materials.

Learning happens as a collaborative effort between the students, it is not just knowledge transfer from the teacher!

References

Littlejohn, A., Milligan, C. & Margaryan, A. 2011. Collective learning in the workplace: Important knowledge sharing behaviours. *International Journal of Advanced Corporate Learning*, 4(4), 26–31.

Milligan, C., Littlejohn, A., & Margaryan, A. 2013. Patterns of Engagement in Connectivist MOOCs. *MERLOT Journal of Online Learning and Teaching*. Vol. 9, No. 2, June 2013, 149-159. http://jolt.merlot.org/vol9no2/milligan_0613.pdf

Siemens, G. 2004. A Learning Theory for a Digital Age. Retrieved August 2013. Available at <http://www.elearnspace.org/Articles/connectivism.htm>

Siemens, G. 2012. Connectivism. Available at <http://www.connectivism.ca/>

Wenger, E. 1998. *Communities of Practice Learning Meaning and Identity*. Cambridge University Press.

Wenger, E. 2012. *Communities of practice and social learning systems: the career of a concept*. <http://wenger-trayner.com/wp-content/uploads/2012/01/09-10-27-CoPs-and-systems-v2.0.pdf>

Vygotsky, L. S. 1978. *Mind in Society: The Development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Mr. Matti Karlsson, Lic.Sc.(Tech), is a lecturer of business, management and digitalization at Tampere University of Applied Sciences, Degree Programme in International Business. Mr. Karlsson comes with over 30 years of versatile professional work experience in the ICT industry, including management and specialist positions, mainly in research and development. His experience includes leading groups of specialists and managing projects in international environment.