

MSc students' experience with peer feedback during a written task

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Introduction and research question

Master's courses at University of Copenhagen are conducted within a 9 week period during which a vast quantity of material is addressed. While some topics are explored at depth, others may be afforded less time and thereby less-detail. To support deeper learning opportunities, group-based essay assignments conducted in parallel to coursework can allow students to explore in depth, analyse, reflect and report on topics of own choice.

On the MSc course Biodiversity in Urban Nature ('BUN'; n = 40 students), participants write group essays which contribute to the final exam, where a given student presents a self-defined topic from within the scope of a group essay, however essays themselves are not graded. Two student challenges associated with the essay writing process are investigated here:

1. BUN participants are from diverse educational and cultural backgrounds, yet encouraged to write essays in interdisciplinary groups. Students have different essay writing experience, and when group work is obligatory, a complex essay writing process can lead to student frustration and anxieties. Thus, a common understanding of the essay writing process and how to define essay topics, may support students meet course requirements;

2. prior to the essay deadline, there is limited time for formative feedback from teachers on group essays. Students would obviously benefit from opportunities for formative feedback prior to submitting essays.

In this University Pedagogy intervention conducted in Sept-Oct. 2017 I investigated whether peer feedback could facilitate the initial essay writ-

ing process, specifically students' understanding of and definition of essay problem statements, as well as guiding the group-forming and essay topic selection processes. Peer feedback (PFB) or "peer assessment", defined by Topping (1998), is "an arrangement in which individuals consider the amount, level, value, worth, quality, or success of the products or outcomes of learning of peers of similar status." The following research question was investigated:

How do students experience peer feedback in relation to exploring potential topics for the compulsory group essay?

Brief literature review

Reasons for incorporating formative PFB in tertiary education range from cognitive and metacognitive aspects (Topping, 1998), fostering transferable skills such as reflection, critical thinking, negotiation and diplomacy - important for students' own lifelong learning (Topping, 1998; Dochy et al., 1999; Adachi et al., 2018, and refs therein). Overarching is evidence PFB promotes active learning and formative reflection (e.g. Li et al., 2010), where students become active *participants* of FB, rather than passive *recipients* (Price et al., 2006), which can promote students' capacity to monitor own learning (e.g. Carnell, 2016). Literature suggests the role of peer assessor often supports greater learning opportunities compared to the role of assessee (Rienecker et al., 2013; Cho et al., 2011), however both roles can promote active learning (Adachi et al., 2018). However, PFB is still not widespread in academic teaching (Taras, 2006; Mulder et al., 2014), despite that Danish students demand more feedback during their education (in Rienecker et al., 2013 ref. to Aarhus University, 2011 p 260), and that PFB is identified as a valuable means to address these desires (Jensen 2011 in Rienecker et al. 2013, p 261). Part of this may be challenges relating to implementing PFB including time, effort and costs for teachers, students' motivation to engage with PFB, and lack of feedback literacy, e.g. students' empathy and human communication skills (Adachi et al., 2018).

Through structured formative PFB starting during the 2nd course week, this intervention prompted students to enter the essay writing process through exploration of their understanding of and criteria for PFB, followed by two iterations of giving and receiving oral PFB on individual writing tasks. In addition, supporting information (i.e. scaffolding) on the intention of the course essay, formal essay structure and scope of topics

were actively included. While written products of the intervention were not necessarily used in submitted group essays, the process underlying the intervention was directly applicable to the subsequent essay writing process. For example, the PFB iterations related to important early stages of the essay writing process, namely identification of topic/problem contexts and definition of the guiding essay problem statement (Rienecker & Jørgensen, 2014). The underlying motivation with the intervention was thus to support students explore topics for group essays, familiarise them with formal essay requirements and to provide insight into the larger essay writing process.

Intervention and documentation (method)

The intervention is briefly described here, but for more detailed information see Appendix A. Following a group discussion where PFB was explored (**Interview 1**), students wrote individual problem statements and 5-10 lines of text briefly describing a problem context of own interest (**Essay task 1**). Students then undertook **PFB session 1** in randomly assigned groups using criteria described during **Interview 1**. Subsequently, **Essay task 2** saw students refine their statements, revise 10 -20 lines of text and outline potential essay topics to address. **PFB session 2** was actively directed with students grouped according to their chosen topics. Finally, a second group discussion aimed to explore student reflections on the process (**Interview 2**).

Qualitative data was collected through written exercises, two master-class interviews (n= 25 - 30 students each time) and use of tag clouds (Appendix B,C). Written exercises entailed **Group discussion 1** whereby students wrote their input on A1 posters to two questions (What is your understanding of PFB? What do you need to consider when giving/receiving PFB to other students?). Posters were hung on a classroom wall and students asked to visit all posters. Subsequently, **Interview 1** sought to identify themes reflecting collective understanding of PFB, identify criteria for PFB and a code of conduct. As part of **Essay task 2**, students were asked to briefly state how they incorporated PFB from **PFB session 1**. In **Group discussion 2** students revisited their posters and added input (in a different colour) based on reflections of their PFB experience (e.g. Appendix D). Subsequently, **Interview 2** explored student reflections on the process, as well as their constructive input regarding ways to improve the process. Finally, using tag clouds, students were asked to describe their experience

of PFB and most important learning experience from the intervention (Appendix B,C).

Analysis + discussion

Students experienced the PFB intervention in relation to Essay tasks as largely positive with “useful”, “constructive”, “helpful” and “clarification” reported most often by students (Appendix B). In Essay task 2, student reflections generally revealed that PFB session 1 had been useful for structuring, refining problem statements and finding alternative sources: *“I even changed the focus on the problem statement, because after the feedback I realized that my essay had to be more focused in a more specific direction...”* and *“...the FB helped make my problem statement a bit more focused, helping me choose the right direction.”* Similar reflections provided evidence the PFB was being implemented in order to enhance an individual’s work. In the following, four themes (there were more) drawn from all data forms are explored.

18.0.1 Understanding and co-creating PFB criteria

Exploration of students’ inputs and understandings led directly to a common set of criteria for the PFB sessions. Groups suggested similar criteria which indicate students had prior experience with PFB and that several common understandings existed. For example, “constructive criticism” appeared on all six posters (Appendix D). Other common criteria included the need to be specific, to give examples and avoid being superficial. For example, *“...be completely neutral...”* and *“...when criticising...back up with examples...to help the person move on...can you help me understanding this part...”*

Cho & Cho (2011) suggest that instructors provide students with the methodology of PFB, e.g. question prompts to focus on particular aspects of a written piece or a prescribed review model. In the present intervention, the criteria discussed during Interview 1 were not exhaustive; however, I felt the discussion was valuable for students in terms of co-determining the type of PFB they should aim for and how to achieve this. In future iterations I would develop the PFB model further. Although this is a time consuming aspect of implementing PFB, the development of criteria and how these relate to a given course assessment, may help students decode intended learning goals (Adachi et al., 2018).

Benefits of being assessor/assessee

Students made reference to the value of PFB for both assessor and assessee: *"PFB is a learning process both for the receiver and the giver."* Students identified open-mindedness when receiving feedback as an important part of learning from others' ways of working and thinking. This links to sentiments relating to the value of receiving "multiple views" and that own reflections on peers' feedback are part of a student's own learning process, as was evident from Interview 2: *"Most PFB lived up to the standards (criteria)...we realised, in addition to multiples views, we also had new information/references from our feedbackers... gave us ideas for more references we could use...links to people having different backgrounds and taken different courses, and have realised an article which you haven't had yourself...that was nice."* The intervention clearly created multiple learning opportunities beyond those associated with instructor-based FB which corroborates with (Nortcliffe, 2012) who identified increased opportunities in PFB for learning from "a larger number of voices".

Evidence of transferable skills through PFB

When students were asked the most important learning experiences from the PFB exercise "reflection" was resoundingly reported, followed by "critical thinking", "tolerance" and "listening" (Appendix C). Other comments such as "preparation", "re-analyse", "constructive feedback", "critical reading", "exchanging ideas" and "being critical" point towards student experience with the very skills associated with feedback itself (from literature above). This suggests that although a specific essay-based task was the focus of PFB tasks an array of transferable skills are activated through the PFB process, and importantly, these are recognised by students.

Vulnerability/anxiety during PFB It surprised me that personal vulnerability was expressed by several groups regarding the social/psychological side of PFB – which clearly denotes potential pitfalls of PFB. On posters, *"brutal"*, *"honest"*, and reference to *"defence of one's self"* were stated and were subsequently discussed in plenum. These sentiments were actively added to the PFB criteria stating a need for *"empathy"* and *"respect"* and *"nurturing"*.

The need to address vulnerability during discussion of criteria was brought up during Interview 1 - *"If you are allowed to defend yourself, you forget to listen...try to listen first...and then you can say..."* Similarly,

yet more vulnerable sentiment, “*It (PFB) only works if you don’t feel attacked*”. Thus, important criteria for students were to listen actively, reflect in real-time, assess the feedback and discuss it collectively – but to avoid being defensive. In contrast, during Interview 2 one student offered “*... in terms of receiving feedback, if you find yourself defending it... it could be an indication that something you’ve written hasn’t been communicated in a clear way...* ”. This student obviously reflected on previous (own) experiences which points to student’s awareness of the role that reflection and amendment of behaviour may have on influencing one’s learning process.

Both assessor and assessee may experience anxiety during PFB (Topping, 1998), exemplified by social embarrassment when a student’s weaknesses are identified by peers. Mulder et al. (2014) uncovered anxieties in 50% of students’ pre-PFB expectations relating to attaining the best tone to balance positive and negative feedback and the quality of their feedback when assessing peers in connection with a writing task. However, this did not concur with post-PFB experiences, and Topping (1998) suggests that overall PFB reduces student anxieties. BUN students were asked for three words to describe the PFB experience; “energy-draining”, “shyness” and “chaotic” reveal that some students experienced forms of anxiety (Appendix B). Masatoshi (2013) highlights the importance of positive social relationships between students as an integral aspect of successful peer feedback - future PFB interventions could explore this aspect of PFB.

Conclusion

Student reflections on the value of PFB for this early-stage exercise in connection with the compulsory group essay were largely positive, e.g. “*... I feel like we agreed that a lot of experience was very positive FB and anything technically critical, was questions/clarification of the topic, but by having to clarify the points, it helped yourself structure the topic...* ”. As successful PFB relies on motivated students who see meaning in why they are asked to undertake PFB (Adachi et al., 2018), scaffolding and a structured PFB framework, employed in this intervention, undoubtedly contributed to this. Additionally, the plenum discussions and co-creation of PFB criteria were, I feel, equally important for fostering ownership of the task, group motivation and establishing a common willingness among students to participate in the intervention. However, there were a few some students who felt anxiety during the process.

Perspective and limitations

While PFB offers students opportunities for formative feedback which ultimately enhances students' submitted works, this intervention did not evaluate the impact of PFB on the quality of the students' final essays (e.g. Mulder et al., 2014). Interestingly, no voluntary attempts were made to employ PFB by groups subsequent to the intervention. Time constraints experienced by students were evident during the intervention and could in part have contributed to quelling initiatives to embrace PFB voluntarily, e.g. "*The time factor... in our group we didn't make it to the critical/improvement part.*" Adachi et al. (2018) identified instructor frustrations associated with "non-completion of feedback loops" whereby students, for undisclosed reasons, do not enhance future work by incorporating FB, despite teachers' best intentions. Future attempts at incorporating PFB are likely to benefit from formal scaffolding and adequate time to achieve the benefits of PFB- perhaps PFB tasks should even be obligatory.

Mapping the causes of student anxiety associated with PFB requires greater attention. Student anxieties are probably influenced by a combination of previous cultural experiences with PFB, a student's personality traits, and the learning environment of a given course. In the present intervention, the learning environment is the most malleable aspect a teacher can influence. Future improvements to the learning environment could be explored; for example, during development of PFB criteria, it might be valuable to ask students to anonymously suggest approaches they feel may reduce anxieties associated with PFB. Furthermore, increasing the time allocated to PFB could support a relaxed atmosphere, whereby students can focus on providing good PFB and are not (also) pressured by time constraints. Finally, in the BUN context, extending PFB as an obligatory part of the group essay, thereby focussing FB at the group-level, rather than student level (as in the intervention), might reduce anxiety further- as well as closing feedback loops.

The PFB model employed here was based on student input and internet literature (e.g. Oxford Brooks University, Herriot Watt University, University of Edinburgh). It would be interesting to use a *PFB model* which aimed to enhance the quality of PFB by, prior to giving FB, formally distinguishing the potential scope of students' feedback comments between surface, micro- and macro-meaning levels. This approach could promote assessors' awareness to differentiate between types of FB (Li et al., 2010), while assist the assessee to understand the orientation of a peer's FB (e.g. Cho et al.,

2011). In this connection, exploring the value of incorporating co-creation of criteria with students in order to foster ownership, engagement and motivation for participating in the PFB process would be worth pursuing, since there are concerns reduced engagement in PFB contributes to superficial learning (Adachi et al., 2018).

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A

Appendix A. Overview of steps involved in peer feedback (PFB) intervention aimed at enhancing students' experience of the initial essay writing process during Biodiversity in Urban Nature, 2017, within the course's timeframe (other feedback opportunities highlighted).

Course week	Intervention step	Qualitative data collected
2*	<i>In class:</i> Group discussion 1 on understanding of PFB → A1 posters → Interview 1: Exploration of PFB and PFB criteria → Introduction to Essay task 1	- 6 posters - 1 st masterclass interview
4	<i>Outside class:</i> Students upload individual Essay task 1 Students assigned random PFB groups (3 - 4 students) → PFB session 1 (in class)	
5	<i>Outside class:</i> Students upload individual Essay task 2 <i>In class:</i> Students assigned PFB groups based on topics (3 - 6 students) → PFB session 2 (in class) Group discussion 2 on reflections on PFB experience → A1 posters revisited → Interview 2: Experience of PFB, ways of improving the intervention → tag cloud Scheduled opportunity for Essay feedback by teacher	- Statement on how students incorporated PFB in Essay Task 2 - 6 posters (revisited) - 2 nd masterclass interview - Mentimeter tag clouds
6-7	Opportunities for informal teacher feedback	
8	Scheduled opportunity for teacher feedback	
9	Essay deadline	
11	Post-exam summative feedback	

* Essay process started 4 weeks earlier than previous courses

B

Appendix B – Mentimeter 1: Provide 3 words which you feel describe your experience with PFB during essay tasks 1 and 2

Provide 3 words which you feel describe your experience with PFB during essay tasks 1 and 2

Mentimeter



17

D

Appendix D - Photo of a student poster

What is your understanding of peer feedback?

- Constructive, professionalism, brutal, insightful, not but should be impartial.
- Strive to achieve a better paper/work.
- Peers are better at highlighting knowledge gaps
 - better than yourself. → but we tend to be ~~stuck~~, we need an open environment.
- See things in a different light/perspective.
 - Knowledge & enthusiasm important influences on feedback
- Be more open and take more time (from groupwork experience)
 - Open brainstorm process but structured...

What do you need to consider when giving / receiving feedback to other students?

- Not personal (both) reviewer and the one being reviewed
- Knowledge background
- Give examples.
- Say something good about it.
- Shouldn't ~~at~~ be about the ~~the~~ reviewer
- Avoid being superficial - make arguments about what it is about.
- Be generous with your time.
- Emojis.
- Anonymity is a big factor
- Motivate a bit

