

Peer reviewed research seminars-in-the-making as a feedback method in teaching

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Abstract: Disciplines and subject areas like business economics and administration can be subjected to theoretical as well as empirical research which can be integrated into teaching courses in higher education. In this case, the well-known written research seminar, as typically applied in higher education, was developed and integrated into teaching to function as a peer review approach to formative feedback. Twice during one semester, students own research seminars in progress (PRS) went through a process of written and oral peer review prior to the final seminar where peer reviewed seminars functioned as the final exam. The peer dialogue enabled students to learn from constructs of advanced issues. Their learning was based on their interaction in 'learning to research' contexts where they applied theory to empirical studies of management concepts in practice.

Note: This conference contribution, describes a feedback form developed and tried out in cooperation with a class of students studying B.Sc. in Economics and Business Administration (HA general) at campus Kolding at University of Southern Denmark during their 4th semester, spring 2013. The conference contribution is based on a personal experience from teaching the course and a conference held in the autumn 2013 at University of Southern Denmark, where a poster on the feedback form was presented and comments received. I hereby wish to thank 4th semester students in Economics and Business Administration, spring 2013 Kolding, SDU for their great effort during one semester and collaboration.

Complex learning demands a suitable feedback form

Contemporary university education demands a curriculum and learning which includes research and writing academic theses. Students normally have to write an academic thesis on subjects from the module curriculum in question to graduate. The research seminar is often used to enable academic learning of subject areas by researching, writing and talking about the seminar amongst peers. In essence, seminars are research activities done by peers, for peers with dialogic peer review. Research-based teaching can thus draw on the traditional seminar which offers the opportunity to combine subject areas with research activities and peer feedback. Combined as a method of learning and simultaneous peer feedback in peer dialogue it has the potential to enhance student learning about complex learning objectives related to research and writing. Complex learning, such as learning how to be research-based within an academic subject context of theory and empirical findings, demands a method and feedback approach which allows advanced subjects to be transformed into understandable constructs while being linked to paradigmatic forms of knowledge. A reasoned dialogue among peers is well suited for this purpose because it provides an appropriate feedback approach.

Students might ideally become more confident and capable producers of knowledge in academia as well as practice if they master the research seminar and its peer-activities related to their area of study and practice. Enhanced by a mindset of intellectual curiosity and critical approaches students should ideally end up in a better position to develop their own lifelong learning of more advanced subjects and areas of practice by the means of research-based learning from doing their research-seminars and their peer reviews. However this kind of learning is complex. Teaching for such learning goals should be better served by a feedback method which can address complex learning goals.

In this case students followed a course in advanced business economics and business administration with subjects related to modern concepts of organization and management seen from different theoretical perspectives. The learning objectives are to make students competent in acting reflectively and critically upon modern management concepts while simultaneously being trained in research and thesis writing. The learning objectives become complex and dependent on the research and practice context in question for the course. Such learning objectives are not easily disassembled into easy understandable single elements for learning. Instead, their complex and holistic nature is better served by holistic learning activities. Therefore, in this case, methods of research and academic writing were applied to develop a research-based context of theory and practices. In this context students could interact and experiment to experience and reflect while comprehending the complexity but also retaining a link to concrete experiences from own research.

Design of an integrated feedback method

Based on experience and student evaluations from previous years, the integration of peer review as a feedback method into the teaching was obvious. When students performed the peer review of written research seminars as part of their examination, they also informed the instructor, that the peer review form of examination actually worked very well to support learning about the complex objectives. The dialogue between peers doing reviews in writing as well as orally clearly demonstrated how meaning concerning the abstract paradigmatic knowledge related to researching a subject got constructed for the students during the examination. According to students following the course, peer-reviewed research seminars in progress (PRS) could be introduced as a feedback method earlier in the course, which would enable students to act upon the new meaning formed by the peer review in dialogue.

The course is mandatory and students work with learning activities designed to teach the subject of advanced business economics and management concepts. In parallel, groups consisting of 3 to 5 students had to formulate a research project on their own concerning issues inside both theory and practices related to management technologies and concepts and write a report on their research resembling a mini bachelor thesis; approx. 30 normal pages. Teaching was planned as blended lecturing, student activities and exercises during class and between classes to keep the groups

actively engaged in formulating and writing a research seminar within and beyond the course literature. They were pushed to opt out into the realm of real management practices to get empirical data by using qualitative methods. Simultaneously, the students were also taught how to find literature sources, how to write academically and how to design a study. Students working with the integrated peer review feedback form, needed to be able to identify and discuss theoretically interpreted and empirically led research questions of relevance to the subject area in an investigative manner in an academic writing style and demonstrate learning along the learning objectives listed beneath:

- (1) Competence to perform a relevant literature study in an investigative manner and use the literature in academic writing in a seminar
- (2) Competence to do a qualitative study of relevance for the subject area in organizations
- (3) Being able to use academic writing in full and convey research results and communicate about research results
- (4) Ability to exercise constructive critique, evaluate and take a stand against research and claims from research and investigations in general. This includes the ability to give written and oral peer review of written research seminars
- (5) Ability to manage and implement a scientific, investigative, collegial conversation about research and evaluation of all these objectives

During the course, groups of students (in the following referred to as authors) were required to articulate a relevant and well confined empirical research question suitable for qualitative studies in organizations. Authors received individual supervision on their research endeavor by making appointments with the instructor resulting in several meetings at his office. Supervisions were at least 30 minutes long except for more spontaneous short meetings, when authors had to get an urgent matter solved by sticking their head inside the office door to see if the supervisor was available for a quick question.

The empirical realms of management concepts were secured early during the course. During one class session, experiments was done in collaboration with a management consultancy firm to solve a complex but actionable case concerning operations and business processes of a large manufacturing company. Besides experiencing different approaches to the problem by consultants, students and the applied theory of the course, groups of students also got a chance to make some initial contact with local organisations for their own research. By organizing the teaching activities around issues experienced by authors, students learned the course subject in a research-based context of theoretical and empirical issues aiming at studying practice. In class, students could experience a need to understand the subject, in terms of both theory and the practical reality of organizational practice. This was demanding but aimed to equip students with a rich and complex experience from working with modern management concepts.

The authors were in need of guidance when faced with acting inside the ambiguity of the theory and student research context. As an integrated part of the course, supervision and peer review (PRS) acted to substantially enhance authors' understanding of the meaning of the complex learning goals. Supervision was levered and vice versa by those PRS sessions. In the process of performing the activities in the PRS procedure, author groups acted to construct meaning by peer reviewing the performance and progress of the particular seminar in question as witnessed during the PRS sessions. The supervisor (instructor), acting as final evaluator of both peer review performance and progress in writing and research during PRS, received important formative feedback from the PRS sessions which could be fed forward into the teaching sessions that followed. The overall set up and sequences in the integrated formative feedback of PRS as it was developed and performed in cooperation with the class in spring 2013, is depicted in

Figure 1.

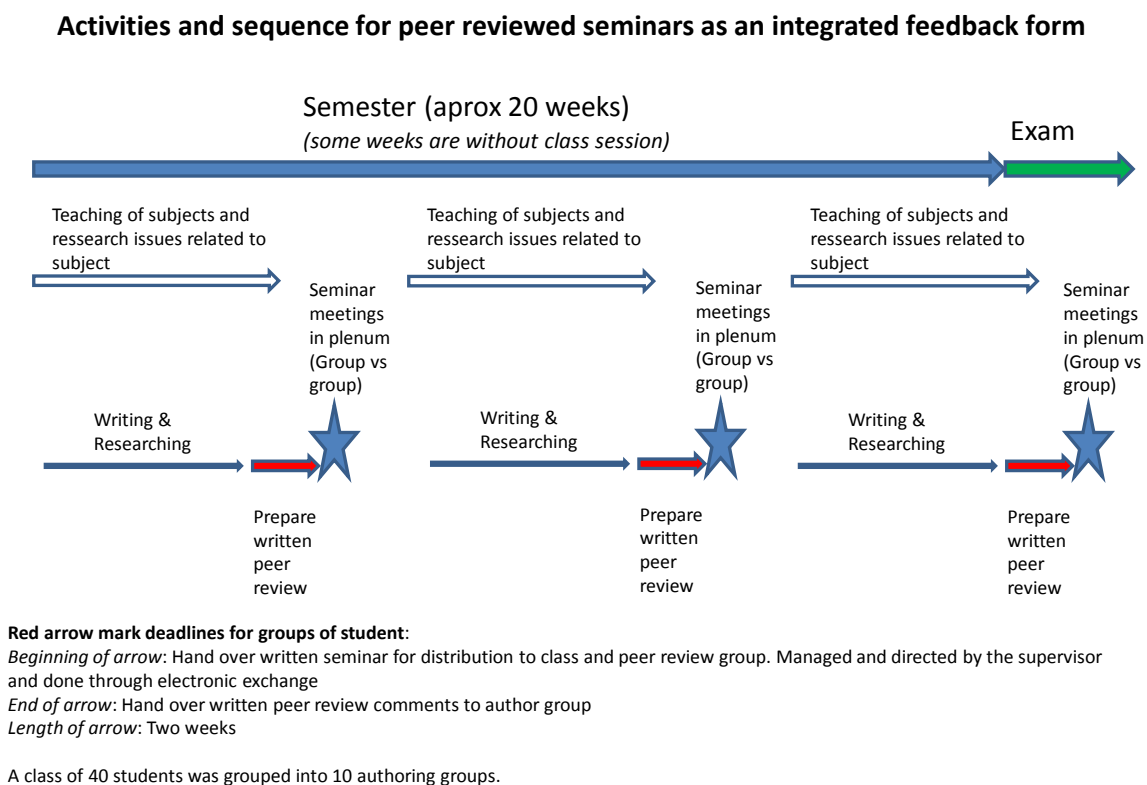


Figure 1 Organization of teaching to integrate the feedback form in the teaching process

How the Feedback Method Worked

Ideal feedback would translate student experiences from their tentative but repeated interaction with the research-based context, made possible in the course, into understandable constructs to be

compared with an understanding of progress with the complex learning objectives. In the end the research-based context, made available through the course, must primarily be understood as paradigmatic and theoretical knowledge, not as pure experience. In this case the feedback method was developed on the premise that if the student can relate her concrete experiences of doing her own research by understanding her experiences inside an academic research agenda, then learning of the complex objectives can take place. Facilitating this translation of student experiences, the feedback method actually worked as part of the course's pedagogy and became an integrated part of the research-based theory and practice context for students to learn from. When peer authors articulated problematic issues related to PRS, both in writing and discussions, the issues had already been interpreted by students in relation to their understanding of the paradigmatic knowledge. This informed the instructor as well as the class. Thus PRS feedback enabled both the instructor's and the students' understanding of the complex learning. The instructor was further informed about problematic issues in this research-based context which warranted being treated in depth in later class sessions. During PRS, issues of the following type were identified in peer reviews and the instructor's regular evaluations of the PRS:

- Missing or good researchable issues
- Impossible or good research questions
- Missing or excellent literature study
- Concrete meaning of applied theoretical perspectives in the subject area (data and analysis actually done and linked according to theoretical perspectives)
- How to write in the correct academic style
- How knowledge of business economics and administration as observed in practice can be understood in theory
- How to take a scientific or theoretical stand versus not working consciously with theory
- How to take a theoretical academic stand based on your own data and choice of theories
- How to act as an academic

How the integrated feedback was accomplished in order to enhance learning

Integrating PRS as a method in the learning process together with group based organisation of teaching seems paramount in this case in order to practically harvest the enhanced learning made possible by the whole setup. The research-based theory-and practice-context formed by composing the course content for research while relating it to the pedagogical methods and the purpose of the course. This research-based context for learning was further constituted by integrating PRS as a formative feedback method.

In general, authors who were in groups were able to articulate relatively advanced research agendas for their seminars compared to individual authors. Groups were also able to give and receive advanced peer review while maintaining integrity of the individual and the groups in mutual. In this case, the social element seemed to be a lever for advanced feedback and learning. It's not possible

though, to deduce or induce from this experience of PRS, if the social becomes a lever of advanced learning due to: using PRS as a feedback method, the group organization of the class, which was a new approach adopted that year, or any combination of these factors. However, when students from the class, were recently asked about the course and the special feedback method they highlight *the value of being allowed to make an independent study [groups managed and decided their own research]* during the course. One might speculate that this experience has been a good experience with valuable learning for more students when integrity was secured by the group. While the research undertaken could also be of a higher quality within a group and the feedback method provided the class with understandable constructs and formative feedback of common interest. During the course, some students expressed their sudden recognition, articulated and framed like this: *“Now I really begin to see.. [issues previously conceived as very complex], this course is teaching me more of how to work with theory and research and how practice is related, than I have learned so far during my study [4. semester]”*¹ Student responses in course evaluation questionnaires, completed after the exam, support the conclusion that PRS as a feedback method actually has contributed to enhancing the learning of complex academic learning objectives, but it cannot be identified as an isolated lever.

The PRS feedback method can be demanding for time schedules and physical localities, which of course is a relative matter. In this case, PRS required 40 minutes times 10 groups, times two feedbacks during one semester course. This could seem to be demanding on the students too. In this case, students were not obliged to meet in class. Not even during the scheduled PRS. Anyway, as an indicator of the value of PRS, all authors was present during PRS session number two except for one group who also skipped the first PRS session. This is remarkable as the meeting was held in great enthusiasm on a Friday right after a national holiday and right before the coming weekend. With regard to resource constraints, complex learning objectives and feedback on complex issues might be better served by organizing class and activities into groups. Not only can supervision and teaching resources be used more efficiently, but the research questions and thus the quality of the seminars can reach a higher level. This makes groups more appropriate for developing students as peer reviewers to a level where advanced learning is made possible for a majority of students. This is true for both the author group, the group giving written and oral review and the class as a whole². From teacher-observations it also became clear that the first sequence of peer review feedback had a profound impact on the students, and their general understanding, of the serious issues confronting them to write a full written research seminar. Therefore, it makes good sense to work with two PRS

¹ Experienced as participant observer in the role of teaching the course.

² Deduced from comparative observation of processes, experienced in the role of teaching the course for two years. The year before, the year of developing, this feedback form, the class of approximate 40 students was not organized into groups but curriculum and exam was in substance almost identical. As a teacher-participant-observer of students learning, it became evident to me, that the group serves an important function in the learning process in this substantive setting of a research context of theory and practice.

feedbacks during one course, in one semester. In this case, the supervision process acted on its own as an important supplement to the PRS feedback. Neither would have worked without the other.