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Creating a context for transformational learning through Microsoft Teams

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Introduction

In the spring of 2019 I took over a course previous called “Group and work competencies” which was held at the first semester business economics, HA bachelor. I took over the course with the aim of developing and adapting the content of the course to the competencies required for business economics students to enter into group work at Aalborg Universitet but also to put bigger emphasis on the competencies needed in their future employment. Thus, the course was reframed to focus more on “Project management and process competencies” with a special emphasis on how to apply digital tools in project management.

The lectures have been a part of a 15 ECTS project work and have been organized alongside lectures in problem based learning, philosophy of science, literature search and reference management. All lectures were intended to introduce students to the practices of being a student at Aalborg University and lay a foundation to build on in future course work and projects. In the new curriculum developed for the HA bachelor, the course is a part of a 5 ECTS course called “PBL, project management and philosophy of science” which are interlinked with and create a foundation for a written assignment/project in an introductory 15 ECTS course called “introduction to business studies” that covers central aspect of business and management. This project report introduces the pedagogical considerations of reframing the previous course, and the considerations of how it will be integrated in the new module structure and curriculum.

Problem statement

My aim during the university pedagogy course has been to develop

- Knowledge to identify the interlink between current lecturing and supervision practices
- Skills to reflect upon the challenges of balancing between lecturing and supervision and identify possible digital solutions to support the process
- Competencies to apply digital tools in supporting the interlink between traditional lectures and supervision

Based on my experiences with developing the course “Project management and process competencies” and the learning goals presented above, the project report aims towards answering the problem formulation:

How can Microsoft Teams be applied to support the development of project management skills and process competencies at the bachelor of business and management?

Contextualization and theoretical introduction

The preparation of the course was inspired by the development of skills necessary for the knowledge-based employees in modern organizations. As elaborated by Tony Bates (2015) students must develop

- Communications skills
- The ability to learn independently
- Ethics and responsibility
- Teamwork and flexibility
- Thinking skills including critical thinking, problem-solving, creativity, originality, strategizing
- Digital skills
- Knowledge management

My aim in developing the course “Project management and process competencies” was to address as many of the critical skills needed for knowledge-based employees in modern organizations to provide our first year students with a holistic introduction including hands-on skills development. Regarding especially the digital aspect of skills development, I decided to introduce a digital project management tool for the students. In

collaboration with CDUL (Center for Digital Understøttet Læring), I explored various options and in the end opted to include Microsoft Teams as a digital tool for developing project management competencies. While the experience is gathered based on the first completion of the course in the fall of 2019, the analysis will be a mix of retrospective learning and reflexive discussion of the future development of the course for the new curriculum which is implemented in the fall of 2020.

During the COVID-19 lockdown the application of Microsoft Teams (MS Teams) has surged. While this has been valuable in terms of getting faculty and students to familiarize themselves with the platform, we are still far from realizing the great learning potential that can be realized by utilizing MS Teams as a didactically well-structured learning space.

The aim of the 5 ECTS course “PBL, project management and philosophy of science” is quite formative to provide the students with fundamental knowledge about developing a problem statement and creating skills in problem-based learning (Study programme, Bachelor Economics and Business Administration 2020). For this reason, the course is essentially low on declarative knowledge (knowledge about things) (Biggs & Tang 2011) or *content* knowledge (Bates 2015). While introducing the students to the underlying pedagogical foundation of PBL and various project management theories is a part of the course, the central part is to create a base line from which students can develop their *functioning knowledge* (Biggs & Tang 2011). The development of functioning knowledge requires putting knowledge to work for which reason we must regard functioning knowledge as knowledge that develops and magnifies through use.

The course enables the students to absorb the declarative knowledge and existing threshold concepts of i.e. microeconomics and transform their knowledge through *reception* learning (Ausubel 1968) by enabling the students to internalize pre-existing knowledge. A part of this learning process must be supported by the supervisor. For this reason, the following analysis also touches upon how we as supervisors can develop our supervision practices through MS Teams and thereby create the potential for additional *skill* development by our students. In order to analyze the potentials and implications of using MS Teams to develop project management skills and process competencies, the following analysis is based on the SOLO taxonomy and the TPACK framework as described in the following.

The SOLO taxonomy (Structure of the Observed Learning Outcome) classifies learning outcomes according to the structural quality (Biggs & Tang 2011). This taxonomy will enable a discussion of how project management and process competencies provide a foundation for increasing the structural complexity of learning throughout the bachelor programme. For this reason, the first part of the analysis mainly covers the interlink of the course in Project management and process competencies alongside the project work in the new curriculum.

The Technological Pedagogical Content Knowledge framework (TPACK) highlights the complex roles and interplay between content, pedagogy and technology that constitute learning environments (Mishra & Koehler 2006). This framework will be included to enable a discussion of the interlink between technology and didactical considerations for developing skills and competencies in project management and process competencies by applying MS Teams.

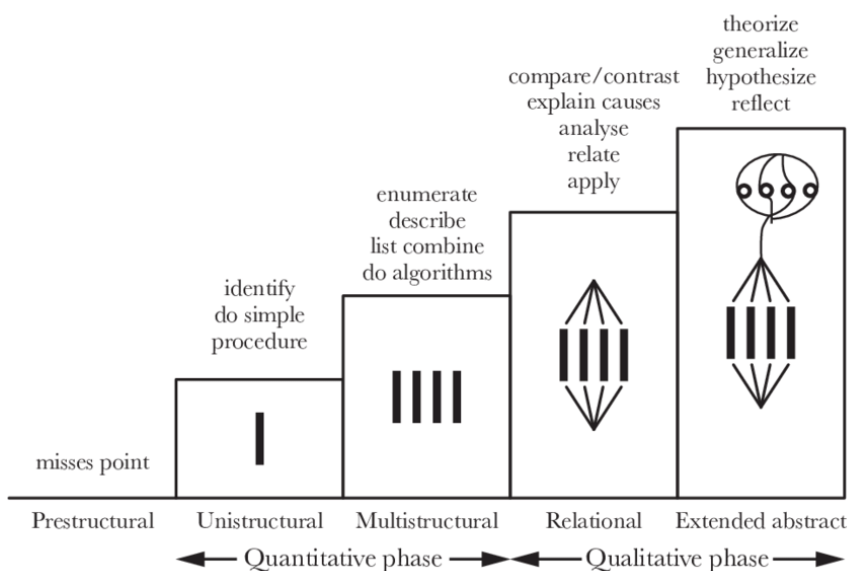
Data analysis

As emphasized by Savin-Baden & Major (2004) students rarely enter the higher education context with well-developed team skills. For this reason, the first year of studies is a mix of gaining the initial *content* knowledge of *threshold concepts* to be understood in a business economics perspective and alongside this they must develop *interpersonal skills of active learning, team building and management, inquiry, conflict management, presentation etc.* (Bosworth 1994). Although these skills are central, I have experienced how they are disregarded by students, who focus more intently on the “tangible” content knowledge. This reflects how

students are inclined towards more quantitative learning, found in the lower steps of the SOLO taxonomy ladder confer figure 1.

On the lower learning steps, it is sufficient for the students to have surface knowledge about e.g. various approaches to project management. But by creating a link between the courses “PBL, project management and philosophy of science” and the project work that is a part of “introduction to business studies”, the students will have to critically consider how they construct their team work and how they communicate and solve problems in a specific context. By bridging the two courses, the students become responsible for their own learning process as they through project work and reflection creates a mix between the content knowledge of “introduction to business studies” and the practices of problem-based learning and project management to create functioning knowledge on both individual and group learning, communication, team work and critical thinking.

Figure 1: The SOLO taxonomy (Biggs 2003, p. 48)



The aim of enabling them to climb the ladder of learning describes by the SOLO taxonomy is supported through the assessment of the “PBL, project management and philosophy of science” course which will be accomplished through dialogue seminars. Thus, the seminar and a pass/non-pass assessment will become a part of the learning process, which is essential for the students’ perception of the problem-based learning context (Savin-Baden & Major 2004).

The course and its interlink with the more content-knowledge based “introduction to business studies” will enable the development of *transversal skills*, that are not tied to a specific subject or field in business and management but is applicable across various academic context and can thus increase the job mobility of students (Bates 2015). To further advance the functioning knowledge and transversal skills to be developed throughout this course, the development of digital skills is highlighted. As previously described, I decided to include the project management platform MS Teams to add a dimension of real-world project management to the course, as MS Teams is applied in many organizations both globally and locally. As argued by Savin-Baden & Major (2004) adding this dimension will motivate students further as it resembles real-world situations which are easily transferable to necessary skills for future knowledge employees. In addition, it

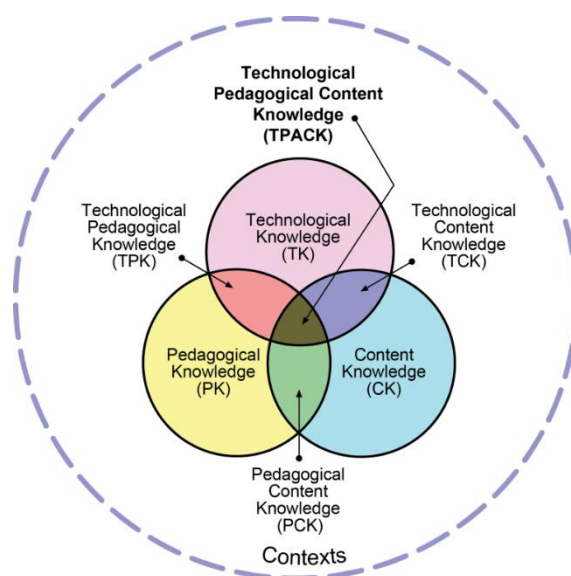
enables a focus on central transversal skills such as; communication skills, ethics and responsibility, teamwork and flexibility and of course digital skills (Bates 2015). Each of these aspects will be elaborated in the following analysis in the TPACK framework.

TPACK

The TPACK framework is inspired by Shulmans (1986) concept of pedagogical content knowledge. Shulman (1986) focused on the interplay between pedagogy and content as the sum of the most important themes in a subject and the most widespread ways of teaching the subject. Building on this, Mishra & Koehler (2006) argues that “... *thoughtful pedagogical uses of technology require the development of a complex situated form of knowledge*”. Knowledge of technology is often regarded as separate from knowledge of pedagogy and content (Mishra & Koehler 2006). However, technology has the potential to both constrain and elevate the content and pedagogy of subjects. With TPACK Mishra and Koehler (2006) emphasize “*the connections, interactions, affordances, and constrains between and among content, pedagogy, and technology*”.

The entry of technology affects both the content and the pedagogy of many subjects especially in business and management. As business economists, we must teach our students technological literacy and the potentials and implications for industries, organizations and employees. In the following, I will elaborate the interlink between Technological Pedagogical Content Knowledge in the course “Project management and process competencies” by zooming in on the three overlaps illustrated in figure 2 and how they address the transversal skill development suggested in figure 1.

Figure 2: The TPACK framework ¹



Pedagogical content knowledge is the approach taken to teach specific content. Previous students evaluations showed, that students had a difficult time acknowledging the value added from the course. For this reason, the reframing was centered to explicating the value to be gained from the course by critically examining the existing link of pedagogical content knowledge. To specify the focus on work competencies, the concept of project management was included. As many companies, regardless of size, industry, location use digital tools to facilitate project management, the inclusion of new technological aspects in the course was pivotal.

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Thus, the development of digital skills became the center of attention in balancing the pedagogical content knowledge.

Technological content knowledge touches upon the reciprocal relation between technology and content. As previously addressed, the content of the course was an introduction to the dynamics of group work and supervision, meeting facilitation and project management. This provided an ideal setting for testing the application of digital tools for project management thus creating a strong connection between the content knowledge and technological knowledge.

Microsoft Teams enables the students to work in a digital platform that is very close to the real world practice of many small and medium sized companies. This enabled the students to develop functioning knowledge of technologically organized team work and their independent learning process.

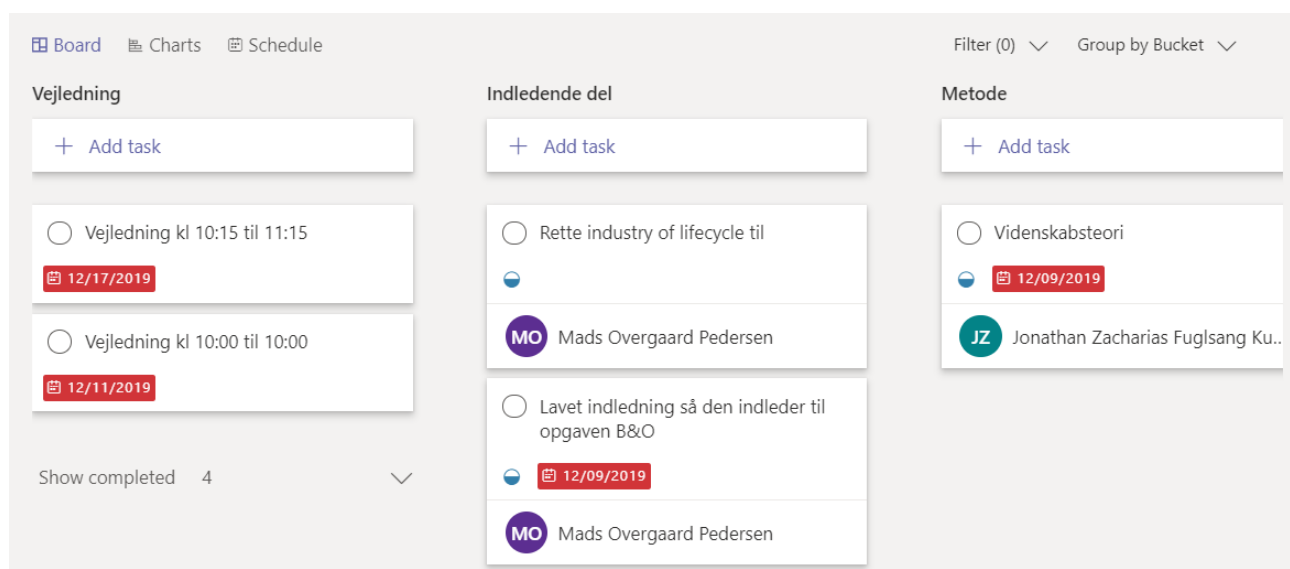
Planner as a plug-in function

Specifically, the students were to apply the MS Teams plug-in tool “Planner” to track their project task, and use the plug-in tool for visualizing how they divided tasks, set and complied with deadlines etc.

Based on the course evaluations it was evident, that some student found value in the use of a plug-in tool for managing specific tasks; *“The planner function in Microsoft Teams has been very useful as it has created an overview of the project and when the different supervisor meetings were held”*.

However, part of the feedback has also been that planner is less useful due to the high number of meetings between group members when they are physically located at campus. *“I have difficulty in understanding the idea in Planner. Perhaps because of the fact that we during project work are so close and have many group meetings so it becomes unnecessary”*.

Figure 3: screen shot of planner-function in MS Teams from voluntary group



As evident in the screen shot, figure 3, the “planner” plugin tool enabled the students to divide their project tasks, assign leads and determine deadlines. In addition, this function created a group overview of how

organized each tasks which enabled reflexive dialogue between group member as to how they divided responsibility and thus their individual strengths and weaknesses in team work processes.

Based on the course feedback, the choice of plugin tool for organizing the group work will be voluntary for the students. To ensure that they are aware of the various potentials in various tools, screencasts will be produced to introduce various tools and their functions.

Technological pedagogical knowledge concerns the various technologies that can be applied for teaching and how technology can change the teaching process. By choosing Microsoft Teams as a platform for the students to use, new potentials and challenges were created for the learning environment. In the first semester of testing the application of MS Teams, it was decided that each supervisor would follow the MS Teams of their groups but that contact to the supervisor was to remain as email contact. This was done to accommodate a minor skepticism for the new platform in the supervisor team.

However, evaluations from the students clearly indicated that the lack of engagement with the supervisor throughout the platform undermined the applicability MS Teams. *“It (MS Teams) has some good functions, so would like to use it with supervisor”, “If supervisor is willing to use Teams I think it would be a really good tool”*. Based on these experiences, communication and file sharing with supervisor will be mandatory through MS Teams as they can beyond functioning as gatekeepers can provide legitimacy for the applicability of the platform. In addition, it will enhance the communicative skills of the students, as they must be prepared to communicate through a new channel and be clear in both communication and data structure.

Technological Pedagogical Content Knowledge

When taken together, the interlink of technology, pedagogy and content creates a new form of knowledge that is reflected through teaching with technology by taking into account the specific content to be disseminated through technology and the pedagogical levers that can support both content and technology. In addition, this must be considered in relation to the contextual setting in both the curriculum and the individual development of each student.

As defined by Mishra and Koehler (2006): *“TPCK represents a class of knowledge that is central to teachers’ work with technology. This knowledge would not typically be held by technologically proficient subject matter experts, or by technologists who know little of the subject or of pedagogy, or by teachers who know little of that subject or about technology.”*

As adressed in the three overlaps above, the course on “Project Management and Process Competencies” will be managed through a mix of lectures, podcast exercises and introductory screen casts to MS Teams. By bridging these activities to the use of MS Teams in project work during the course “Introduction to business studies” it will enable the creation of technological pedagogical content knowledge both for teachers, students and supervisors. In addition, it will enable the students’ development of transversal thinking skills including critical thinking, problem-solving, communication and team work as they: engage with each other and the supervisor through a digital platform; must correspond respectfully and intelligibly; organize activities and manage both internal and external deadlines.

The added value from working with MS Teams as a digital platform for team work is making students aware of ethics and responsibility when conducting research. In the evaluation, many students argued that *“There are smarter alternativt. Google drive, messenger etc. Perhaps it is a matter of adaption”*. This provides a basis for teaching students the framework conditions of file sharing, GDPR and data security; transversal knowledge and skills that must be highlighted but is often beyond the scope of academic specializations and is, therefore, not addressed explicitly.

As simply stated in the student evaluations; *"There are many advantages and disadvantages with the programme (MS Teams). Other programs that we know in advance are simply easier accessible and there is a greater knowledge of what we have always used rather than something new. But it can certainly worth your while to learn how to use Microsoft Teams"*.

Discussion and conclusion

During supervision, there is a potential to challenge the students' ability to conduct *deep learning* (Marton & Säljö 1976; Entwistle 1981) and support their interest in engaging with specific phenomena, relate theory to practice examples, question the notion of the world which they are exploring and build bridge between existing knowledge and new observations.

This task is of special relevance on the first semester, where the students are engaging with new learning approaches, methods and cultures. For this reason, the first semesters specifically foster the potential of creating a space for *transformational learning*, as the students are expected to take control of, take action during and reflect upon their learning process (Savin-Baden & Major 2004). If we are to create a space for transformative learning, the student must regard the university as a safe, open and trusting environment (Savin-Baden & Major 2004).

When we meet student in their first year of university studies, they are continuously constructing their identity as learners both consciously and unconsciously. The identity of a learning is affected both by how we are regarded by others as a learner and how they perceive themselves as learners. In addition, learning occurs in a context that affects the learning process. The learning context is constituted by the students perception of teaching methods, assessment mechanisms and the design of the curriculum (Savin-Baden & Major 2004). Thus, the learning context is perceived individually by each student and affected by a multiplicity of parameters that are not all controllable for the teacher/lecturer. While we as lecturers can fall into the trap of regarding learning contexts as static – teaching the same course, with the same slides, in the same room – it is far from so. The learning context is constituted both by the *content* knowledge, which we try to convey in an interesting, appealing way, but especially by the room that must be created to develop *skills*. The learning context for developing skills must be adjusted to which skills the students are to acquire or develop throughout the course as this is where they move beyond the *content* knowledge to actively apply the knowledge and create skills and competencies.

The aim of the course in developing project management skills and process competencies taps into this challenge by introducing MS Teams as a dynamic learning space both for team work and supervision. While as a digital platform, it can mainly support the lower steps of the SOLO taxonomy (Biggs 2003), it provides the students with a context for developing transversal skills (Bates 2015) and a foundation for communication and organizing more complex problem-based projects. As evident throughout student evaluations and own reflections, this, however, requires a focus on the interlink between technology, pedagogy and content. Based on the experiences gathered during the COVID-19 lock down, this interlink is challenging and must be well considered when planning and conducting courses.

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