

## Student Autonomy and Peer Learning – An Example

Stefan Hellmer\*

*Centre för Business Studies, Kristianstad University*

This short article presents and describes a transition from “traditional” teaching with knowledge transferred from the teacher to the students in a classroom to a peer-to-peer situation in which the students, with different support, learn from each other. The process and results are encouraging and the peer-to-peer approach will be used and developed further in economics courses.

*Keywords:* student autonomy; peer-to-peer learning

### INTRODUCTION

I was once approached by a student who complained: “I have to protest against the fact that the upcoming exam is an open book exam”. When asked to explain he said “because then I have to buy the book”. My immediate reaction is of no interest, but the deeper reflection involved questions like: are the students not using the course literature at all? Are the students expecting the teacher to provide a “short version” resulting in lecture notes to be used as the main literature? Am I the only one in the classroom that has read the literature and, can the situation, described by Powel (1988) be true: “A consequence of this [lecturing] is that students become dependent upon their teachers to such an extent that they cannot envisage learning very much without them”? My fear in this was that the teacher seems to be increasingly used as a substitute to the literature instead of as a complement; we are thereby probably losing important issues like deep learning and skills like analytical and critical thinking and communication of knowledge. Can we the teachers step back from our role as the major transmitter of knowledge? Is it possible to reduce the (perceived) importance of the teacher? Is it possible to replace teacher activity with student activity and still reach the goals in the course syllabus? Is there such a thing as a self-learning method or peer-to-peer learning method suitable for a subject like economics, a subject in which a theoretical base (rather than a practical base) is needed in order to create analytical and critical thinking (rather than solving a practical problem)? And, most importantly, is there any method with a different focus that can solve some of these problems partly or fully?

### PURPOSE

Mainly inspired by Boud (1988) on student autonomy and by contributions in Boud, Cohen & Sampson (2001) on peer-to-peer learning, it was decided to make a radical change in one course in economics, introductory microeconomics. Was it possible to replace all “traditional” lecturing time with student activity based time in the classroom trying to inspire the students to “teach each other” under the supervision and help of a teacher?

One major aim with the “experiment” was to at least try to “produce” students who show an increasing capability of functioning independently of the teachers. The wish was to set up an environment in which the students could learn as much, or even more, from their peers as from

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\* Författarkontakt: Stefan.Hellmer@hkr.se

their teachers by focusing less on the teaching part and more on the learning part. This meant that the teachers had to step outside their comfort zones as teaching is probably less demanding and familiar than facilitating learning via a higher level of student activity. It is certainly more challenging for both the teachers and students.

Peer learning involves the sharing of knowledge and experience between different participants. This means moving from an “ordinary” independent learning to interdependent learning where students learn from explaining to each other and participate in activities in which they learn from their peers. Students in economics (and probably in other subjects) often use the phrase “what’s the real world use of this to me” especially when they don’t understand a concept or application. By letting the students interact with peers in smaller groups, by communicating and discussing new knowledge, explaining and perhaps putting new knowledge in a context more suitable for each student’s point of reference and earlier experience, we hoped to increase the students’ ability to, for example, work with others, to make critical reflections and to communicate knowledge. The meaning of peer learning is partly to get the student take responsibility for its own as well as other students’ learning. One important part is to communicate and argue for new knowledge in the light of one’s own previous knowledge and other people’s knowledge that are found in scholarly references.

#### IMPLEMENTATION IN INTRODUCTORY MICROECONOMICS

Around 120 students were registered to take the course. All students were divided into 4 classes, of which one class containing 31 students was assigned to join the “new” form that we called “student active form of teaching”. The same teacher taught all students during the period. The course was carried out during a period of 4 weeks fulltime study, and ended with an individual written exam (the exact same exam was given to all students). The students in the special class were scheduled two hours every weekday with each week following the same schedule and built upon five concepts; reading instructions, discussions and problem solving, quizzes, workshops and seminars. The reading instructions for the upcoming day were handed out every Monday and Tuesday. The purpose with these instructions was to guide the students through the assigned chapters or passages in the course literature. The instructions referred to different passages in the literature that the teacher believed to be especially difficult or important, and the students were asked to pay attention to these sections. The instructions were written in such a way that they made no sense without the literature, i.e. could not be used as course literature. These instructions were limited to a maximum of two pages.

Every Tuesday and Wednesday the students sat in groups of four solving and discussing assigned problems from the book or from a special handout. It was assumed that each student had read the course literature according to the instructions. A teacher was present in order to listen to the discussions and to perhaps “interfere” and ask additional questions. The purpose was to use the peers as a resource for answering questions and explaining different problems or concepts.

Each Thursday the students were given an individual quiz with ten multiple choice questions covering the text of the week. For each quiz (four in total) that was passed (60 % correct answers) the students could skip one question on the final exam. Since nothing in the course was mandatory, the right to skip one question per passed quiz acted as an incentive to be present during the activities each week. During the second hour of the Thursday session each group was given a larger task to solve (workshop) to be presented the next day.

During the last day of the week each group was given 15 minutes to present their respective task from the day before. These tasks were usually to describe and to teach general concepts within microeconomic theory such as point elasticities, to explain income and substitution effect or to do a complete description of perfect competition in the short and long run. This schedule was repeated for four weeks.

#### THE TEACHER'S OBSERVATION

The students were very active during Tuesdays and Wednesdays, the two most important days of the week. In general, the students seemed to be well prepared and appreciated the reading instructions. The students had surprisingly few questions to their teacher and turned to each other with success.

The quizzes went well. Between 70 % and 90 % passed every single quiz. The groups were rearranged after two quizzes to become more "equalized" both with respect to quiz result and discussions. The presentation on Fridays was a success and was taken seriously by the students with the fellow students taking notes as if it was an ordinary lecture. The students claimed that they learned the most from preparing and presenting but that also listening to other presentations was fruitful.

It was emphasized by the teacher that if they didn't prepare by reading the text before each Tuesday or Wednesday they might as well stay at home. Almost all students attended all classes and none of them ever expressed any wish to replace any day with an ordinary lecture. I often heard the students saying "I have never read this much during a course", "Hey I actually understand this stuff" and "it is perfect to be able to (and allowed to) discuss and talk instead of just listening during a lecture". Also, the quizzes were good in order to make the students read the literature continuously and to "check" the knowledge on the way.

#### COURSE EVALUATION

After the course, but before the final exam, we had a anonymous written course evaluation and all 31 students participated. The students were given a number of statements and were asked if they agreed or didn't agree to these statements on a five degree scale. Each area in the evaluation appeared twice in different "versions", one positive (I agree) and one negative (I oppose).

On the question if the course "has provided deeper learning and not just memorization for the final exam" 26 students agreed. After adding "... thanks to the course design", 24 students agreed. On the reversed version of the question, "I didn't appreciate this kind of course design at all", 8 agreed, 15 opposed and 8 were unsure. On the statement "The teacher seemed more interested in how much you remembered and not on how much you learned", 28 students opposed. 21 students agreed to the question if they "got continuous feedback during the course". The trend through the evaluation was the same, no strong (or even weak) general opposition against the outline of the course.

#### RESULTS AND REFLECTIONS

The main purpose of using peer learning was to target the problem of students being passive receivers of knowledge and information transmitted from a lecturer. The target was not specifically the exam result even if we did hope that the results at least would not be worse than in the ordinary group. We received positive feedback from the students during and after the course, but what about the exam result? Differences in exam result as a measurer of improvement between years

or groups is a blunt instrument. Different exams and “batches” of students generate different results, and we now had two groups during one year. Larger randomized groups over a couple of years would be preferable but in this particular case we have these limited observations of a blunt instrument as result on the final exam. We will hopefully be able to generate a larger sample over the years to come.

The grades given at the final exam was *Fail* (less than 60 %), *Pass* (at least 60 %) and *Pass with Distinction* (at least 80 %). The grades among the 31 students in the “special” class were compared to the grades among the students (around 100) that attended the same course but with the traditional lecturing. We did notice some differences between the groups, especially among the students that failed and among the students that passed with distinction with a clear advantage for the peer learning class.

Around 50% of the students passed in both groups, but there was a clear increase in pass with distinction in the peer learning class and a clear drop of students failing in the peer learning class. In total around 80% of the students in the peer learning class passed the course after one exam while around 60% of the traditional class passed after one exam. If this difference depends solely on the way of teaching is impossible to deduct from one study. However, the student reactions in general (as well as exam result) have made us confident enough to continue to use peer learning.

The teacher’s hours on Mondays and the working passes on Tuesdays and Wednesdays worked very well. However, it is important not to have too many problems during these hours, have backup problems instead. It was important for the students to be able to finalize the problems during the scheduled time.

To use multiple choice questions on the quizzes might not be optimal. They are easy to correct and provides fast feedback, but they are a blunt instrument. One idea is to design the quizzes as an ordinary smaller final exam and let the students correct each other’s exam. Maybe, in times of cut backs and less resource, we need to utilize one important resource still in the university system, the students.

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