

Engaging novice psychology students through peer assessment

Tom H Skoglund, Norwegian Defence University College, tomhskoglund@gmail.com

Abstract

Ensuring a positive student perception of peer assessment is essential for achieving its educational benefits. Thus, this case study explored first-year bachelor's students' experiences with a peer assessment writing assignment on the history of psychology ($n = 272$). Participants rated their agreement on six statements about their learning experience, with an option to add comments. Quantitative data showed that most students (80%) had an overall positive experience, finding value in reading others' work, providing thorough feedback, and responding to feedback. Qualitative data indicated some felt a sense of mastery and gained insights into academic evaluation. Both data types revealed mixed opinions on the educational value of peer feedback. While web applications streamline peer assessment for large groups, I conclude that anticipating an associated workload is vital to ensure positive student perceptions of this method. This case study may invite educators to reflect on this rich, student-active method, particularly in the context of novice students in higher education.

Introduction

Peer assessment is a rather complex educational method in which students take on roles as both assessors and assessees (Chin, 2016; Double et al., 2020). By enabling efficient data collection, digital platforms have advanced research on peer assessment, which largely reports positive learning experiences in higher education. For example, a comprehensive study found that most students across disciplines were eager to try peer assessment and reported positive attitudes afterward (Planas Lladó et al., 2014). Similar positive experiences have been reported in other studies, including those involving psychology students (Mai & Nguyen, 2024; Misiejuk et al., 2021; Ng & Yu, 2023; Vickerman, 2009; Kingsley, 2010). At the same time, peer assessment also presents inherent challenges, particularly concerning the quality of peer feedback compared to teacher/expert feedback (Falchikov & Goldfinch, 2000; Xiong et al., 2023). More nuanced challenges have also been reported through qualitative data, such as students feeling uncomfortable receiving feedback when comments were unclear or experiencing taxing mixed emotions when acting as assessors (Adams & Mabusela, 2015).

The present case study contributes to this literature by examining the experiences of approximately 300 first-year psychology students in Norway. In line with previous research, it considers perceptions of reading peers' work and receiving feedback on one's own work. Beyond these commonly reported aspects, the study adds a novel dimension by examining students' evaluations of the feedback they themselves provided and their opportunity to evaluate the feedback they received.

Such a layered examination, which considers distinct steps of the peer assessment process, may be valuable for optimising the method, as ensuring positive student perceptions is important for realising its educational benefits. These benefits are well documented, with research generally showing positive academic outcomes. Large-scale meta-analyses report

that peer assessment can significantly enhance student performance, with effects ranging from moderate to strong (Double et al., 2020; Li et al., 2020; Schneider & Preckel, 2017). It may foster autonomy, responsibility, and deeper engagement with course material (Kingsley, 2010), while also helping students to identify mistakes in their own work and that of their peers (Planas Lladó et al., 2014). Peer assessment appears particularly beneficial for improving academic writing by providing opportunities for text revision – a key component of the writing process (Hayes & Flower, 1987) – a finding supported by a meta-analysis showing that receiving peer feedback improves writing skills (Huisman et al., 2019). Moreover, the method may promote broader competencies, such as critical thinking, problem-solving (Gill-Simmen, 2020), and feedback literacy, which is understood as the ability to appreciate others' perspectives and manage related emotions (Carless & Boud, 2018; Hoo et al., 2022).

In essence, peer assessment is associated with positive academic and developmental outcomes. At the same time, practical challenges, including concerns about feedback quality, fairness, and the emotional demands of the process, reflect the method's underlying complexity. Acknowledging both the benefits and the challenges of this somewhat intricate method, it was not surprising that positive and critical attitudes emerged when the students participating in this study were informed of their peer assignment. This observation sparked an interest in systematically collecting students' experiences, ultimately leading to this case study. Finding the facilitation of peer assessment meaningful, I wanted to share this investigation with educators beyond my own institution, potentially contributing to their reflections on this rich, student-active method.

Methodology

This case study was conducted at Oslo New University College, a small private higher education institution offering bachelor's and master's degrees in psychology, among other disciplines (<https://oslonyehoysskole.no/en/about-ONUC>). All psychology students take a methodology course in their first semester, where I introduced a peer assessment assignment requiring them to write an 800-word response on a key period in the history of psychology. While lecturing in this course from the year 2019, I used the web application Peergrade® (<https://www.peergrade.io>). Here, two feedback questions were formulated (in the application's rubric) requiring free-text answers: (1) Mention two aspects of the essay that you thought were good, and (2) Mention two aspects of the essay that you think could be improved. In addition, a yes/no question was used to ask whether the requirements for scope and form were correct.

A guidance document, somewhat similar to a traditional examiner's guide, was made available. Subsequently, the students responded to the three reviews they received on their essay using a scale that indicated whether they found the feedback useful, along with an optional section for additional comments. In this manner, each student also received feedback on the degree to which their reviews of their peers were appreciated. All steps in the peer assessment procedure had to be completed in order to successfully pass this assignment.

After the assignment was finalised, all students who passed received a questionnaire through the college's digital learning portal. The questionnaire contained six statements, and responses were measured on a 7-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree).

agree), with 4 representing a neutral position. Participants in this study were asked to indicate their agreement with the following statements: (1) “I found it educational to read other students’ assignments”; (2) “I found the feedback I received on my assignment to be educational”; (3) “I provided thorough feedback on other students’ assignments”; and (4) “I liked that I had the opportunity to evaluate the feedback I received from fellow students.” Additionally, two statements about (5) the perceived usability of the web application used and (6) the overall experience of the process were included. Finally, an open-ended question invited further comments on the learning experience, though this was optional.

Responding to the questionnaire was voluntary, anonymity was assured, and participants were informed in writing about the project’s purpose. The data obtained in this study were part of an internal quality assurance system in accordance with the Norwegian Universities and Colleges Act, exempting it from other notification requirements (i.e., from governmental research ethics boards). The project and the later dissemination of its results were approved by the college management, and I identified no foreseeable ethical challenges in conducting the study.

The quantitative analyses were conducted using the R programming language with the ggplot2 package (R Core Team, 2024). I visualised the distribution of values for the six statements using a ridgeline plot, where higher peaks correspond to higher concentrations of responses. The mean values for each statement were superimposed in the plot, and I arranged the statements in descending order to enhance readability. Figure 1 illustrates these analyses. For examining students’ free-text responses, I used the NVivo software (Lumivero, 2023) to organise the data for a reflexive thematic analysis (Byrne, 2022), guided by the research question: “How did students experience the peer assessment assignment?” The analytic process followed the stages outlined by Braun and Clarke (2006), beginning with initial coding suggestions and culminating in the definition of content and scope for themes that captured patterns in the material.

Results and Discussion

Of 298 students attending the assignment, 272 (91%) completed the questionnaire. The final sample included 224 women and 48 men ($M = 24.7$ years, $SD = 6.7$, range = 19-56). Aside from one participant missing responses on two statements, there were no missing data. Eighteen percent (50 participants) provided comments in the optional free-text section. In total, 2,000 words were written, with an average of 41 words per student. About half elaborated their responses beyond a single sentence.

As can be observed in Figure 1, high mean scores (around 5.5) and clearly skewed distributions were observed for five of the six statements, indicating that most students reported positive experiences. This includes the web application used, finding it educational to read the works of others, views on providing thorough feedback, and the opportunity to respond to feedback. Eighty percent of students rated their overall experience as five or higher. However, there was more varied agreement and a lower mean score (4.6) regarding whether the feedback received was perceived as educational, as depicted in the lower part of the figure.

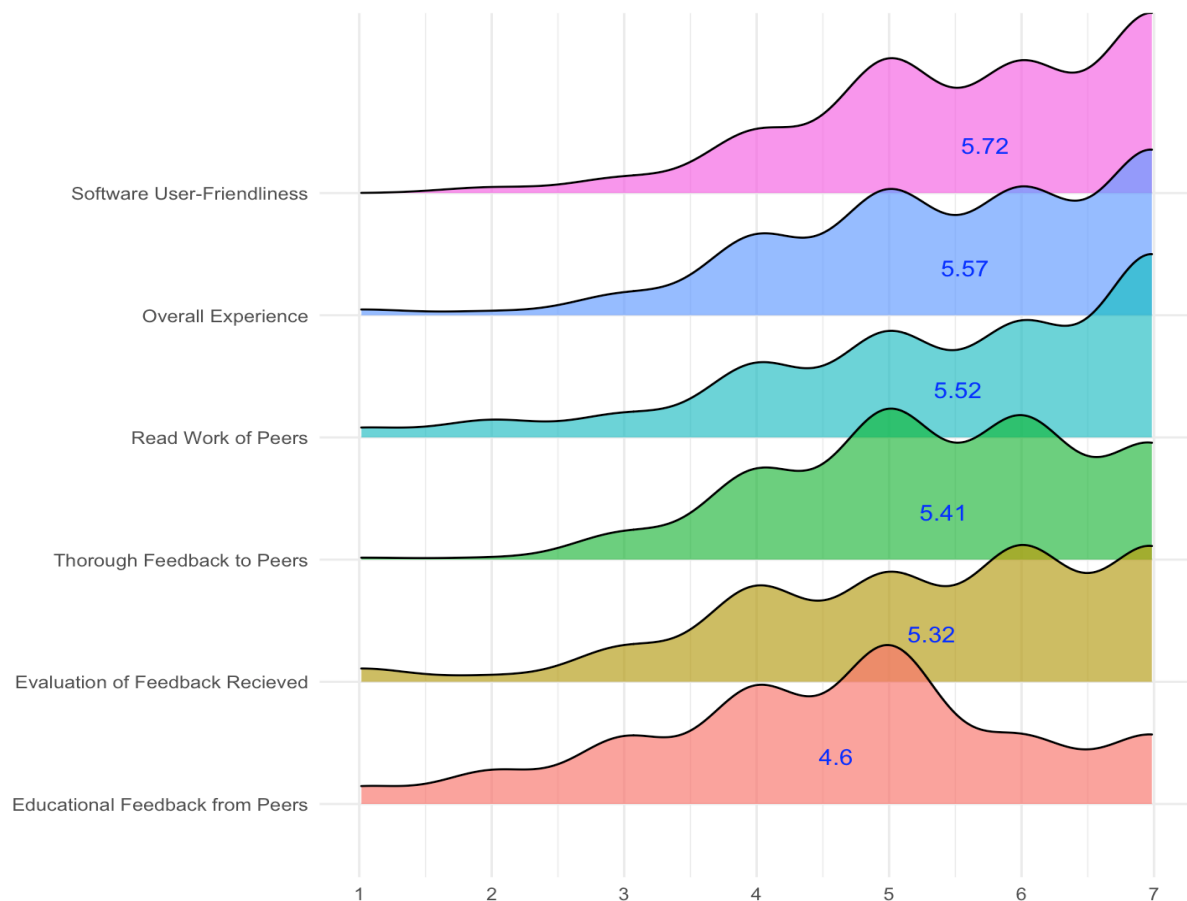


Figure 1: Ridgeline Plot with Mean Values of Six Questionnaire Statements

The thematic analysis of the free-text responses revealed two themes: (1) elaboration on a positive learning experience and (2) a desire for assessment from an expert. Among the 50 students who provided free-text comments, about three out of four reported an overall positive experience. Twenty-one students noted that they missed receiving expert feedback.

The overarching finding of the overall positive reception of peer assessment replicated the findings from other studies (e.g., Misiejuk et al., 2021; Planas Lladó et al., 2014; Vickerman, 2009). In particular, the quantitative data highlighted the software's user-friendliness and the perceived learning benefit of reading others' work. The novel examination of students' evaluations of both the feedback they themselves provided and their opportunity to evaluate the feedback they received was generally rated positively, adding refinement to commonly reported positive experiences in the literature. Additional nuances in the positive student experience were witnessed in the first theme in the qualitative analysis. Two semantic segments from the material are illustrative:

Interesting concept. I appreciated the role of 'evaluator'—the execution gave me a sense of mastery. It was a positive experience to receive positive feedback on my work, as well as on my assessments (that part was very enjoyable, as I did a fairly thorough job with the feedback—it paid off).

and

It was interesting to see a submission from the other side. It gave me perspective on how I should write to make the assignment easy for the evaluator to follow. I experienced what evaluators typically look for when grading. It was incredibly educational. It's difficult to gain such perspective without doing it yourself. Overall, peer grading was an interesting way to learn the material. I would recommend this to future cohorts.

When reflecting on their positive experience, a few students, like the two cited above, emphasised a sense of mastery and the value of increased insight regarding the evaluation of academic performance. This highlights potential benefits of the assessor role, in addition to, for example, the fostering of autonomy and responsibility (Kingsley, 2010) and the opportunity to observe peers' mistakes (Planas Lladó et al., 2014).

The varied experiences regarding whether feedback was seen as educational also aligned with previous studies, reflecting the challenges of validity and perceived fairness in the method (Adams & Mabusela, 2015; Xiong et al., 2023). Interestingly, the majority of students agreed to the statement concerning the provision of thorough feedback in the present study. However, there may be a distinction between believing one has given thorough feedback relative to the perception of the receiver. For example, peer feedback may be thorough, yet still inaccurate when compared to expert judgment or delivered in a way that limits its usefulness to the receiver. The second theme in the qualitative analysis concerns varied perceptions of peer feedback quality further. While it reflects a desire for expert assessment, the limited number of students who used the optional comment field makes it unclear how representative this view is of the overall sample. Two examples of semantic segments in the material are:

It would have been nice to have a guiding grade as well. I found it educational to work with the material and write the assignment, but I felt that the feedback from other students was not very useful, as it seemed that several of them hadn't even bothered to read the assignment properly. It was informative to read others' assignments, but I believe a teacher should have assessed the assignment as well.

and

Poor feedback that was neither constructive nor helpful. I received advice on how to handle my assignment that is not correct in relation to an exam, and I think that if one is to use peer grading, they need to receive proper feedback from a teacher who knows the material. It was an incredibly difficult assignment, and I have no idea how I stand in relation to the exam with the feedback I received.

Even though aggregated evidence suggests there are no significant differences between the evaluations of experts and peers (Falchikov & Goldfinch, 2000; Xiong et al., 2023), tapping into the student experiences reveals a desire for a teacher evaluation for some. It is unfortunate when students perceive the feedback received as not helpful, as the two segments above exemplify. The optimisation of peer assessments has been linked to the quality and appropriateness of supporting materials (Xiong et al., 2023), such as instructions and feedback

criteria. As well, fostering a sense of responsibility in the role of the assessor (Cho et al., 2006) and feedback training (Li et al., 2020) have been underscored. Interestingly, the study by Misiejuk and co-authors (2021), which had a notably large sample, demonstrated that most feedback in peer assessments, regardless of its perceived usefulness, was considered insufficiently specific and constructive by participants. This finding may highlight an under-communicated difficulty in designing an educational procedure where the peer feedback is as effective as possible. Nevertheless, to improve feedback quality, it would be prudent to consider, for example, enhancements related to instructions and feedback criteria.

I also note that the last semantic segment above is descriptive of another potential difficulty, namely, the perception that certain tasks are cognitively overwhelming (Freeman & Parks, 2010). It is unsurprising that students may seek teacher evaluations when they find an assignment too challenging or complex. However, in this study, only a few comments suggested that the assignment itself was overly challenging, indicating that the content was generally well-suited to the first-year academic stage.

Limitations

The procedure chosen for exploring students' experiences has at least two methodological weaknesses worth mentioning. First, the questionnaire used had not undergone any formal validation process and had not been used previously. Therefore, it is somewhat unclear what the different levels on the 7-point scale signify beyond indicating high or low levels of agreement. Though used solely for descriptive purposes, a key strength was its ability to capture students' perceptions of the separate steps of the peer assessment. Second, I note that the limited material obtained through the free-text responses makes it challenging to generalise these qualitative findings to the student cohort. Also, the qualitative analysis naturally relied on my interpretation, meaning others might view the material from different angles. One strength, however, was that I discussed the students' comments and subsequent analysis with the college's pedagogical advisors, to whom I am grateful.

Conclusion

Although most higher education students report a positive learning experience, perceptions of peer assessment can fluctuate, as shown in both previous research and the present case study. Research suggests that clear instructions, explicit feedback criteria, fostering responsibility (Cho et al., 2006; Xiong et al., 2023), and engaging students in feedback training (Li et al., 2020) can enhance the learning experience. In my experience, however, implementing such activities requires considerable time and resources. It seems therefore vital to anticipate an increased workload to effectively optimise this method, even though today's web applications may appear to offer a quick fix for this rather complex student-active procedure.

In later iterations of the assignment, I aimed to improve the guidance document and create opportunities for feedback training. Perhaps most importantly, after the first implementation I spent more time discussing the overall value of peer assessment with students, highlighting its role in developing critical thinking in a collaborative setting (Gill-Simmen, 2020) and fostering feedback literacy (Carless & Boud, 2018). Arguably, these competencies not only

enhance students' engagement with the assessor role and their academic proficiency but may also support their future employability and personal growth.

Indeed, integrating peer assessment into educational practice can be a rewarding aspect of the teaching experience itself, as it offers a powerful strategy to help, and perhaps motivate, the students. Conducting a local investigation of participants' experiences, such as the present case study, drew greater attention to the method - from students and colleagues alike. While the web application Peergrade® provided an elegant technical and practical solution, particularly well-suited for managing a large student group, the students' fluctuating experiences of receiving peer feedback indicated that it was not a complete solution for fully engaging students. My final reflection is that having the time and opportunity to involve students with a guiding hand remains valuable, even as digital platforms increasingly support complex teaching methods.

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