

# **PREPARING UNIVERSITY STUDENTS FOR PEER ASSESSMENT IN ASYNCHRONOUS TEXT DISCUSSIONS: A CASE STUDY**

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## **Abstract**

This study reports students' experiences of asynchronous, written communication in an on-line university course during peer assessment preparation. The data derives from their postings in the course forums and from self- and course evaluations. The results indicate that it seems like the students were able to negotiate meaning through the text communication, as many of the students expressed that their original understanding of the subject discussed were challenged by others postings. However, some students found the asynchronous text based communication restraining.

## **Introduction**

This paper draws upon findings from a project in higher education aimed to implement peer assessment in online courses to explore if this could be a way to support and direct the students learning towards expected learning outcomes.

## **Background**

The advancing developments of information and communication technology (ICT) have literally brought the University to our homes. For example figures from 2005 shows that 17 percent of all American students in higher education, or more then 3, 2 million persons, were taking at least one course at a degree granting institution during the fall 2005 (Allen & Seaman, 2006). The same trend is visible in Sweden where statistics from 2006 shows that as many as every fifth student in higher education, which means around 77 000 Swedish students, were registered at courses at the Swedish Net University (Swedish Agency for Networks and cooperation in Higher Education [NSHU], 2008).

The Swedish Net University seems to in larger degree then traditional on campus educations facilitate "life long learning," as it in larger numbers attracts "untraditional students", for example students with working class backgrounds, those who lives in rural areas, and mature persons in a period of life where work and family life plays a central role (NSHU, 2008). This means that teachers in online education face the challenging task to provide education for a highly heterogeneous group of students through fairly new technical solutions, which

strengths and limitations have still not been fully explored; and where asynchronous, text based communication is the common mean for interaction.

Simultaneous the consequences of contemporary demands in higher education are directing syllabus and curricula towards acquisition of “expected learning outcomes” in much higher degree than before. One example of this is the “Bologna process” (or Bologna accords) in which Sweden; together with nearly 50 other European countries, participates in an effort to establish a common European arena for higher education and consensus about quality in higher education (European commission, 2008). One important goal for the Bologna process is to enhance the international competitiveness and attractiveness of European higher education by creating a common degree structure to support increased mobility so that national boundaries no longer are barriers for student’s education and future employment, and to prolong the concept of “life long learning” (Swedish National Agency for Higher Education [HSV], 2008). Accordingly efforts have been done to develop a framework of qualifications for the European Higher Education Area, in which reflective and critical thinking skills as well as qualifications linked to the future working life are outlined (Bologna Process. The official website 2007–2009, 2008). These changes are followed by evaluation demands to ensure the quality in higher education (HSV, 2008).

This amplified focus on students’ acquisitions of qualifications, calls for sophisticated measurement techniques as well as outcome oriented education to support the students to achieve the expected learning outcomes. Although teaching is a challenge of itself in an on-campus setting, it seems even more challenging to carry this out in an online study environment where the participants in the learning situation might seldom or never meet in person and where many students have a limited time to devote for their studies due to other life commitments.

One strategy to meet the demands of measuring achievements and at the same time keep the students’ active in the course seems to be by organising courses around frequent assessments. In two previous Swedish studies (Hult 2005, 2007) all assessments in 50 net-based courses, varying in discipline, length and level, were collected and analysed. The results shows that many of these courses seemed to be organised around a great number of different assessments spread out over time during the course. For example a five week course could offer up to seven compulsory assignments which the tutor assessed and commented.

### **Peer Assessment as a Tool for Directed Learning**

Formative assessment, which seems to rise in interest at the moment, may be considered one strategy to merge the need to gain knowledge about the quality of the students’ achievements while at the same time support them to direct their learning towards the expected learning outcomes. There are however, arguments

that this may produce reductionist learning and instrumental accountability rather than meaningful empowerment (Ecclestone, 2004; Torrance, 2007).

Peer assessment which builds on an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the product or outcomes of learning of peers of similar status (Definition originally by Topping, 1998), could be one strategy to reduce this risk for instrumental and reductive learning.

Previous researches indicate that participating in peer assessment can contribute to the students' development of critical appraisal skills. Macpherson (1999) found indications of a growth in the students' reflective and critical thinking skills after participating in a peer/tutor arrangement in which the students were to give oral feedback on each others' literature reviews. Anderson et al. (1999) found evidence that students participating in peer assessment developed their skills of making reasoned justification of arguments. According to Macdonald (2002) viewing other students' strategies to approach the assessment task seems to support the awareness of weaknesses in their own approaches.

Other arguments for peer assessment are linked to the idea of lifelong learning and the evolving needs of the global employment market. A vital part of this concept is the autonomous, independent and self-directed learners who take responsibility of their own personal and professional development (Lorraine & Stefani, 1998). Boud (2000) argues that assessment is vital for supplementing life long learning, and that "This means that it has to move from the exclusive domain of assessors into the hand of learners" (p. 151).

There are also several arguments that engaging students in formative peer assessment sustains the idea of autonomous, independent and self-directed learners who takes responsibility for their own personal and professional development and helps them to direct their learning towards successful achievements and (e.g., Bloxham & West, 2004; Boud, 2002; Higgins et al., 2002; Lorraine & Stefani, 1998; McLuckie & Topping, 2004). Boud argues that the more complex the learning task is the more need for interaction with others to help us test our understanding, reflect upon our ideas and provide other kind of support. By that peer assessment can be considered as a vital part of what Boud describes as "sustainable assessment" and defines as "assessment that meets the needs of present without compromising the ability of students to meet their own future learning needs" (p. 151).

A last argument which is important in the context of untraditional students in net courses is that it could be a way to support the students' understanding of the often tacit dimensions of academic disciplines. The teacher enters an assessment setting with a much deeper knowledge of the criteria and standards than the students and with evaluative skills in making judgement about student performance. While

students often struggle to understand what they are meant to achieve and they often have problems understanding the feedback and comments and interpreting them correctly, many researches indicate that participating in peer assessment helps the students to understand the deeper sense of the criteria to help direct their learning towards successful achievements (e.g., Bloxham & West, 2004). Since peer- and self assessment can support the students to internalise academic standard, it could also help the students to develop an ability to supervise themselves. O'Donovan et al. (2004) argue that the best way to create meaningful knowledge of assessment and standard are through both explicit communication and tacit transfer processes.

### **The Importance of Mediating and Negotiate Meaning**

However, as O'Donovan et al. (2004) point out, the tacit assumptions behind different criteria are hard to explain and make explicit. In other words, all criteria and standards are imbued with a specific meaning derived from a certain practice within the “academic language community,” but this meaning is not known to all students which might result in other understanding than the lecturer (Orsmond et al., 1996, 1997). Hence an important component in peer assessment is to enhance the students understanding of the specific meaning the criteria is imbued with in the specific practise they derive from. O'Donovan et al. (2004) point out that the tacit knowledge about this specific meaning are obtained from a shared experience of the staff when using the criteria for marking and feedback and argue that supervising and engaging the students in interpretation and negotiations of criteria as a preparation for peer assessment activities could be means to mediate this meaning and contribute to a deeper learning trough the peer assessment process.

### **What Happens When Peer Assessment Preparation is Carried Out through Asynchronous Text-Based Communication?**

The data collected in this study derive from an online undergraduate course in the field of Social Education, and was the pilot course in a development project aimed to test out peer assessment as a tool to enhance students learning in online courses. The primary communication was asynchronous and text based as this still is the common means for communication in these types of courses, although different communication tools will be tested further into the project to evaluate what those could add in this context.

The course design included a workshop aimed to prepare the students for participating in peer assessment in accordance to findings of earlier studies. However, most studies of peer assessment and how to prepare students for this task by enhancing their under-standing of criteria are carried out in a face-to-face context. As the students are physically on campus their chances to learn to know the “academic culture” are much greater than online students since the on campus students have the opportunity to meet the representatives of this culture in forms

of other staff than their teachers in between scheduled sessions. The communication is primarily the spoken language; accomplished by gestures and facial expressions and tone of the voice. These attributes are important tools to mediate the specific meaning of the words used to ensure that the uttering received are understood as intended (e.g., Olsson, 1994; Ong, 1982). In other words they are tools to provide the receiver of the words with additional information to help them “read between the lines.”

### **Aims of the Study**

A first step towards understanding how peer assessment preparation could be organised in an online setting is to raise questions about what it means for the students possibilities to negotiate meaning when the primary mean for communication is the written language. Is it possible to mediate and negotiate meaning when the primary tool for communication is asynchronous and text based?

### **The Examined Course**

The pilot course was carried out online with no physical meetings at all. Around 60 students from all over Sweden were registered on the course, although some of them dropped out of the course in a very early stage, and as this study was performed before all students had handed in their final assessment it is not possible to give an exact figure of how many of them that actually completed the course.

The students in this course ranged from students who had performed their profession education on university level to students who were attending university studies for the first time. Some of the students had previous experiences from performing studies in an online environment while others were new to this study environment. The course platform used was Moodle, a tool which enabled the students to create their own topic threads for asynchronous discussions and to use synchronic communication through the chat function. The large study group was divided into smaller workgroups containing around 7–8 students and each workgroup had their separate text based discussion forums to communicate through.

The course included four themes and an individual final assessment in forms of a literature study. The students were instructed to document the contributions they and other students did during the learning process and make an analysis of this data with a focus on how this may have contributed to their learning. This document was to accomplish the final assessment product. Participation in peer assessment during the development of the literature studies was obligatory.

## **Peer Assessment Preparation**

Preparation for peer assessment was carried out through four workshops, each open for three days at the time to ensure that all students could find time to participate. The students were tutored through all workshops by questions aimed to enrich the discussion and to support the students to focus on identifying principles for scientific knowledge building and its consequences for how to produce an academic text.

### *Workshop I*

The students were asked to interpret general criteria in relation to expected learning outcomes.

### *Workshop II*

The students were asked to apply the understanding they have gained in Workshop I on two texts and instructed to identify signs of scientific knowledge building.

### *Workshop III*

The students were instructed to discuss their own ontological and epistemological beliefs and how this could influence their way of approaching studies by others, for instance when processing the course literature.

*Workshop IV* was a result of the requests from the responsible teacher for the course to direct some of the discussions towards the actual course content and was focusing questionnaires for data collection.

## **The Research**

The main data for this study were collected from the text based discussions in the workshop, but complemented with data from other forums in the course where the students made spontaneous reflections. Data were also collected from the students self evaluations in which one of the tasks was to evaluate what communication with the peers had meant for their learning during the course.

As other means for communication will be tested in a later stage of the project it was found necessary to examine if it is possible to mediate and negotiate meaning through asynchronous text based communication alone.

The data were analysed with a focus on:

1. Expressed reflections about what the impact postings from others had on their own thinking and learning

2. Possible posts in which the students expressed a change of mind after participating in a discussion of a topic
3. General reflections expressed on written communication.

## Results

Initially many students expressed that they did not see the purpose with the workshop and all. Some expressed that they thought it was not related to the course content and expressed frustration about not knowing what this part of the course would lead to. The students however started to create topics and post messages in the first workshop and in some of the groups the students became very active in starting and responding to topics. This was notable not only in the workshop but also in the forum where the discussions about the group content was performed. In the workshop one topic could sometimes get as much as 40 responses or more.

It was a significant lower activity in other groups in posting and responding to topics although none of the study groups lacked activity at all. One of the explanations to this can be drawn from data from the students self evaluation where they are pointing out that many of the students that dropped out of the course belonged to the groups with lower activity which had a negative impact on the dynamic of the group. Other reasons such as lack of time to engage in the discussions, insecurity about the own ability to contribute with something important or lack of motivation can also be traced in the data.

### **Was the Communication Rich Enough to Challenge the Students Initial Understanding of Criteria?**

When working with the general criteria in *Workshop I*, the students were asked to discuss what it could mean to be “critical,” “independent” and “reflective” in a scientific context. In all groups there were students who expressed that this had to do with “trusting one’s own judgements”, while others wrote about learning how to read, interpret and view a text with critical eyes as means to judge its value.

In many of the groups these different opinions were not further interpreted. Instead the students focused on how to create the actual criteria to be used for the peer evaluation. Most groups settled with the course criteria for the final assessment or used criteria they had found in a method book. There are thus not many signs that any student changed the original view upon criteria in the data from *workshop I*, although different opinions were aired.

In *Workshop II* the students were supposed to put the criteria they had agreed upon in action by assessing two example texts. Initially many of the students in all groups approached the task by discussing the content in the texts instead of assessing them. At this point they were tutored by being asked to try to look for ‘signs of scientific knowledge building’ in how the texts were written instead of focusing the topic of the text. After this tutoring most students abandoned the content discussion and started to view the text in other aspects. Now several of them stated that they found one text, which presented studies by others in a referring way without a clear purpose for this, more scientific than the other text. Many motivated this by pointing out that this particular text had more references than the second text. Many also wrote that the second text had a “negative tone” and therefore was less scientific than the other text which they thought was more open minded. It was also pointed out that there was a reference to a newspaper article in the second text, which many students found highly unscientific.

There were, however, other students in the groups that expressed that they felt that the second text was much easier to read and seemed to have a more scientific approach since the author were using references to other studies as part of an argumentation for performing the study. Some also identified that the second text seemed to have a more academic language than the first one.

The students were now tutored again by follow-up questions like “can you identify an author voice in any text?”, “what clues can you find about what methods used to produce the findings the authors are referring to?”, “are the authors using references to others as a part of an own argumentation or are they referring what others have found without drawing any conclusions from that?”.

During this discussion many students in all the groups started to express that they now had other understandings of the texts than in their first posts. Now almost all of them identified an author voice in the second text, the one they earlier had dismissed as “negative” and also “unscientific,” which in many cases was motivated with the fact that it had less references to other studies than the first one, and because it contained a reference to a newspaper. All of a sudden many wrote that they had changed their mind about the reference to the newspaper article. Some wrote that they now could see that it was not used as a scientific argument, but as a mean to introduce the study and illustrate that the topic was of public interest and others agreed. One of the students made a spontaneous reflection in a post about how the group discussion in the workshop had affected her:

But oi, how exciting everything became all of a sudden! How fun to read all this feedback and how different thoughts exchanged and all of a sudden I am viewing the texts with new eyes.



In the same post she continued by stating that the discussions in the forum had made her change opinion about her view upon the texts she had assessed:

Now when I have re-read them and participated in this discussion I view the texts like I had never read them before. How different they are! Originally I dismissed the reference to the newspaper article despite the fact I even read [other student] comment about that the article only served a purpose to illustrate that the topic was of public interest.

She also drew a conclusion from this in which she expressed:

Very healthy experience — exactly what I need to be able to lift my eyes from my somewhat usual paths and expand my views.

Another student expressed the following in her self evaluation:

During workshop II I had a “hallelujah moment”, when I had an insightful flash about text analysis. It didn’t just concern the content in a text, but also has to do with the scientific interest for a study and about a critical approach to the text one reads.

Another student wrote in her self evaluation about the great impact a discussion in *workshop II* between other students and the tutor had on her understanding of how biased her reading of texts sometimes are.

In the last two workshops there is not so much visible evidence that the students may have developed new perspectives as in *Workshop II*. There were no explicit reflections posted about what impact these workshops could have had on the students understanding of criteria. One part of this could be that the students in this period were working on their drafts to be commented before the final assessment which could have made them devote more time to this than to the workshop.

There are however other indications that the students were able to mediate meaning through the asynchronous text based communication. For example one of the students wrote this comment at the end of the course in a thread called “questions to the teachers”:

This has been the best course of these three (she had been participating in) during Education A, since I now feel like a university student, not as an inquiring mind in general. To start to grasp and understand the scientific view that are present at the university feels very exciting and fun, because it is so NOT my way to view the world.

Another student expressed in her self evaluation that she really thought that the feedback from her peers had opened her eyes for new perspectives and that it had given her a chance to rethink her original opinions. This student also wrote that:

To get to work out criteria of ones' own is learning and makes one get a better understanding of what's expected of one.

There were some students that expressed that they found very little value from the discussions with others as they thought the discussions mostly rested upon personal beliefs and thoughts rather than scientific theory.

### **The Student Views on Using Asynchronous Text-based Discussion for Communication**

Many students expressed in the self evaluation and the course evaluation that they thought that it had been possible to communicate through text in a way where they were understood as intended. Some pointed out those textual discussions make it easier for everyone to make their voice heard and that it was beneficial that the text was saved so they could go back and reflect on what's been said whenever they liked. One of the students wrote that she had experienced that there was no difference between textual and spoken communication. However other students expressed that they thought it was hard to express themselves through text and that they would rather have used the spoken language to communicate. A couple of the students pointed out that the lack of body language, facial expressions and the tone of the voice were limiting the conversations.

## **Discussion**

The overall purpose for the project which has been studied in this paper is to test out and evaluate what the implementation of peer assessment could mean for enhancing the students' learning in correlation to the rising demands on higher education. Preparing students for peer assessment is highlighted through out research literature about peer assessment as an important way to transmit the tacit inscribed meaning of criterion. Therefore the focus in this study has been to establish if asynchronous text based communication is sufficient for transmission of meaning.

It is important to point out that there are no data analysed at this stage from the comments they made to each other or their assessment products. Consequently no evidence can be presented to support that the implementation of peer assessment in the pilot course had any effect on the students' comments to each other and the quality of their assessment product but this will be an interesting starting point for further data analysis.

Judging from the students' own views on what participating in peer assessment and the initial preparation meant for their learning, the results indicate that it is possible to negotiate meaning through asynchronous text communication as so many students found that the postings from others resulted in a new understanding of the criterion. This means that this type of communication can be a useful tool to prepare students for participating in peer assessment. However there are also data that show that not all students found the means for communication sufficient, which supports the aim in the studied project to try other communication tools to find out of what that could mean for communication.

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