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### **Investigating college students' perceptions of online and offline review modes in academic writing courses**

#### **Bio data**



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#### **Abstract**

The importance of peer review practice in writing courses has been strongly supported by pedagogical research due to its value in facilitating students' writing progress. This study investigated college students' experiences with different peer review modes in an academic writing course. We investigated three peer review modes: (i) face-to-face peer review (F2F), (ii) anonymous computer-mediated peer review (CMPR), where students provided feedback anonymously on an online platform, and (iii) blended peer review, where students conducted both F2F and CMPR. This study was guided by the question: What are students' perceptions of and experiences with the three peer review methods? Three classes ( $n = 66$ ) enrolled in an academic writing course at a Singaporean university participated in this study. The three classes were assigned to the three peer review modes respectively over a semester. Surveys and interviews were administered to investigate students' perceived usefulness of the feedback and their interactions with the reviewers. The findings show that students in all three groups were generally satisfied with the mode they were assigned to, but with a preference for the blended mode. The blended mode accommodates different learning needs by addressing the limitations of both F2F and CMPR and leveraging the merits of both modes. Several psychological and contextual factors were found to impact the effectiveness of peer review practices, including the closeness among peers, the presence of incentives, the functionality and affordances of an online peer-review platform, time constraint, and the instructions.

### Introduction

Peer review, where students evaluate and comment on each other's work, has been widely applied in various educational contexts due to its numerous pedagogical benefits (Cho & Cho, 2011; Cho & MacArthur, 2011, Topping, 2009). For instance, peer feedback greatly helps learners identify issues with clarity and prompts divergent thinking (Hsieh & Hill, 2021), facilitates learners' language improvement (Chang, 2014), cultivates learners' awareness of audience when they write (Lee, 2015), and engages learners in more reflective and deep thinking (Zheng et al, 2015). Apart from the focus on its benefits, another important strand of research has focused on the communication modes in the peer review process (e.g., face-to-face [F2F] and computer-mediated peer review [CMPR]). Due to the advancement of technology, a plethora of platforms and features facilitating peer review practices are made available and have become ideal alternatives to the traditional F2F peer review. Literature has shown that different peer review modes could greatly impact students' feedback-providing behaviors, the nature of feedback, students' perceptions, and the level of engagement (Chang, 2012; Ho, 2015). While most of the studies have compared the F2F and CMPR modes (Ho, 2015, Liu & Sadler, 2003; Pritchard & Morrow, 2017), very few have examined the effectiveness of a blend of the two modes and how it could impact the peer review process and student perceptions (Chang, 2012). This study investigated students' perceptions of the two primary modes of peer review, F2F and anonymous CMPR, as well as a blended mode (F2F and CMPR), in a university-level academic writing setting.

### Literature review

Research has shown that both F2F and CMPR have their limitations and strengths that could impact students' perceptions and feedback-providing behaviors to a large extent.

#### *Students' perceptions of the F2F review mode*

In a F2F setting, the most valued aspect is the interactivity among students as they are given opportunities to negotiate and elaborate their intended meanings in their writing with the reviewer for informed revision decisions (Tsui & Ng, 2000). Conversely, some students in the F2F setting reported discomfort and embarrassment when they had to highlight weaknesses in each other's writing. Thus, the social factor of face-saving is found to override the provision of honest and direct comments (Bradley, 2014; Snowball & Sayigh, 2007). The fear of harming others' self-esteem and the intention to maintain cohesion may lead to poor-quality or praise-based feedback, which to some extent compromises the reliability of peer feedback. Students may also feel uncomfortable when their writings are read and critiqued by others (Topping, 2009). These feelings are summarized as "negative social processes" (Topping, 2009, p. 24), which could potentially subvert the reliability and validity of peer feedback.

#### *Students' perceptions of the anonymous CMPR review mode*

In the recent two decades, the proliferation of online peer review platforms has created alternative modes of peer review with many facilitating features, including anonymity. Technology not only streamlines the administration of anonymous peer review, but addresses the concerns in the traditional F2F peer review setting. Research has shown that anonymous CMPR has the potential to eliminate possible stress and embarrassment inherent in the F2F setting, which helps to promote more direct and honest feedback (Bradley, 2014; Loretto et al., 2016; Wu et al., 2015), as well as encourage participation due to reduced peer pressure (Raes, 2015). Additionally, when identities are unknown to each other, not only do reviewers produce more objective feedback, but writers tend to

assess the feedback more objectively (Cote, 2014). Therefore, students reported favourable attitudes toward the anonymous peer review environment (Mostert & Snowball, 2013). With the increased comfort level, Li (2017) found that students undergoing the anonymous review process academically outperformed those who engaged in fully identifiable review. However, students' chances for immediate face-to-face interactions are minimal in such an environment. Studies also found that with the nature of anonymity, some students may submit poor-quality drafts as the "peer pressure" of performing well is absent (Mostert & Snowball, 2013). The lack of engagement observed in anonymous CMPR may lead to the reviewers' reluctance to provide constructive or explicit feedback.

### *Research gaps and research question*

These mixed results motivated us to propose a blended mode of peer review, where both F2F peer review and anonymous CMPR are implemented in the same peer review process for the same assignment. Research has been conducted to compare the F2F peer review and CMPR (Ho, 2015; Liu & Sadler, 2003; Pritchard & Morrow, 2017), yet there is a lack of studies on the blended mode. Chang (2012) is one of the few studies that examined a blended mode, with F2F as well as synchronous and asynchronous CMPR implemented in the same assignment and has concluded that different peer review modes can successfully complement each other. However, the scope of the study does not include the effect of anonymity in a blended mode. Addressing these research gaps, this study investigated students' perceptions of the effectiveness of three peer review modes: the F2F mode, anonymous CMPR, and the blended mode. Given the limitations and strengths of both the F2F peer review and anonymous CMPR mode, this study hypothesizes that a blended mode could allow the students to enjoy the merits of both— opportunities for negotiation and discussions, as well as a 'safer' environment to provide more direct and honest feedback. It is also expected that the blended mode would allow both to compensate for each other's limitations. The research question that guides this study is: What are university students' perceptions of the three peer review modes in an academic writing context?

## **Methodology**

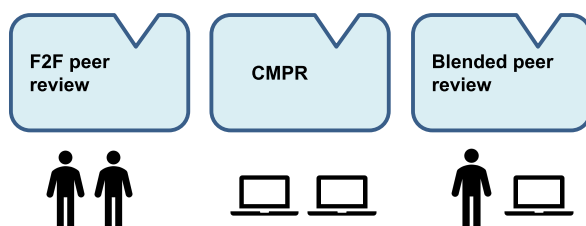
### *Study setting and participants*

This study was a form of classroom action research, which is an ideal methodology that allows the teacher-researcher to test and reflect on pedagogical practices to improve teaching and learning (Creswell, 2012). The study was conducted in a compulsory academic writing course for freshmen at a Singaporean university; the course involved two-hour weekly tutorials over 12 weeks. Students from three classes participated in this study (a total of 66 students). They are all first-year students from the school of Engineering, and the male to female ratio was roughly 2:1. The three classes were randomly assigned to one of the three peer review modes: the F2F mode, the anonymous CMPR mode, and the blended mode. One of the authors was the instructor of the classes. Students were provided with an overview of the research and were fully informed of the voluntary nature of the study. Informed consent was sought from all participants.

### *Procedure*

In this course, students wrote two assignments over a semester, a technical proposal (group work), and an evaluation report (individual work). As a usual practice in this course, students conducted a peer review with two reviewers one week prior to the submission of their final assignment draft. For the F2F group, they were given one hour to review two peers' work, write their comments, and orally discuss the feedback in class. For the CMPR group, they conducted a double-blind review in an online anonymous

platform *Peergrade*. Students were randomly assigned two drafts to review at their own time within two days. *Peergrade* was employed due to its functions that support a good practice of peer review, including anonymity, multiple reviewers, feedback reactions, etc. During the review period, the instructor monitored reviewers' feedback activities and progress. As for the blended group, students worked with one reviewer face-to-face in the class, followed by the other review conducted online over *Peergrade* (see Fig.1 for the study design). Students in all three modes conducted peer reviews for the two written assignments, as a group work for the technical proposal, and individually for the evaluation report. The same rubric was used for the assignments in all three modes. In the F2F setting, the rubric was shown on the PowerPoint slide in class, and for the CMPR, the rubric was presented along with the drafts on the screen. After the peer review, students had a week to revise their drafts based on the feedback they received from their two reviewers.



**Figure 1.** *The study design*

#### *Data collection and analysis*

To understand students' overall perceptions and learning needs, a survey was administered upon the completion of the peer review for each assignment. The reason for the repeated survey distribution is to obtain a more comprehensive observation of students' perceptions over the semester. Students were surveyed about their satisfaction in terms of the overall peer review experiences, interactions with peers, and perceived helpfulness of the feedback. To obtain a more in-depth understanding of students' perceptions, individual interview or focus-group discussions (depending on students' availability) were conducted with volunteer students from each class at the end of the semester. A total of 34 students from three of the modes participated in the interview/focus-group discussions (F2F:  $n=9$ , CMPR:  $n=12$ , blended:  $n=13$ ). In the interview, students were asked to recall the review process, peer discussions, revision decisions, and were asked about the perceived benefits, and issues with the assigned peer review mode, the overall review experiences, and their preferred review mode. The interviews were transcribed using the intelligent verbatim approach (leaving out repeated words or fillers). The interview transcripts were coded into negative and positive views using an inductive coding approach that identifies emerging common patterns and recurring themes.

#### **Findings and discussion**

The survey results and the interview/focus-group discussions are presented in a combined manner to show students' overall perceptions and preference. Exemplary quotes from the interview/focus-group discussion are provided to support the observed themes.

### Overall satisfaction

The overall survey results indicate that students in all three groups were generally satisfied with the mode they were assigned to. No statistical significance was found among the three groups in terms of students' satisfaction. However, the blended mode receives the highest percentages of 'agree' and 'strongly agree' (with one exception) when students were asked about their overall satisfaction with the peer review mode for both assignment 1 and assignment 2 (Table 1).

**Table 1.** Percentages of 'Agree' and 'Strongly agree' in students' overall satisfaction with the peer review mode

Overall satisfaction with the peer review mode	F2F (n=23)	CMPR (n=17)	Blended (n=26)
Assignment 1	83%	82%	F2F: 88% CMPR: 88%
Assignment 2	71%	86%	F2F: 88% CMPR: 85%

The observation could be substantiated with the focus-group discussions, which revealed that the respondents generally appreciated the feedback experience. However, while the students appreciated their assigned feedback modes, they generally preferred the blended mode instead. Fifteen respondents expressly indicated their preference for the blended approach, with five other students expressing their tacit agreement through head nodding and facial gestures. Only four respondents preferred the CMPR mode and another four respondents, the F2F mode.

The respondents also raised two core issues related to their feedback experience; these pertain to the value of the feedback received, and the flexibility offered by the feedback mode. These issues are discussed in turn in the following sub-sections.

### Value of feedback

Repeatedly, the respondents emphasized the importance of receiving constructive feedback. They agreed that the success of the feedback practice was viewed almost entirely in terms of how useful the feedback was in improving their drafts. Such feedback tended to be facilitated by the online mode, where the anonymity of the reviewer often resulted in feedback that was more direct and honest, which echoes the results of previous research (Bradley, 2014; Loretto et al., 2016). One student commented:

I think, being anonymous, kind of, helps with being more direct because if you know the person, you might try to like hold back your comments in case you hurt their feelings halfway. So, it's nice that it's anonymous and you don't really know who you're giving feedback to so you can be more direct about their mistakes, yah. (O1)

By contrast, the feedback received during F2F sessions was far more reserved, in accordance with many studies (Bradley, 2014; Snowball & Sayigh, 2007). As not all student-reviewer pairs were familiar with each other, the reviewers tended to be more polite and often hedged their feedback so as not to cause offence. As one respondent put it:

Yeah, it's mainly the word choices, but then I feel that at the end of the day, the word choice used may still affect the type of message that you're going to put across. Yeah, because some tone [*sic*], some words, some words are

much more straightforward and direct and hurtful. So, you will try to use less impactful words; then it may actually turn the message slightly but I will not say entirely. Alright, so message-wise, it's still a lot of the same direction, but it wouldn't be as impactful. (F15)

... when we are giving a [sic] feedback during face-to-face, sometimes when you want to comment on something that is, you think, your peer is doing badly and you don't dare to say. (B5)

While such a strategy may be tactful, the obvious shortcoming is that flaws in the student's draft may sometimes be glossed over or even ignored, thus affecting the value of the feedback. This problem is, of course, less severe among friends who know each other well, but such a pairing option is not always possible, particularly when greater interactivity among students in class is encouraged.

There are no easy solutions to such a problem in the F2F setting, compounded perhaps by the relative conservatism in Singaporean culture (Mathew et al., 2021). While teacher-student consultations are often held face-to-face, teachers are generally regarded as authority figures and experts in the field. But this is not so among peers. In this respect, the online mode appears to work better in helping reviewers to provide objective and potentially useful feedback.

Another issue raised by a few respondents in a F2F setting is that sometimes oral clarification may falsely indicate that an issue was solved. Some pointed out that when they clarified a problem with their peer, who may seem convinced and let the issue pass, they would still be concerned, or even confused, whether there is a need to revise their writing. One indicated, "[...] there will come this worry when others read it, will they also see this point of view or will they also need this clarification?" (B8). If they were to read the comments online, they would tend to think more objectively and thoroughly about whether, or how to revise. Some respondents even remarked that, for reviewers, such oral clarification could be a "distraction" that skewed their judgement or interrupted their concentration. These issues, again, would compromise the value of peer feedback to a great extent, and the online mode is seen as a more favorable environment for peer review. As B2 noted, "[...] in a sense doing it online removes all these distractions[...] More focused, more concentrated."

#### *Time and physical constraints, and the importance of interactivity*

The respondents also discussed how the time constraint on the reviewers to complete their feedback, and the need for them to be physically present during the feedback process could affect the value of the feedback. Together, their views call for a feedback mode that is flexible enough for these constraints to be relaxed.

As regards the time constraint, the F2F mode clearly suffers since the reviewer needs to read the draft and process it within the assigned time in the presence of the student. The respondents in the focus-group discussions recounted two outcomes with such a practice. First, the draft was read too quickly, resulting in feedback that was too general and thin on details. Second, conversely and more commonly, reviewers took too long to read the draft, leaving hardly enough time for oral feedback and discussion. In both outcomes, the value of the feedback is compromised. As one respondent complained:

[...] we needed to take some time to, sort of, understand what they were writing and dissect it based on the rubrics. So, we didn't really spend much time to think about, you know, whether or not the idea actually is feasible, whether it makes sense for them to continue on this idea. (F19)

The online mode, on the other hand, has no such time or physical constraints. Reviewers were allowed to read their peers' drafts and complete the feedback at their own time and convenience. This allowed them to think more deeply about both the content and technical aspects of their assigned drafts, and so offer more detailed, constructive, and valid suggestions for improvement. Coupled with the functionalities and affordances of the online review platform, students' review practices were further facilitated. Having the paper and the rubric juxtaposing on the screen "prompts us to check through the points," O2 indicated, therefore encouraging more comprehensive feedback. Reviewers also felt incentivized by the feedback generated by the system for the reviewers. "[...] like 'Wow, you're a feedback rock star' [...] that's quite helpful and it provides people some motivation to give more elaborate feedback. (O3)" These functionalities helped to enhance the positive experiences in a constraint-free online review setting and are not readily available in a F2F setting.

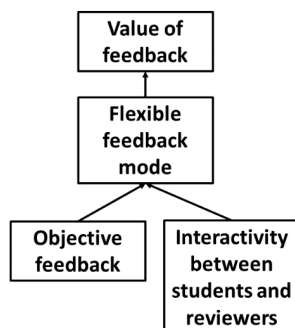
While the time and physical constraints of the F2F mode might appear to be hindrances, numerous respondents in fact valued the physical presence of the reviewer. When it worked well, the F2F mode allowed for immediate interaction between students and reviewers; the ease and convenience of speaking, rather than typing, about points of concern was especially attractive. F22, in fact, described his feedback experience as "a very intimate feel", and appreciated how the interactivity allowed him to absorb the information more quickly. Seeking such immediate clarification in the online mode is not quite possible, and while there is an option to deliver an online message to the reviewer via the feedback reactions function, the message is not always answered promptly.

[...] unlike the comment part where it is required for us to comment on the friend's work on Peergrade. But to reply is not a must. So, we will choose the easy option, which is not to reply. (B22)

Not replying to a query defeats the idea of feedback being "a dialogical and contingent two-way process" (Nicol, 2010, p. 503). This is an important point to consider, for while the feedback offered via the online mode tends to be more detailed, it can also be challenging. In the event that clarification is needed, the online mode lacks the synchronous interactivity that the F2F mode offers.

#### *Proposed blended peer feedback model*

The inputs of the respondents indicate clearly that feedback practice, including the mode of feedback, is only as useful as the perceived value of the feedback received. The respondents preferred peer feedback to be honest and constructive, and expected the peer review process to be free from "distractions." They also highlighted the need for the feedback mode to be flexible enough to facilitate both objective feedback and synchronous interactivity between students and reviewers. The following model summarizes the broad observations from the interview and focus-group discussions:



*Figure 2: Proposed blended peer feedback model*

We argue that the peer feedback mode that is best able to achieve this flexibility is the blended mode, where both the F2F and the CMPR modes are incorporated. The blended approach not only brings together the strengths of each individual mode to accommodate the different learning needs of individual students, but also addresses the limitations of both modes. Some students may have a greater preference for one or the other mode, and may thus fail to fully benefit from the feedback process if only the non-preferred mode is used. This problem is mitigated if both modes are used.

Further, for any single assignment, the use of both modes has the added advantage of including more reviewers — one for the F2F component, and another for the online component. This helps students to consider the perspectives and recommendations from more than one reviewer, and so make better decisions to revise and refine the writing (Cho & Schunn, 2007). In fact, four respondents, such as F22 below, recommended having more than two reviewers despite knowing that this would entail more work for themselves.

- Researcher: So, when you say “more of that”, do you mean more reviewers or multiple times of review?
- F22: More reviewers. [...] I think two is the bare minimum.
- Researcher: Oh, I see. So, maybe three or even four would be better?
- F22: Yeah, three or four will be better. [...] When you go out to work, you have to work with three or four people so it will be better to work with that number of people so you can train your mind. (F22)

We see here an implicit benefit of the feedback process, that it not only helps students improve on their writing, but goes some way to prepare them for the future demands of the workplace, where working in teams and providing feedback are essential skills (Krakoff, n.d.). Particularly, to be able to provide feedback via different modes and platforms, the provision of modelling in the instruction is important to prepare the students for feedback-providing and to maximize the efficacy of a blended peer review mode.

## Conclusion

This study investigated university students’ perceptions of different modes of peer review, F2F and anonymous CMPR, and a blended mode. The findings largely support our



hypothesis that the blended mode is perceived to be the most conducive practice that allows students to enjoy the merits of both modes. We proposed a peer feedback model, in which both F2F and anonymous CMPR are incorporated to create the desired flexibility that facilitates peer review practices.

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