

# Capturing Learners' Emotional Responses to Computer-Mediated Peer-Feedback in English Proficiency

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## **Abstract**

Group massification and blended learning methods are forcing language practitioners to revisit the issue of student independent learning. Peer-feedback, aka peer review/editing/assessment (Yu & Lee, 2016: 461), is widely implemented in today's educational landscape. It aims to develop crucial competencies in text revision and editing. Next to traditional pen-and-paper forms of peer-feedback, computer-mediated peer-feedback (Yu & Lee, 2016: 469) is now steadily gaining ground. Yet, little is known to-date about the range of emotions that are induced by this type of feedback. The current paper addresses this issue and aims to measure English as a Foreign Language (EFL) learners' emotional attitudes towards online peer-feedback carried out via the D-PAC tool (*Digital Platform for Assessment of Competences*<sup>23</sup>) which was jointly developed by the Universities of Antwerp and Gent (Belgium). To capture EFL learners' responses to online peer-feedback, we developed a questionnaire which aimed to tap into learners' emotional responses to computer-mediated peer-feedback. The informants were 64 second-year students from the University of Antwerp taking part in the English Proficiency 4 course. The data indicate a rather mixed picture when it comes to student attitudes to (online) peer-feedback. A wide spectrum of emotions seems to be generated by computer-mediated peer-feedback, including for instance 'delight', 'curiosity', 'frustration', 'anxiety', 'boredom', etc. On a scale of 1 to 5, students mostly rated computer-mediated feedback as being a 4 (rather useful) or a 3 (neither useful nor useless), with a minority ranking it as a 2 (somewhat useless). In the discussion we will, among others, address how these results relate to students' level of proficiency level, motivation for the program and the course, and the quality of social interaction in the group.

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<sup>23</sup> D-PAC official webpage: <https://www.d-pac.be/>

## **Conference Paper**

### 1. Introduction

Although traditional forms of pen and paper peer feedback have been extensively studied (Freeman, 1995; Strachan & Wilcox, 1996), “research regarding the emotional response of learners in online peer assessment activities is relatively scarce” (Cheng, Hou & Wu, 2014:272). We aim to contribute to this strand of research by capturing the emotional reactions of English as a Foreign Language (EFL) learners to peer assessment carried out in a computer-mediated context.

The first section of this paper briefly reviews some of the main findings presented in the literature about (online) peer feedback. Section two presents the set-up of the current study. It describes the Digital Platform for the Assessment of Competences (henceforth D-PAC) which was used to implement online peer assessment, the online peer feedback activities which the EFL learners were asked to engage in, as well as the data which were collected to capture their emotional responses to these tasks. Section three zooms in on the results of our survey regarding the types of emotional responses generated by online peer feedback. The paper ends with a number of suggestions regarding ways in which to encourage positive emotional responses to online peer feedback.

### 2. Literature review

Liu & Hansen (2002: 1) define peer feedback as “the use of learners as sources of information and interactants for each other in such a way that learners assume roles and responsibilities normally taken on by a formally trained teacher, tutor, or editor in commenting on and critiquing each other’s drafts in both written and oral formats in the process of writing”. Despite the reservations expressed by a number of language education professionals, peer feedback has become a widely implemented pedagogical method.

In theory, the peer feedback method pursues a number of pedagogical objectives which in an ideal world would benefit both language learners and their teachers (Yu & Lee, 2016). From a learner perspective, peer feedback aims, among others, to foster cognitive skills (e.g., noticing, comparing, negotiating meaning, self- & peer-editing, commenting, assessing) and lead to long-term improvement in language writing skills (structure, argumentation, accuracy, complexity). For students wishing to become language teachers, the above are some of the most crucial skills that need to be acquired. From the teacher’s perspective, peer feedback is intended to foster learner autonomy and collaboration among students, as well as provide the students with more versatile types of feedback.

In reality however, research results into the benefits of peer feedback are generally inconclusive and rather mixed (Ho & Savignon, 2007; Yu & Lee, 2016), with some studies reporting positive effects of peer reviewing on cognitive and language skills (Liu & Tsai, 2005), while others found that learners responded rather negatively to the peer feedback experience, be it in the traditional or online mode (Wen & Tsai, 2006). Findings worth mentioning concern the anonymous nature of online peer reviewing which was found to create an uninhibiting type of environment where learners are free to express their ‘real’ thoughts about their peers’ work without them losing face. Importantly, Cheng (2009) found that online peer feedback increased students’ learning time outside the classroom but that it did not have an impact on learner motivation, engagement and autonomy. In general, the literature reports mixed student attitudes towards online peer feedback with students mainly expressing reservations towards the quality of the feedback provided by their peers. It is thus safe to say that, to this day, (online) peer feedback is met with a certain amount of scepticism by students, a finding which also emerges from the present study (see Section 3 below).

Given the contradictory results reported in the literature about the effectiveness of (online) peer feedback, we believe it is impossible to claim whether peer feedback is, in and of itself, a ‘universally’ pedagogically valuable method. Rather, the way in which learners respond to peer feedback is likely to be the result of an interaction between the context in which the peer feedback method is implemented (tasks, tools, proficiency of students, group dynamics, teacher guidance, etc.) and each student’s individual emotional response to this environment (levels of anxiety, motivation, perceived aptitude, etc.). In other words, the effectiveness of the online peer feedback experience is likely to strongly depend on “what goes on inside” (Muñoz & Ortega-Martín, 2005: 42). It is precisely “what went on inside” during the online peer reviewing activities which the current study has attempted to capture.

### 3. Participants, data, methods

#### 3.1 The D-PAC tool

The present study reports on the emotional responses of Dutch-speaking EFL learners to the online peer feedback activities which were implemented in the context of an advanced English Proficiency course (Engels: Taalbeheersing 4) in the Department of Literature and Linguistics at the University of Antwerp, Belgium. To actively perform online peer assessment the students were required to use the D-PAC<sup>24</sup> tool, an online platform developed jointly by the University of Antwerp, the University of Ghent and imec.

Concretely, D-PAC is an innovative tool for assessing a wide range of competences, based on the method of Comparative Judgement. As the D-PAC developers explain, Comparative Judgement is based on Thurstone's Law of Comparative Judgement which "stipulates that people are better and more reliable when comparing two things than in assigning an absolute score to (only) one thing" (d-pac.be). In the context of online peer assessment, students were thus asked to holistically compare two of their randomly selected peers' texts and decide which one was the "better" text (see Figure 1). Each text was assessed by multiple peers, which heightens the reliability of the holistic student judgements.

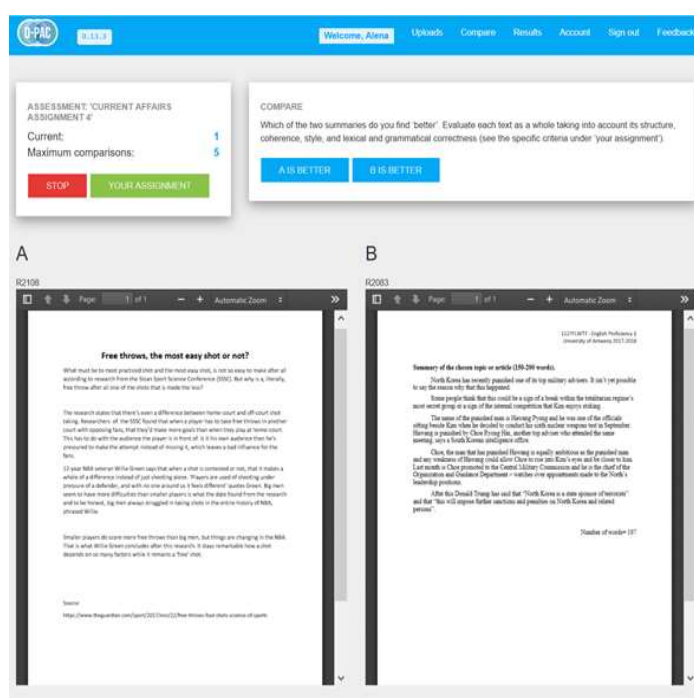


Figure 1: D-PAC window for comparative judgement

Following the holistic judgement, students were subsequently presented with two separate boxes (one for each text) in which they were asked to provide their feedback on matters pertaining to overall impact, text structure, quality of content and argumentation, style and register, language mechanics (accuracy) (see Figure 2 below).

<sup>24</sup> <https://www.d-pac.be/>

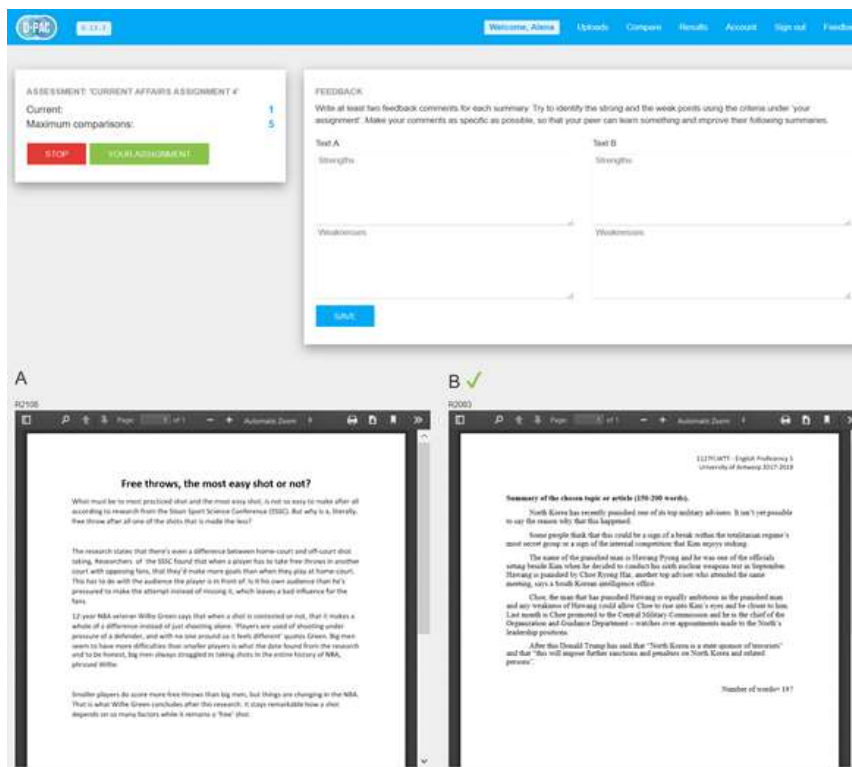


Figure 2: Providing peer feedback on D-PAC

A specific characteristic of D-PAC is that it automatically generates a ranking of student texts based on the results of the multiple holistic comparisons (see Figure 3), thereby allowing students to see how they have fared compared to their peers.

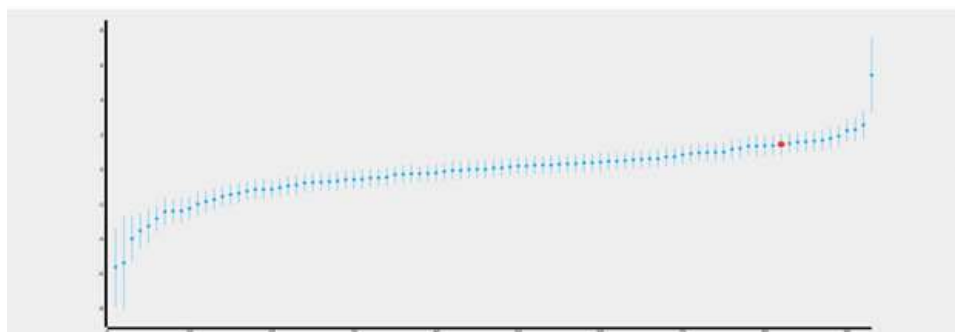


Figure 3: Ranking in D-PAC

### 3.2 D-PAC module in EP4

In the context of the English Proficiency 4 (henceforth EP4) course specifically, online peer feedback tasks were designed to build on students' writing and editing skills developed in two compulsory semester-long courses in academic writing. Students were instructed to carry out three peer feedback tasks on D-PAC throughout the term. They were required to write an assignment on the three following topics: voting among the younger generation, the dangers of "overthinking" and the issues raised by "overparenting". These assignments were anonymised and uploaded on D-PAC so as to be submitted to the peer review process where students were asked to rate and comment on five pairs of texts each time. The module was preceded by an introduction session which dealt with the technical aspects of using the tool, the principles of comparative judgement and specific criteria for peer feedback and assessment. Students were also instructed to use the feedback they received to revise one of the

assignments and submit it for teacher assessment. After the first two iterations students had an extensive feedback session which addressed the typical mistakes, the quality of the peer feedback and assessment and student emotional response to the tasks.

Online peer assessment constituted the continuous assessment module for this course. Students were assessed based on whether they had participated in the peer reviewing and not on the quality of their peer comments or the ranking of their texts.

### 3.3 The questionnaire

To tap into the emotions generated by online peer assessment, a detailed pen and paper questionnaire was developed and submitted to 64 EP4 students. In keeping with the topic of the conference, the questionnaire specifically targeted a number of emotions, namely:

- student motivation for the English program in general and for online peer feedback in particular
- self-perceived aptitude in English overall and in English writing
- anxiety/confidence when speaking and writing in English
- student dynamics within the EP4 group
- perception of peer feedback as a legitimate type of feedback
- feelings generated by the quality of the peer feedback received through the online medium.

Questions required both quantitative answers, e.g. *on a scale of 1 (not useful at all) to 5 (very useful), how useful did you find the feedback you received on D-PAC from your peers*, and qualitative comments, e.g. *name three emotions that you associate with working on D-PAC*. The questionnaire included a number of open questions where students could write a short comment, e.g. *What did you find particularly frustrating in terms of quality of the feedback you were given?* The data were collected into a dataset and standardized for spelling. Comments provided to open questions were recoded to identify the key responses that could be analysed quantitatively and qualitatively. The results provided below are necessarily selective and will present some of the major results to stand out from the questionnaire.

### 3.4 Results: learner emotions towards online peer reviewing

At first glance, the survey reveals many negative emotions in relation to online peer feedback (see Figure 4). When asked to spontaneously name three emotions they associate with this procedure, the students provided a total of 67 different emotions<sup>25</sup>, with “frustrated” and “bored” topping the list (reported by 21 and 18 students respectively). Other negative emotions pertaining to inner feelings such as “nervous”, “anxious”, “insecure”, “overwhelmed” were also given, along with emotions related to the task itself, e.g. “a lot of work”, “time consuming”, “repetitive”. A number of positive emotions were expressed although they constituted a minority, e.g. “curious”, “motivated”, “excited”, “relieved”.

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<sup>25</sup> Names of emotions were standardised to adjective forms for a more homogeneous analysis.



Figure 4: EP4 student emotions towards online peer assessment

These negative results need to be attenuated, however. Implementing online peer feedback was not all “doom and gloom” and did in fact generate a number of encouraging pedagogical findings. For instance, when asked to identify areas where they feel their writing had improved as a result of peer reviewing, the students were able to provide concrete answers, e.g. “I need to use more sources when writing”, “my arguments lack clarity”, “I was told to let my own opinion shine through more, which is something I struggled with and have now gotten better at.” They also overwhelmingly agreed that online peer reviewing encourages learner autonomy (see Figure 5) and many acknowledged that the feedback they had received from their peers was indeed sometimes useful.

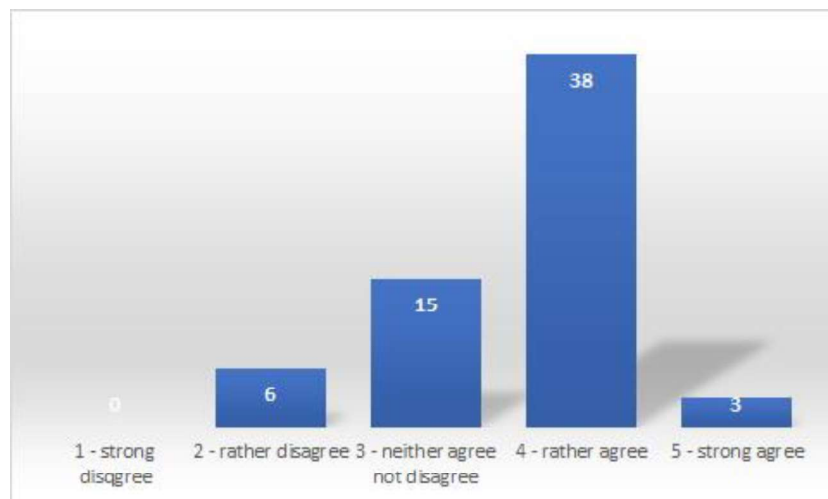


Figure 5: Online peer feedback encourages learner autonomy

When asked whether they preferred pen&paper peer feedback over online peer feedback, c. 60% of the students responded in favour of peer feedback in a computer-mediated context.

In what follows we provide further insights into the results generated by the questionnaire so as to shed some light on the possible reasons for the scepticism surrounding online peer assessment. Importantly, the negative emotions were *not* induced by the D-PAC tool itself as all students bar one rated it as a very to rather easy and user-friendly tool to use. The negative emotions can therefore not

be attributed to tool usability. Scepticism is not due either to student familiarity with peer feedback as a pedagogical method as all students reported having done peer reviewing in other courses as well as in informal contexts (i.e. asking friends and family to review their work). The students also readily recognised feedback from their peers as a “legitimate” type of feedback.

One of the possible reasons why online peer feedback generated lukewarm emotional responses relates to the quality of the peer comments. Figure 6 shows that a total of 29 students (46%) found the feedback given by their peers to be “rather useful” or “very useful”. However, 34 of their counterparts (54%) rated the feedback they received as “not useful at all”, “somewhat useless” or “neither useful nor useless”. “Neither useful nor useless” is in fact the second most populated category in Figure 6 and might be interpreted as a type of indifference towards peer feedback. This appears to go against the claim by Cheng et al. (2014: 272) according to which “be it positive or negative, the feedback received from peers may well evoke an emotional response”. Figure 6 thus reveals some mixed feelings towards the quality of the online student comments.

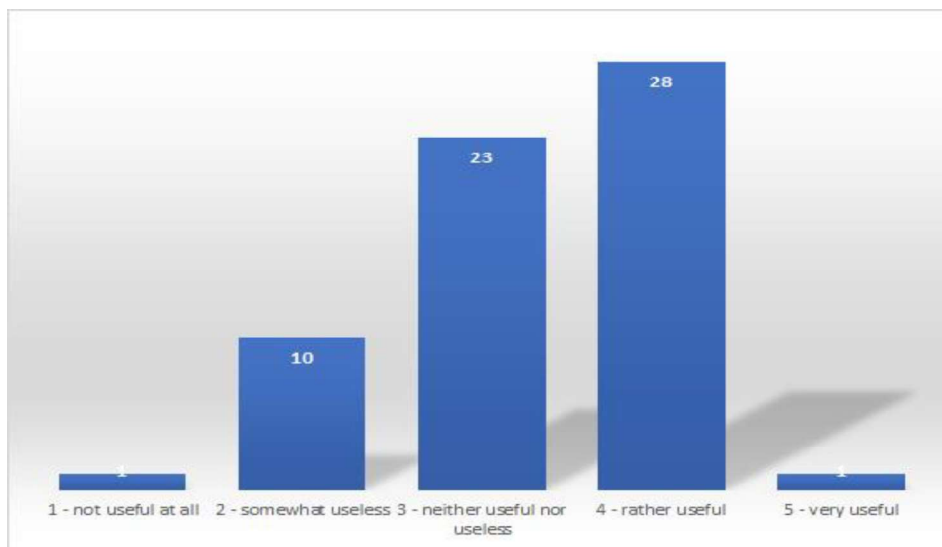


Figure 6: How useful did you find the feedback from your peers?

When invited to comment on the reasons for their answers, students qualified the feedback of their peers with a variety of adjectives (see Figure 7). Interestingly, “useful” was the most frequently used adjective. However, we note that it was sometimes used as a downtoner to reduce the impact of the criticism which followed, e.g. “every once in a while a peer would say something useful, but overall the feedback lacked depth”. Criticism concerned, among others, the “vagueness” of the peer comments which were also sometimes considered to be downright “wrong”. The repetitive nature of the comments received by the multiple peers who looked at the same text was sometimes lamented, with only one student intelligently pointing out that if a point was repetitively commented on, it must indeed represent an issue that needs to be worked on. Students also mentioned that they sometimes felt like their peers had carried out the peer reviewing in haste (i.e. were “disengaged” from the task) and “did not bother” to put any time or effort into the activities. This could indeed be the case for some as, when asked how long they had spent doing the online peer reviewing work, answers ranged from as little as 20 minutes to as long as 3 hours (average time was calculated as a little over one hour).

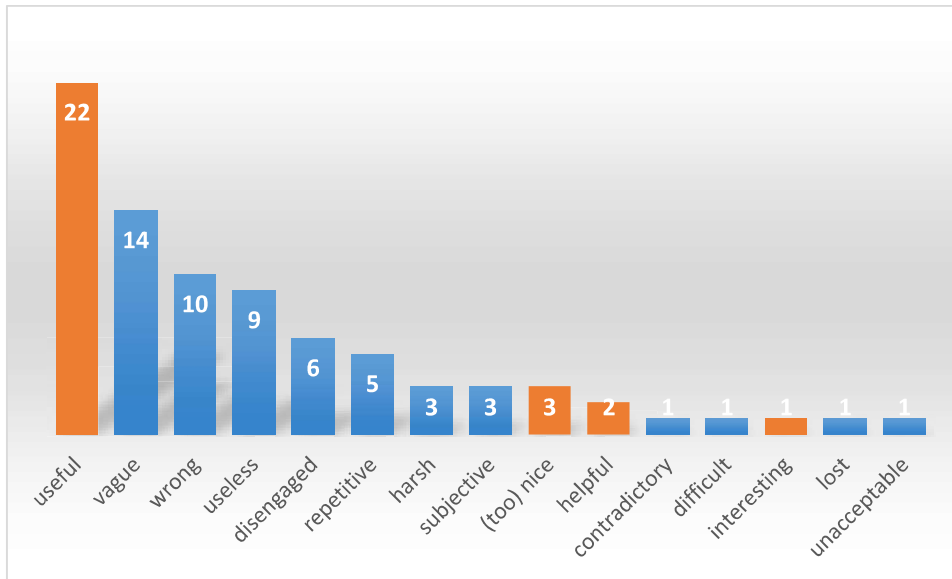


Figure 7: Comment on the quality of the peer feedback received

Figure 7 further points out that students sometimes felt their peers to be particularly harsh in their comments. This observation was also raised elsewhere in the questionnaire and might be related to group dynamics. Yu and Lee (2016) distinguish between collaborative, expert/novice, dominant/dominant, and dominant/passive group dynamic patterns, all of which will induce different emotional responses to the feedback provided. According to the authors, the collaborative pattern of interaction with a moderate to high degree of equality and mutuality is more conducive to L2 learning and writing development than other patterns. It appears from our results and the sometimes bluntness of the comments that some students may have taken on an “expert/novice” role where a more positive collaborative relationship would perhaps have been desirable. However, it might also be the case that certain students took some of the comments too personally and felt them to be harsh where this was not the peer’s intention.

The factor of the student’s proficiency level may also partly explain the students’ mixed views towards online peer feedback. We analysed the results of how students rated the quality of the feedback provided by their peers (Figure 6) against the exam score each student obtained for the EP4 course at the end of the academic year. The results presented in Figure 8 interestingly reveal that students who responded 2 (the feedback was “rather useless”) tended to have higher scores on the exam while students who responded 4 (the feedback was “rather useful”) tended to have a lower exam score.

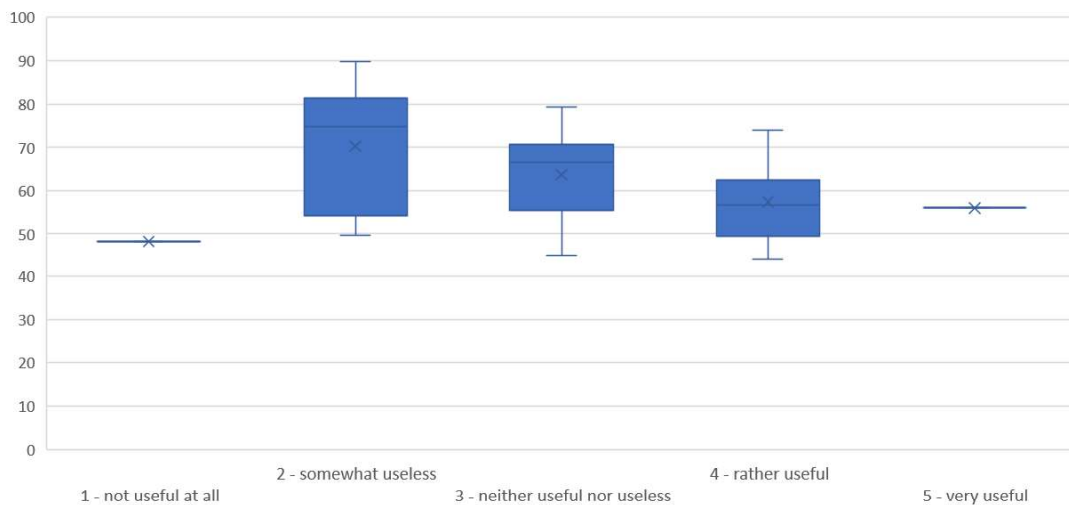


Figure 8: Relationship between perceived quality of peer feedback and EP4 exam scores



Perhaps this betrays a possible feeling of ‘arrogance’ on the part of the higher achieving students who less readily accept that their immediate counterparts may be able to constructively comment on their writing. The issue of the proficiency level (which is still very much under-researched in the online peer assessment literature) may be key in the success of online peer reviewing: perhaps it is the case that higher-proficiency level learners should provide feedback to their lower-proficiency counterparts in different years of study. This may, in certain cases, lower the level of scepticism when it comes to acceptance of peer feedback from learners within the same EFL group who may feel it is a case of “the blind leading the blind”.

#### 4. Conclusion

The reactions generated by online peer reviewing within the EP4 group represented a complex mix of emotions ranging from the very negative (frustration, boredom) to more positive acknowledgement that peer feedback may nevertheless encourage learner autonomy and that it is a legitimate type of feedback. It is fair to say that students did not necessarily consider the bigger pedagogical picture and did not immediately appreciate the pedagogical values of peer reviewing which were obvious to the teachers. This may have to do with student personality (some level of immaturity, anxiety and perhaps even arrogance) and the fact that students may perhaps have been more concerned with where their work ranked in the general ranking than with the possible pedagogical benefits of peer reviewing. This paper has highlighted a number of factors that need to be considered when implementing peer feedback activities (e.g. quality of the feedback provided, proficiency level issues, group dynamics, underlying feelings of indifference, etc.). Although teachers do not have direct access to “what goes on inside”, it is crucial that they be aware of students’ emotional reactions to the peer feedback experience so as to “offer suitable guidance through an emotional response analysis” (Cheng et al., 2014: 282).

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## **Bio data**

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