

EXTENDED SUMMARY FOR SYMPOSIUM EARLI 2012

Structuring the Peer Assessment Process: The Impact on Product Improvement, Students' Perception and Feedback Quality

Problem statement

Recently, collaborative learning has been highly praised (Janssen, et al., 2010), as peers actively work together to achieve a common goal. In this respect, peer-assessment (PA) can have an added value in higher education (Topping, 2003) since it engages learners directly in the learning process (see also Topping, 1998). Peer feedback can be seen as a specific approach of peer assessment, which aims to involve students in assessment for learning by asking them to provide fellow students with opinions, ideas and suggestions for improvement (Black and William, 1998). Empirical evidence suggests the use of wikis as an ideal CSCL-tool for supporting online collaboration and PA activities (De Wever et al., 2011). Previous research also highlights the benefits of offering structure in a CSCL-environment (Strijbos and Weinberger, 2010) and the need for structure and support to ensure effective feedback (Poverjuc, Brook and Wray, 2012). Therefore, the present research focuses on the impact of structuring peer assessment and peer feedback in a wiki-based computer-supported collaborative learning environment.

Purpose of study

Two subsequent studies were set up. The main aim was to study the product improvement and students' perception of peer feedback (study 1 & 2), as well as the quality of students' feedback (study 2). In the first study (conducted in 2011), two conditions were implemented: a non-structured peer feedback condition (NS-PFB) and a basic structured peer feedback (BS-PFB) condition. In 2012, the second study also involved an extra condition: Elaborated structured peer feedback (ES-PFB).

The following hypotheses are examined: A higher level of structuring the PA process will lead to (H1) a higher product improvement, (H2) a more positive influence on students' perception towards assessment, and (H3) a higher feedback quality.

Research methods

First year university students, enrolled in an educational sciences program (N=177 and N=178, for the 2011 and 2012 cohort respectively) were divided into groups (N=38 and N=37, for the 2011 and 2012 cohort respectively) of five, and were asked to collaborate on writing assignments in a wiki environment. For the two studies, the control and BS-PFB condition used an identical template to provide peer feedback. At the end, students had to complete a questionnaire including 5-point Likert items evaluating how they perceived the peer feedback process. For the first study, students had to formulate in total six answers to multiple choice exam questions on Behaviorism, Cognitivism and Constructivism. After submitting weekly a draft solution for two exam questions, another student had to provide peer feedback on this draft version. Eventually, this feedback had to be used to compile the final versions for the wiki assignment. For the second study, each group member had to contribute to the wiki by assembling three abstracts based on provided articles. As shown in

figure 1, one fixed group member had to provide peer feedback on the draft version in the next phase, which was followed by a questionnaire about their PA skills. Based on the feedback, the final version of the abstract is constructed together with an evaluation of the received peer feedback. After submitting their group work, all participating students had to summatively assess the three abstracts with the help of a scoring rubric.

Findings

The findings of the first study showed that for both conditions the product improved significantly between the draft ($M=15.15$, $SD=3.63$) and the final ($M=19.81$, $SD=1.56$) version; $t(176)=-19.738$, $p<.001$. However, the study did not show a significant difference between the two conditions regarding product improvement. Furthermore, this study pointed out that students in the BS-PFB ($M=4.20$, $SD=0.720$) condition reported a significantly higher critical attitude towards providing peer feedback compared to the control ($M=3.90$, $SD=0.715$) condition; $t(155)=-2.584$, $p=.011$. Additionally, the findings also showed a significantly higher critical attitude towards receiving peer feedback for students in the experimental ($M=3.81$, $SD=0.702$) condition compared to the control ($M=3.56$, $SD=0.748$) condition; $t(154)=-2.184$, $p=.030$. Furthermore, the experimental ($M=3.16$, $SD=0.833$) group also reported that they perceived the received peer feedback as more profound and detailed than the control ($M=2.86$, $SD=0.698$) group; $t(153)=-2.372$, $p=.019$. On the contrary, students' perception of their own provided peer feedback as being profound and detailed, did not highlight a significant difference between the BS-PFB ($M=3.40$, $SD=0.805$) condition and the control ($M=3.19$, $SD=0.762$) condition; $t(155)=-1.633$, $p=.104$. For the second study, data is currently gathered (October – December 2012), hence findings of this study will be reported at the Earli conference.

Conclusions

The first study showed that although the wiki product improved significantly between pretest and posttest, there was no significant difference in product quality between the BS-PFB and control condition. However, the BS-PFB group perceived the quality of the received peer feedback as being more profound and detailed. Furthermore, the BS-PFB group reported to adopt a more critical attitude when both providing and receiving peer feedback. For the second study, it is hypothesized that the elaborated structured feedback condition (ES-PFB) will lead to higher levels of feedback.

Keywords: Peer Assessment, Structured Peer Feedback, Wiki, CSCL

Contact details:

First author	Mario Gielen
Second author	Prof Dr. Bram De Wever
Telephone first author	0032(479)688489
University	Ghent University
Department	Department of Educational Studies
Country	Belgium
E-mail	Mario.Gielen@ugent.be

