Amy Kong and Mark Feng Teng*

The operating mechanisms of self-efficacy and peer feedback: An exploration of L2 young writers

https://doi.org/10.1515/applirev-2020-0019

Abstract: There is a huge scarcity of documentation of instances in which students do not follow the peer review training guidelines. One factor in these unanticipated scenarios could be learners’ self-efficacy (SE). The current investigation illustrates how different sources of SE contribute to students’ agentic orientations during peer review. For this purpose, six secondary-one students were paired to implement peer reviews in an after-school English writing course, after receiving peer review training. The data from three dyadic peer review sessions, stimulated recalls, and pre-/post-interviews were triangulated with quantitative data from 20 learners. The results showed that the students’ low SE for self-regulation (SESR) for peer review at the outset overshadowed the impact of training and influenced the use of strategies by them during the peer reviews. Whereas those with high SESR followed the instructions from the training session and regulated the peer reviews professionally, those with low SESR ignored these guidelines, which resulted in constrained agency and promoted their skepticism of peer review in the end. However, by comparing their own performances as reviewers with those of their peers, the students’ SE for regulating future peer review also changed. This paper underscores SE as an important construct in peer review for L2 young learners.

Keywords: self-efficacy, peer review, metacognitive training, self-regulation, social comparison

1 Introduction

In recent years, there has been a call for a paradigm shift from teacher-directed and product-oriented instructional rhetoric to a student-centered approach that

*Corresponding author: Mark Feng Teng, Faculty of Education, University of Macau, Taipa, Macau, China, E-mail: markteng@um.edu.mo. https://orcid.org/0000-0002-5134-8504
Amy Kong, Department of English, The Hang Seng University of Hong Kong, Hong Kong, Hong Kong, E-mail: amykong@hsu.edu.hk. https://orcid.org/0000-0001-9377-6171
can motivate students to be agents while learning to write (Teng 2020). Peer review, a regulated, collaborative learning activity that involves students working interdependently to provide written and/or oral feedback for better writing, has come to force in the L2 writing research agenda. Despite evidence of the facilitative role of peer review in improving students’ writing (Blain 2001; Zhu 2001), there are concerns about students’ abilities to understand and evaluate the peers’ texts effectively (Lee 2015; Paulus 1999; Yu and Hu 2017).

Although training for peer review is proposed to unleash the potential of peer review (Bui and Kong 2019; Hansen and Liu 2005; Liu and Hansen 2002), peer review is considered to be a social, collaborative activity that could be affected by personal and social factors (Van Meter and Stevens 2000). The factors could be, but not limited to, the students’ perceptions of peer review, their self-efficacy (SE), and the power relations among the participating students. This study aimed to explore how the differences in students’ SE engendered unexpected outcomes after they received peer review training. Related to this, the purpose was to provide a detailed outline of the operating mechanisms of different sources of SE when young learners navigated peer reviews by giving both oral and written feedback to their peers in L2 writing classrooms.

2 Literature review

2.1 Peer review and feedback in L2 writing

According to Lundstrom and Baker (2009), peer review can provide students with feedback and “a range of skills important in the development of language and writing ability,” such as “meaningful interaction with peers, greater exposure to ideas, and new perspectives on the writing process” (p. 30). Peer review is conceptualized as a highly effective means for encouraging collaborative learning and ensuring writing quality through evaluation of the work by one or more peers. When students work together to improve the quality of their writing tasks, they get an opportunity to engage in discussions, promote their critical reading and thinking skills, contribute to complementary knowledge through “scaffolding” (Vygotsky 1978), and be responsible for their learnings (Benson 2016; Hyland 2000; Shen et al. 2020).

Numerous studies have been conducted in L2 writing classes to examine the quality of peer feedback. In a study involving four learners of English as the second language (ESL) in Canada, Blain (2001) reported that the writing quality of the students’ revised drafts had improved due to the quality oral comments received from their peers. In addition, Zhu (2001) collected data about the quality of peer
feedback among three mixed peer response groups, each with one to three non-native speakers. He observed that non-native speakers were able to give as many written, global comments as the native speakers. However, in a recent study that focused on corrective, written feedback (Reynolds and Kao 2019), data collected from 45 Taiwanese students showed that teacher instruction with error correction and digital-based instruction could lead to better performance in writing than error correction by the learners. The study highlighted the benefits of teachers’ direct, focused feedback on L2 writing as well as the disadvantage of exchanging feedback among peers.

Hence, despite some positive findings about the quality of peer feedback, we may need to acknowledge some shortcomings of peer review or feedback. For example, Paulas (1999) revealed that the majority of peer revisions made by 11 undergraduate ESL students were at the surface-level. In addition, some student writers of higher proficiency level perceived that their peers, particularly those at lower proficiency level, were not qualified to act as substitutes for teachers, and regarded the peer feedback as poor, less elaborate, and vague (Yu and Hu 2017). Some learners could not trust in their peers’ ability to give constructive feedback on L2 writing—because the age of the learners or their interlanguage level could constrain the success of collaborative activities, leading to the learners being unable to discern the benefits of the “social interaction demanded by peer review” (Lee 2015, p.26). We could see the need for effective peer review training activities to coach learners about the principles and practices of effective peer group interactions and alleviate the practical and pedagogical shortcomings involved with peer review.

2.2 Peer review training

To ensure optimal effects from peer review, Hansen and Liu (2005) and Liu and Hansen (2002) suggested peer review training to instruct students with a variety of scaffolding strategies that might lead to increased negotiations during peer interactions, thereby boosting the levels of cooperation. They categorized effective verbal comments into three types, namely, evaluation, suggestions, and asking for clarifications. They also stressed the importance of adopting clarifications to intensify peer interactions as the strategy provided students with a chance to discuss their opinions in detail.

Many studies have shown that peer review training could improve quality of peer feedback, intensiveness of peer interactions, and quality of revised drafts. For example, Stanley (1992) guided his students to undergo a lengthy coaching procedure, which included role-playing and analyzing evaluation sessions,
discovering rules for effective communication, and studying the genres of student writings. Results showed that compared to the un-coached students, the trained students demonstrated a higher level of engagement in peer interactions and gave clearer comments to the writers to revise the drafts. Berg (1999) conducted a similar study that examined the effects of trained peer response on both the students’ revision types and the writing quality. Results revealed that the revised drafts of the trained students showed a greater improvement, and these students made more meaningful revisions than the untrained pupils, regardless of their proficiency levels.

Bui and Kong (2019) delivered a metacognitive instruction in a secondary school in Hong Kong to train 20 secondary-one English as foreign language (EFL) students to conduct peer reviews. Results showed that the training enabled the students to understand the goal of the peer review, which was to read and improve each other’s drafts collaboratively; it also influenced the students’ use of socio- and meta-cognitive strategies during peer review, enhancing the quality of the peer feedback. Similar findings were also reported in Kong’s (2021) dual-case study, where two pairs of secondary students reported a significant impact of training on their peer review stances in terms of the four mediators (artifact, role, rule, and community) within the peer review activity system. These improved peer review techniques increased the variety of peer interactions and comments.

Although training has been reported to amplify the effectiveness of peer reviews, humans, who are conceptualized as complex social beings in a learning community, are expected to feature a variety of agencies that could be different from the expected outcomes of training. One factor that has always influenced learners’ agentic orientations in a learning task is learners’ SE (Bandura 1990, 2001, 2012; Locke et al. 1984; Schunk and Pajares 2009).

### 2.3 Self-efficacy (SE)

SE is defined as “people’s beliefs about their capabilities to exercise control over events” (Bandura 1989, p. 1175). In socio-cognitive theory, the central mechanism of agency—“the capacity to make a difference” (Foss et al. 2007)—is people’s beliefs about their capabilities to exercise behavior or strategies that are necessary to achieve a desired outcome (Klemenčič 2015). Stronger SE belief can boost people’s motivation. This helps them set higher goals for the activities and display firmer commitment and persistence to a task. In contrast, if the SE is self-hindering, people become less motivated and set lower goals. This may reduce their determination to search for solutions and thus affect the final outcomes. Findings supported that SE influenced one’s motivation to learn (Schunk and Usher 2019;
Schunk and Zimmerman 2012; Wolters and Rosenthal 2000) and participate in learning activities (Bandura 1986; Schunk et al. 1994).

According to the SE theory (Bandura 1986, 1997), people gauge their SE from interpretations of “actual performances (mastery experience), vicarious experience (e.g., modeled), forms of social persuasion, and physiological indexes” (Schunk and Pajares 2009, p. 36). Mastery experience is defined as the students’ interpretation of the actual performances. Former successes increase the mastery experience, but constant failures lower them. Bandura (1997) postulated that students could also obtain information about their capabilities through others’ performances (that is, the vicarious experience). SE is raised by observing similar others’ successful completion of the task. In contrast, if learners observed failures of the peers, they would be dissuaded from performing the task. Social persuasion refers to the evaluative feedback from others (very often, teachers or coaches) on the performance of the task (Bandura 1997). Physiological indexes are individuals’ emotional states, such as anxiety and stress during the task (Bandura 1997). Among these four sources, mastery experience is regarded as the most reliable because learners’ interpretations of their actual performances are “tangible indicators of one’s capabilities” (Schunk and Pajares 2009, p. 36).

Other factors that can influence SE include imagined experience (imagining oneself doing the task effectively or not in hypothetical situations) (Maddux and Kleiman 2016), SE for self-regulation (SESR) (the perceived ability to regulate the task using effective strategies) (Teng 2019; Teng and Huang 2019; Zimmerman 2002, 2008), and social comparison (comparison with the peers during the task) (Dijkstra et al. 2008; Pajares 2003). Imagined experience can be derived from learners’ actual or vicarious experience with a previous task similar to the one currently engaged in (Maddux and Kleiman 2016). It may also be motivated by others’ (such as teachers’) acknowledgment of their ability to execute the task (Bandura 1997; Williams 1995). When students receive feedback from others that refer to mastery, improvement, and achievement, it could bring desirable effects to their SE for future tasks (Pintrich and Schunk 2002). As for SESR, research indicated that SE exerted remarkable influences on self-regulated learning behaviors, including persistence when confronting difficulties (Bandura 1997; Pintrich and Schunk 2002; Schunk 1995, 2001) and the use of more sophisticated strategies (Pintrich and Schrauben 1992; Pintrich and Schunk 2002). In terms of social comparison, there are three dimensions, namely, upward comparison (students comparing themselves with peers who perform better), downward comparison (students comparing themselves with peers who perform worse), and lateral comparison (students comparing themselves with peers displaying similar performance levels) (Dijkstra et al. 2008). Vrugt et al. (2002) reported that more than
half of the high school students preferred comparing their performances with a peer who performed at an equal level in the classroom.

When the above-mentioned factors interplay with each other in the operating mechanism of SE, they form an integrated system that changes the learner's agentic orientation—an interaction of various factors that activate an individual to act. Therefore, how learners perceive their past experiences and the present performance will influence their actions. In other words, these factors play an important role in influencing learners' agency when they participate in collaborative learning tasks like peer review and so are considered to be important constructs in the current study.

In addition to the above factors, it was postulated that gender could play a role in learners' self-efficacy to employ self-regulatory strategies (Pajares 2002). For example, Zimmerman and Martinezpons (1990) observed that among grade 5, 8, and 11 students they observed, female students demonstrated more goal setting and planning strategies as well as more frequent monitoring than their male counterparts. This echoed Pokay and Blumenfeld (1990), who detected more frequent use of metacognitive and cognitive strategies by the girls than did the boys in a high-school geometry class. In a more recent research involving a questionnaire survey among 140 ELT learners in a university in Turkey (Yilmaz 2010), the female participants reported significantly more frequent employment of affective strategies than males did. Pajares and Graham (1999), Pajares et al. (2000), and Pajares and Valiante (2001) have also documented that girls expressed higher self-efficacy for self-regulation, in both the middle-school and high-school level. Given the possible impact of gender differences on students' employment of self-regulatory strategies, it is essential to consider different combinations of gender when observing how students regulate their strategies in a collaborative learning process.

2.4 SE, peer review, and L2 writing

Research has manifested the relationship between SE and L2 writing. Through analyzing the apprehension test and SE with regard to a writing scale collected from 188 EFL students in Turkey et al. (2011) reported that when students had higher SE with respect to writing, they felt less anxious about the task. Similar findings were also documented in other studies (Kirmizi and Kirmizi 2015; Woodrow 2011).

While exploring the possible ways to promote SE for L2 writing, peer review has also been an area under investigation. For example, Lee and Evans (2019) collected data from 110 Chinese undergraduates to explore the relationship
between the different sources of writing SE and perceived usefulness of peer feedback. They reported that while the students perceived peer feedback useful, their writing SE for L2 writing could be enhanced directly through the interplay of various SE sources, such as mastery experience, SESR, and social comparison.

2.5 SESR and SE for peer review

Different studies were conducted to examine whether students’ SE for peer review was predictive of their ability to employ effective self-regulated strategies during peer review, and whether the successful use of strategies would thus affect their SE for implementing peer review in the future.

Using a mixed-method approach, Wang and Wu (2008) explored whether students’ SE predicted their learning behaviors during peer review, including their use of strategies and the feedback giving/receiving behaviors. They found that students with high efficacy provided more elaborate feedback and used high-level cognitive strategies than those with low efficacy. They also investigated the changes in the students’ SE from the original writings to the revised ones. The results indicated that the SE of the students who received elaborate feedback significantly increased, as compared to those who did not.

Wang and Wu (2008) explored the predictive effect of SE on the learners’ feedback giving/receiving behaviors, as well as the changes in their SE after receiving peer feedback. However, the participants of the study were not ESL learners, nor was the study conducted in L2 writing classrooms. In addition, the kind of “peer review” they implemented did not let the students participate in interactive discussions. Most importantly, the study did not specify which particular sources of SE (that is, the mastery experience, vicarious experience, SESR, or the social comparison) were being investigated. In other words, it did not detail the operating mechanisms of different sources of SE during peer review.

Another study (Zheng et al. 2018), set in an L2 writing classroom, also included synchronous discussions between assessors and assesseees. It also diagnosed the impact of peer discussions on SE. The 64 undergraduate students in China who participated in the investigation, first conducted peer assessments for 20 min; then they participated in an online synchronous discussion to discuss the peer comments for 70 min. Results indicated that the synchronous discussions between the assessors and the assesseees significantly improved their SE for peer review as it enabled them to identify the strengths and weaknesses of the essays. It also helped the students to identify and judge which of their comments were more useful. However, the detailed operating mechanisms of the different sources of SE were not outlined in this study.
2.6 Rationale for the present study

To sum up, although the existing literature highlights the relationship between SE and learners’ motivation to undergo a learning task, between SE and learners’ use of strategies in L2 learning and writing, as well as between SE and peers giving and receiving feedback, there was no study investigating the operating mechanisms of the different sources of SE for peer review. It should be noted that the different sources of SE may affect students’ actual execution of the activity. The current study focused on whether the target students were able to employ a variety of strategies to regulate the peer review activities after receiving training. Most importantly, as peer review is a collaborative activity, when exploring students’ SE for running peer review, we should also consider social comparison—students’ comparing their peers’ performances with their performances during peer review. Such comparisons may further foster or impair the development of the students’ SE in implementing future peer review. Lastly, previous studies on SE for L2 writing and peer review were mainly set in the tertiary education context. However, learners of different ages, as reflected in different level of schoolings, may display distant preferences for particular strategies (Magogwe and Oliver 2007), thus affecting the operating mechanisms of the SE for peer review. The current study bridged the gap by recruiting secondary school students to be the participants. It serves as important reference for secondary schools to improve their implementation of peer review in the future. The major goal of the current study—outlining the operating mechanisms of the different sources of SE during peer review among secondary students—led to three research questions as listed below:

1. How do previous mastery experience and imagined experience of peer review affect the secondary students’ SESR for peer review?
2. In what ways do the secondary students’ SESR affect their use of metacognitive strategies introduced in training?
3. In what ways does social comparison affect the secondary students’ SE for peer review in the future?

3 Method

3.1 Participants

A total of 20 EFL learners from two band-one, English as a medium of instruction (EMI) secondary schools participated in the current study. They were secondary-one students, with Cantonese as their first language. In order to understand the
operating mechanisms of the SE sources related to the students’ peer review experiences as well as their evaluation of their own and their partners’ performances, three pairs were randomly chosen from the 20 participants (Olva and Adam; Hattie and Wynne; and Andrew and Ian) for in-depth case studies. The first pairing (Olva and Adam) involved the opposite genders; the other two pairs shared the same gender, with Hattie and Wynne being females and Andrew and Ian being males. Different pairings of genders were formed in response to the possible relationship between gender, self-efficacy, and self-regulated learning (Pajares 2002). Table 1 below shows the demographic data of the six participants.

The data collected from the pre-/post-interviews of and the stimulated recalls with these three pairs of the participants were triangulated with the results of the quantitative analysis of the pair-talks from all the 20 students. This was used to examine how the different sources of SE affected the individual student’s perception of peer review and training as well as their actual employment of strategies during the peer reviews. It can shed light on the students’ SE in conducting peer review in the future.

### 3.2 Procedures

The participants attended 12 lessons of an after-school writing course delivered by the first researcher. Each lesson lasted for around 60–90 min. During the course, the researcher taught the students five lessons on narrative writing with respect to the context, structural elements, and target language items. Before the course started, the researcher delivered a training session on how to conduct peer review effectively. Using the semi-structured format, the researcher interviewed the

<table>
<thead>
<tr>
<th></th>
<th>Adam</th>
<th>Olva</th>
<th>Wynne</th>
<th>Hattie</th>
<th>Andrew</th>
<th>Ian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Around 12 years old.</td>
<td>Secondary-one (Grade 7).</td>
<td>Band-one, EMI school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schooling</td>
<td>Secondary-one (Grade 7).</td>
<td>Band-one, EMI school.</td>
<td>Band-one, EMI school.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of English learning experience</td>
<td>Around 10 years</td>
<td>Able to write for around 200 words in each piece of English writing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English writing ability</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Peer review experience</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

There are three bandings for the secondary schools in Hong Kong. The most outstanding pupils are put in Band-one. EMI means English as the medium of instruction while CMI means Chinese as the medium of instruction. In an EMI school, all the subjects are instructed in English. Usually, the students that are put in an EMI school are considered to be more competent in English than those in an CMI school.
participants about their former peer review experiences and their perceptions of peer review and training (Appendix I). The second lesson focused on the teaching of the first topic, and the students had to finish the writing task at home. In the following lesson, the students were paired up to conduct the peer review. Before starting the peer review, a peer evaluation form (See a Sample in Appendix II) was distributed to guide the students to regulate peer review. The structural elements and linguistic features of each particular text are listed in the form. The researcher explained each item in the form to ensure the students understood it. She also reminded the participants about the goal of the activity and the use of appropriate strategies and expressions during the activity.

The interactions of the first, third, and the last peer review sessions were audio-recorded and transcribed to explore the detailed use of strategies during the peer reviews. To unearth the students’ underlying reasons for their agentic orientations, a stimulated recall session (Appendix I) was done with each student individually one day after each peer review. During the stimulated recall, selected episodes of the previous peer review session were played to the student, and he/she was asked to reflect on certain peer review instances. After the whole course, semi-structured post-interviews (Appendix I) were held again with the participants to learn about their perceptions of the current and the future peer review experiences. All the interviews and the stimulated recall sessions were conducted in the mother-tongue of the students to facilitate their recalling process. In addition, the first draft and the revised draft of the first-, third-, and the last unit of writings were coded by two raters to examine whether students incorporated their partners’ feedback in their revisions.

The students and their parents were fully informed that the students’ interactions, stimulated recalls, and interviews would be recorded and used for data analysis. Consent forms were collected from the students and their parents, and all the data are kept confidential.

3.3 Peer review training through metacognitive instruction

With reference to the metacognitive instruction for peer review (Bui and Kong 2019), the first researcher provided a training session for the participants before the first peer review session. The participants were reminded of the training guidelines before each peer review session for reinforcement. The objectives of the training were three-fold:

1. In terms of meta-cognitive knowledge, participants were reminded to set a clear goal for the peer review, which was to improve the writing performance based on the items listed in the peer evaluation form. They were also told to
understand their roles clearly as a reviewer and a writer and alternate these roles to improve each other’s writing performance in a collaborative manner. The reviewer had to show appreciation for the peer’s writing, whereas the writer had to demonstrate openness to accept the peer’s comments.

2. As for the metacognitive strategies, students were told to go through the written texts three times to ensure they offered both global and surface-level comments. Firstly, they had to read through the text and give global comments relating to the structural elements in the evaluation form. Secondly, they were to read the text again to locate the errors associated with the selected language items in the form. The final glance at the text was to help them grasp the overall coherence and style of the text. The students were also encouraged to employ a myriad of mediating strategies such as giving suggestions, lessons, and evaluation, eliciting responses, and asking for clarifications during the peer interaction. Such a procedure reflected Teng’s (2016) conceptualization that training of metacognitive strategies could be maximized during peer collaborations. In addition, students were taught to employ useful language expressions in peer reviews. They were reminded to give constructive comments (for example, “You should talk about the causes of the car accident.”) instead of vague ones (for example, “Your writing is unclear.”) to ensure their peers knew specifically which parts needed improvement. Students were asked to converse in English during the interactions; only when they had difficulty expressing their ideas in English, they asked to adopt code-mixing—using both Cantonese (L1) and English (L2).

3. With respect to metacognitive regulation, the students were asked to regulate the peer review activity based on the items listed in the evaluation form. Firstly, they were to plan the peer review process according to the items in the form. Secondly, they had to monitor the process by evaluating the writings based on each item and by asking the peers for clarifications. Afterward, they had to reflect on their peer review process, and this reflection had to be articulated in the stimulated recall sessions.

3.4 Data coding and analysis

In order to understand the mediating strategies adopted by the student reviewers in this study, the audio-taped, pair-talk sessions were transcribed and coded into different episodes, which was a segment of one turn-taking in which the participants focused explicitly on the essays as described by Swain and Lapkin (1998). These episodes were further coded into the mediating strategies adopted by the reviewers (See Table 2) (Villamil and De Guerrero 1996).
In addition, the episodes were coded into content-feedback-related episodes (CREs), language-feedback-related episodes (LREs) (Swain and Lapkin 1998), and unusable-feedback-related episodes (See Table 3). The LREs focused on the segments in the dyadic interactions during which the learners dealt with the language items, whereas the CREs involved the segments in which the students focused on the content and the organization of the essays. The CREs were further divided into macro-related and micro-related (Faigley and Witte 1981). The CREs that showed comments influencing the overall idea development of the essays were classified as macro-related; others that included comments made to slightly adjust the existing meaning without affecting the overall meaning or structure of the essays were micro-related. Moreover, vague and non-specific feedback, such as “your writing is not attractive” were referred to as unusable (Hyland 1998). Finally, LREs that had errors on, for example, grammar, were identified as erroneous-LREs.

The revised drafts of the six selected students had also been checked against the feedback they received to examine if they had incorporated the peer feedback

<table>
<thead>
<tr>
<th>Type</th>
<th>Examples from the current study</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREs (Macro)</td>
<td>There are too many dialogues, compared with the narration. Please delete some of the dialogues.</td>
</tr>
<tr>
<td>CREs (Micro)</td>
<td>I think you can mention the woman’s physical condition after being sent to the hospital in the last paragraph.</td>
</tr>
<tr>
<td>LREs</td>
<td>Please use the past tense here because it happened yesterday.</td>
</tr>
<tr>
<td>Unusable</td>
<td>Please write more to improve the essay.</td>
</tr>
<tr>
<td>Erroneous-LRES</td>
<td>I phoned Amy…please add “to” before Amy.</td>
</tr>
</tbody>
</table>

in the revisions. In order to ensure reliability of the coding process, accuracy of an established coding scheme, agreement of results across coders, and consistency of a single coder were considered (McDonald et al. 2019). First, the researchers and two doctoral students specializing in Applied English Linguistics went through the coding schemes (Table 2 and 3) to have a consensus. Since the coding schemes were developed and adopted by previous researchers as well as agreed by all of the coders of the current research, they were considered to be accurate and reliable. Then, 30% of the data were checked by the four coders to ensure the reliability of the coding process. The first round involved a separate coding of 10% of the data, and the coders reconciled differences through discussion after the coding. The same process repeated two more rounds until all the coders showed replicability in their coding. To save the labor cost, the rest of the data were coded by the researchers only. However, the data were coded twice to ensure the second coding was consistent with the first coding. The stimulated recall and interview sessions were also transcribed and analyzed to triangulate the quantitative data.

4 Results

4.1 Mastery experience, imagined experience, and SESR for the current peer review

Before the current writing course, Olva and Adam had experiences conducting peer review while in primary classes. Olva regarded herself as an experienced reviewer as she was familiar with the peer review process. She would love to continue the peer review experience in the secondary school, as well. Since both the students had not learned any effective techniques on how to interact with the peers efficiently, they welcomed the idea of adopting the techniques taught during the training session to improve the peer-review process:

Olva: I have had similar experiences before, and we were allowed to speak to each other. However, we seldom spoke up. There was no training on how to interact with the other students. I think your training session will be useful for me to better review the peer’s work.

Adam: I did have a few experiences of peer review in primary school. But the teacher did not ask us to talk. Everyone was silent in the class. We just circled each other’s mistakes. I think it will be more useful and less boring as we are trained to speak to each other in the class.

On the other hand, both Hattie and Wynne did not have any peer review experience in the past. However, they were eager to try the peer review activity because they thought that reading the peer’s works and receiving the peer’s comments could
improve their writings. Most importantly, they appreciated the peer training session very much because they thought they were instructed on how and what to comment on. They loved learning how to interact with peers in English effectively because they thought this could improve their speaking skills.

Wynne: *English is very important in society, and I have to communicate in English with others in the future. So I want to grasp every chance to practice English speaking, and, I think, interacting in English during peer review can help me improve my English speaking skills.*

Hattie: *I share the same thought as Wynne’s. I love talking in English. I think I will follow your advice given during the training and try to speak English during peer review to improve my English speaking skills.*

Similarly, Andrew and Ian had no previous experience doing peer review. Andrew’s SESR induced from his imagined experience was quite low. At the beginning of the course, when asked about his perceived ability to conduct an effective peer review session, he gave a negative response:

Andrew: *I am only a student and incapable of reviewing my partner’s essays effectively.*

When asked about his SE to regulate the peer reviews effectively, Ian regarded himself as a lazy reviewer as he did not like reading long texts and evaluating them for quality:

Ian: *I am lazy to read and give long comments.*

### 4.2 SESR and strategy use during the current peer review

#### 4.2.1 Goal- and role-setting

Olva, Adam, Hattie, and Wynne said in the pre-interviews that they could deliver effective peer reviews with the techniques taught in the training session. Because of this positive belief, they set up clear goals and roles for the peer review sessions. They took turns to be the reviewers and the writers by engaging in peer interactions, during which the reviewers explained their comments to the writers, and the writers demonstrated a high rate of incorporation of their peers’ comments. Adam showed 87.5% incorporation of Olva’s comments with respect to the macro changes and 100% incorporation of the two surface-level comments. Olva incorporated 67% comments made by Adam involving macro changes to the text. She also made all the surface-level changes as per Adam’s suggestions. As for Hattie and Wynne, while Wynne incorporated around 80% of the global and surface-level
comments (10 out of 12 global and 8 out of 10 surface-level changes) in the revised writing, Hattie incorporated all the comments made by Wynne in the revision, regardless of the nature of the feedback (6 global and 9 surface-level changes).

Different from Olva and Adam, Andrew and Ian had very low SESR for peer reviews, even with the help of the training. Andrew thought he was not capable of regulating the peer review sessions, no matter how much training he received due to his poor English ability. Therefore, he did not engage in the activity as a reviewer. On the other hand, his partner, Ian, thought the training might be useful; however, as revealed in his peer review sessions with Andrew, he remained quite silent most of the time. He seldom commented on his partner’s content as he was too lazy to finish reading the whole text. To sum up, neither Andrew nor Ian took the role of a reviewer to give verbal advice to their partner, or produced any revised drafts based on the partner’s comments.

4.2.2 Metacognitive strategies

As reported in the stimulated recalls, Olva, Adam, Hattie, and Wynne followed the guidelines on the evaluation form to regulate their peer review activities. For example:

Wynne: *I read the essay twice. First, I read through the content [based on the prompts in the form]; then, I looked into the grammar mistakes [according to the items in the form]. After that, I talked to my partner about my comments. And finally, I put tick marks against the items in the form.*

On the other hand, Andrew and Ian read the writing once without referring to the evaluation form. Sometimes, they even gave up reading the whole text, as revealed from their stimulated recall sessions:

Andrew: *I am not a serious reviewer. I hate reading English! There are too many words in the essay. I wanted to give up after reading one or two lines, so I failed to grasp the meaning of the whole essay.*
Ian: *I only corrected the peer’s grammar because it’s easier. Reading the content takes too much time. I was lazy and incapable of doing so.*

Table 4 illustrates the percentages of the different types of feedback given by all the 20 participants. Most of the inputs (~90%) given by the students were usable. This indicates the effectiveness of the training in making the students give constructive feedback. Moreover, the percentage of CREs (macro and micro together: 54.13%) was slightly over the percentage of LREs, which demonstrates the students’ ability to cover both the global and the surface-level revisions during the peer review. This
could, perhaps, be explained by the fact that students were following the training guidelines to follow the flow in the peer evaluation form.

The same desirable outcomes (that the students’ comments covered all aspects of the essays) were witnessed between Olva and Adam too. Olva gave Adam comments regarding both the language and the content. Altogether, 80% of her verbal comments involved macro changes in the texts, and 20% involved surface-level changes. Adam gave Olva 50% comments verbally. 30% of these comments involved macro changes to the text, 10% involved micro-changes, and 10% involved surface-level changes. However, he also marked many surface-level changes in Olva’s original writings. Similarly, Hattie and Wynne also gave each other feedback that covered both the content- and the language-related aspects. Verbally, Hattie gave an equal number ($N = 12$) of global and surface-level comments to Wynne, and she also wrote down most of the global comments on the peer evaluation form. On the other side, Wynne suggested comparatively more surface-level changes ($N = 15$) to Hattie’s writings, but she was still able to produce comments related to the content of the texts ($N = 6$). Most importantly, these students were able to offer constructive and specific comments rather than vague ones. For example:

Olva: You should have described how serious the incident was.
Adam: Just one big problem…the ending is just here…just one sentence. It’s not meaningful [detailed]enough…
Hattie: He was dead…why…? He was dead because of the failure of the treatment or he was just dead on the spot?
Wynne: I think, in the first paragraph, you said that you had some problems when you woke up. Before that sentence, you had written that you and Amy had planned to go to Disneyland. I think you can write more; for example, describe the fact that you had talked on the phone to Amy.

In contrast, the feedback given by Andrew and Ian showed an entirely different picture, which was not expected after the training. They gave each other feedback mainly on surface-level changes but no global comments. Ian provided nine written comments concerning the surface-level aspects of Andrew’s drafts, while Andrew marked two surface-level changes on Ian’s texts. In the last session of the

<table>
<thead>
<tr>
<th>CRE (Macro)</th>
<th>CRE (Micro)</th>
<th>LRE</th>
<th>Unusable</th>
<th>Erroneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.93%</td>
<td>24.20%</td>
<td>32.48%</td>
<td>10.83%</td>
<td>2.55%</td>
<td>100%</td>
</tr>
<tr>
<td>(47)</td>
<td>(38)</td>
<td>(51)</td>
<td>(17)</td>
<td>(4)</td>
<td>(157)</td>
</tr>
</tbody>
</table>
peer review, Andrew gave Ian three suggestions about the text globally. However, Ian did not give any response to these comments, nor did he make any revisions.

4.2.3 Mediating strategies

According to Table 5, all the students demonstrated the use of various strategies to ensure peer interaction. During the training, the students were encouraged to request clarifications or elicit responses from their peers, to enhance the effectiveness of the peer interaction. According to the table, however, the students tended to give suggestions to the peers directly (39.37%); but the strategy of “asking for clarifications” still ranked the second most adopted strategy (30.32%).

The employment of mediating strategies was also witnessed during the peer interactions between Olva and Adam, as well as between Hattie and Wynne. Both pairs acknowledged the importance of training sessions and demonstrated the use of various strategies during the peer review. For example:

Adam: So, you can write a little more clearly about the school, …the class…
Olva: What do you mean? (Asking for clarification)
Adam: (L1) How to say in English 8:05 am? (Giving responses)
Wynne: You only have one pet, so the pet shouldn’t go with an ‘s.’ (Giving lessons)
Hattie: I know, I know…I made a careless mistake again…(Acknowledgment)

On the other hand, a contradictory outcome was seen in the case of Andrew and Ian, who rarely showed peer interactions during the peer review sessions. Even when they did, they spoke to each other with only a few words in L1 (Cantonese). For example, in the last session of the peer review, all the six episodes of their pair-talks were non-interactive. In other words, they never responded to each other’s comments. For example:

Andrew: You…should write how to…find Amy and how to…when you narrate the story…the post [essay] should be longer. (Unusable feedback)
Ian: (Silent)
Table 6 below summarizes the behaviors and strategies displayed by students with the high and low SESR respectively during peer review:

Table 6: Behaviors and strategies of high and low SESR.

<table>
<thead>
<tr>
<th></th>
<th>High SESR</th>
<th>Low SESR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal setting</td>
<td>Setting up a clear goal—helping each other to improve the draft and believing in his/her own ability to attain the goal.</td>
<td>Not believing in his/her own ability to achieve the task despite being told about the goal of peer review.</td>
</tr>
<tr>
<td>Role setting</td>
<td>Taking turn to be both the writer and the reviewer—the reviewer giving comments to the writer while the writer humbly acknowledging or justifying the comments.</td>
<td>Working on their own and so appearing to have no division of role.</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>Reviewing the peer’s essay according to the evaluation form.</td>
<td>Not reviewing the peer’s essay based on the evaluation form, thus making surface-level changes to the peer’s draft.</td>
</tr>
<tr>
<td>strategies</td>
<td>Reading the essay 2–3 times to make sure the comments cover both the content and language aspects.</td>
<td>Keeping silent most of the time during peer review, regardless of whether he/she is the writer or the reviewer.</td>
</tr>
<tr>
<td>Mediating strategies</td>
<td>The reviewer explaining the comments to the writer, while the writer responding to the comments. Employing various mediating strategies to intensify peer interaction.</td>
<td></td>
</tr>
<tr>
<td>Revisions</td>
<td>Showing a relatively high incorporation rate of the reviewer’s comments in the revised draft.</td>
<td>Showing a relatively low incorporation rate (or even no incorporation) of the reviewer’s comments in the revised draft.</td>
</tr>
</tbody>
</table>

4.3 Social comparison and SE in future peer reviews

Despite having had several peer interactions between Olva and Adam, Adam behaved more shyly compared to Olva (upward comparison). Although he still interacted with Olva, it was very obvious that Olva was the more assertive partner who led the whole discussion. On the other hand, Adam provided simple acknowledgments or weak explanations. Among the 19 pair-talk episodes, there were five episodes during which Adam passively acknowledged Olva’s advice without offering any justifications. There were even six episodes in which Adam reacted silently to Olva’s comments. In the last peer review session, being too harshly
suppressed by Olva, Adam was found to engage in several turns of “arguments” with Olva. However, at last, Adam gave up simply by saying “I don’t think so:"

Olva: (L1) I have not yet finished…but there is too much…I really don’t think you need to write that much…like me;…I also didn’t write too much…all these dialogues have made up the whole essay…there is no narration. I think 2/3 should be narration, while 1/3 should be dialogues…I think your dialogues are 2/3, and there’s not enough content.
Adam: (L2) I don’t think so…I don’t think I included too many dialogues.
Olva: (L1) Let’s see…from this paragraph to this paragraph…all are dialogues so there is 2/3 of it…it’s so easy to tell!
Adam: (L1) But there is some of the content in which there are not any dialogues!
Olva: (L1) I know, but 2/3 of the content is dialogues…do you understand?
Adam: (L1) It’s good to have dialogues.
Olva: (L1) It’s good to have dialogues, but people don’t understand clearly what you mean if there are too many…
Adam: (L1) But my goal is to have dialogues, so I want to include the dialogues.
Olva: (L1) No…I don’t think there are any in the (L2) climax.
Adam: (L1) I don’t think so…

Perhaps because of “observing” Olva’s aggressive behavior during the peer review sessions, Adam stated in the post-interview that he welcomed the idea of peer reviews, but he was reluctant to have face-to-face interactions with those from the opposite sex in the future:

Adam: I didn’t want to have face-to-face communication. If my partner is a boy, I am much better with that. I am very shy, and I have no confidence in talking to girls. Because she (Olva) is a girl, I was less assertive in terms of talking. When facing a girl, I really don’t want to make too many comments. I am shy.

Similar to Adam, Olva also had a few complaints regarding the quality of the comments given by her partner. She thought that compared to herself, Adam failed to make any “sophisticated” changes to her essays (downward comparison). The comments made Olva appear less satisfied with Adam’s feedback:

Olva: His comments were quite superficial.

However, Olva still accepted Adam’s comments and made revisions according to them because she thought she could learn something from Adam. In addition, she reviewed her essays once again during the revisions and made changes, even without Adam’s advice. Most importantly, Olva regarded herself as a professional reviewer because, different from her partner, she had given Adam many constructive comments covering all the aspects of the essays:

Olva: I am more professional as I commented on both the content and the language deeply…
Because of her positive mastery experiences in the current study, Olva welcomed similar peer review experiences in the future and was confident of being an effective peer reviewer.

On the other hand, Hattie and Wynne were the pair that worked most collaboratively, as they managed to complement each other’s strengths and weaknesses through effective regulation of the peer review (lateral comparison with both having high SESR). During the stimulated recall sessions, Hattie said she was better at idea development but careless of grammar, whereas Wynne said she was better at grammar but very weak in thinking of interesting content.

Wynne: *I love grammar and it’s easier for me to detect grammar mistakes. However, I am weak in content development. I think Hattie has done a good job about that. Her ideas are great, and she can use a variety of vocabulary. I think it is useful to make revisions according to her comments because, in that way, both the language and the content of my essay will improve.*

Hattie: *I love commenting on the content because grammar is very boring, and I always make a lot of careless grammatical mistakes. I think Wynne’s grammar is good, and she has helped me a lot by improving the grammar of my essays. I think I can learn more about grammar by reading Wynne’s feedback during the revisions.*

Thus, complementary pairing helped the two students improve each other’s essays. As a result, they developed very positive perceptions of peer reviews. As mentioned in the post-interview sessions, both of them considered it was useful to receive one more perspective from the peer in addition to the ones from the teacher.

Similar to Hattie and Wynne, both Andrew and Ian displayed lateral comparison; however, this pair is found to have mastered the peer review activity ineffectively. Andrew reported that his partner, Ian, did not give constructive comments. The negative experience further reinforced his skepticism about the expertise of a secondary school student to function as a reviewer:

Andrew: *I think not all peer feedback was useful. If students do it seriously, it will be useful; otherwise, it is meaningless […] He [Ian] just talked repeatedly about grammar, like tenses, only. There were no deeper comments on the content.*

Perhaps in retribution, Andrew himself did not provide any quality feedback either. He only made a few surface-level changes to his peer’s essays. In the post-interview, Andrew regarded himself as a poor reviewer. This, together with his discontent about his partner’s performance, led to his low SE for peer review, also reducing his motivation to try peer review in the future:

Andrew: *I am not a serious reviewer. I hate reading English! There are too many words in the essays.*
After trying out the peer review, Ian felt quite positive because he thought that by listening to his peer’s comments, he could learn about his own strengths and weaknesses. However, he admitted that he was a poor reviewer because he was too lazy to read the peer’s essays. Compared to his partner, he thought that he was being selfish to provide feedback about only verb tenses to his partner. It seems that Ian’s perceptions of peer review remained fairly constant throughout the course.

5 Discussion

5.1 Relationship among mastery experience, imagined experience, and SESR for peer review

Olva and Adam had positive mastery experiences doing peer review in primary school. Therefore, they were highly motivated to carry out the peer review activity in the current study. SE is reported to have a close relationship with one’s motivation to engage in the learning activities (Schunk and Usher 2019; Schunk and Zimmerman 2012; Wolters and Rosenthal 2000). When the same concept is applied to peer review in the L2 writing classroom, students’ motivation to participate in peer review could be highly influenced by their SE, which is mainly deduced from their mastery experiences (Bandura 1986, 1997; Schunk and Pajares 2009). Olva’s and Adam’s positive mastery experience kept them motivated to try the peer review.

Moreover, expanding on the idea of SE is SESR, associated with the students’ beliefs in their abilities to regulate writing (Ma and Teng 2020; Teng 2019; Teng and Huang 2019) or a language learning task (Zimmerman 2002, 2008). SE relates to such self-regulated behavior, including the use of effective strategies and the efforts put into sustaining a writing task (Teng 2020). This could explain why Olva and Adam had confidence in regulating the peer review in the beginning. With higher SE for peer reviews, they had higher SESR, and so, they were more open to peer review training and adopt new strategies to conduct the task effectively.

On the other hand, with no prior peer review experience, Hattie, Wynne, Andrew, and Ian shaped their SE based on the imagined experience. Since Hattie and Wynne were interested in peer reviews, they were determined to employ effective strategies in the upcoming sessions. However, Andrew and Ian perceived themselves to be incompetent or non-persistent reviewers, and they did not acknowledge the significance of training.
Therefore, learners may attribute their capability to complete the peer review task to their proficiencies or persistence in English reading and writing (Bui and Kong 2019; Teng 2020). For example, Andrew regarded himself as an incompetent English user, so he imagined himself incapable of carrying out the peer review task due to his inability to read, understand, and evaluate the writings effectively. This led to his low SESR for peer review, regardless of training. Similarly, Ian imagined himself being unable to run peer review effectively, mainly because of his perceived low persistence to finish reading whole texts.

Another possible factor that might influence one’s imagined capability to control peer reviews is one’s interest in the task. Imagined experience may be induced from experiences involving scenarios resembling the anticipated task (Maddux and Kleiman 2016). Another source of these imaginations includes feedback from others on one’s own ability (Williams 1995). However, peer review was a novel experience to Hattie and Wynne, and they would not have received any feedback about their abilities to conduct peer review before the course. Therefore, the only account of their positive perceptions of executing peer reviews could be their strong desire to improve their writing and speaking skills. This could have led to their determination to follow the training guidelines and conduct peer review with effective strategies.

5.2 Relationship among SESR, training, and strategy use in peer review

In the pre-interviews, Olva, Adam, Hattie, and Wynne regarded themselves as being quite capable of conducting peer review, and they acknowledged the importance of training. As a result, all of them gave each other global and surface-level comments and employed substantial metacognitive and mediating strategies during the sessions. Their cases echoed the findings of Wang and Wu (2008), which reported students’ SE predicted their feedback giving/receiving behaviors during peer review. Since Olva, Adam, Hattie, and Wynne had high SE due to their positive mastery or imagined experience, they held strong belief in being able to implement peer review effectively through various strategies that were introduced in the training. As a result, they followed the instructions given by the training and exercised appropriate behaviors and effective strategies to predispose the enactment of agency (i.e., to execute the peer review task). For example, they divided themselves into the roles of reviewer and writer and employed various metacognitive and mediating strategies to ensure their feedback was conveyed clearly to the writers.
However, not all students were able to perform in a way that displayed the desirable outcomes. For example, Andrew and Ian showed nil strategy use during the peer review sessions. Both of them were bound by the peer’s writings, as they read the essays and marked surface-level changes on their own, instead of negotiating with the peer to improve each other’s writings effectively.

Andrew and Ian’s unanticipated results could be explained by their low SESR, which reduced their motivation to use effective strategies and to be persistent during peer review (Bandura 1997; Pintrich and Schunk, 2002; Schunk 1995, 2001; Wang and Wu 2008). For example, Andrew’s low SE for peer review contributed to his low SESR. Even with the provision of training, he did not demonstrate any effective use of strategies during the peer review sessions because he thought he could not evaluate the text effectively by whatever means. Similarly, Ian did not employ any strategies during the peer review sessions because he did not believe he could be persistent enough to use them (for example, reading the texts thoroughly). Their low SESR led to the absence of effective strategy use and persistence during the peer review sessions, thus leading to the agentic orientation of the activity to an object-object regulated one (De Guerrero and Villamil 1994, 1996, 2000). That is, both the students were bound by the texts, working alone without being able to improve the writings collaboratively. This particular result indicates that SESR is an important determining factor for optimizing the effectiveness of peer review training. Although research has always recommended adopting training sessions to encourage students to display regulatory behavior, increase peer interaction intensiveness, and form collaborative social relationships (Bui and Kong 2019, Hansen and Liu 2005; Kong and Bui 2019; Liu and Hansen 2002). It seems that the learners’ high SESR is a much more significant pre-determinant to truly unleash the potentials of peer review training. If students have high SESR, they can fully utilize the metacognitive knowledge and strategies that are provided during the training; however, if students have low SESR, it may overshadow the impact of training and lead to undesirable outcomes.

5.3 Relationship between social comparisons and SE for future peer reviews

The findings of the current study may also help understand how the SE for future peer review executions may have been constructed through “upward, downward, or lateral social comparisons” (Dijkstra et al. 2008, p. 830). Seeing Adam giving less constructive comments than those provided by herself, Olva felt a bit dissatisfied; however, rather than ignoring Adam’s comments, she did acknowledge
them and even continued self-regulating her writings by self-corrections. Her optimistic attitude to the current learning experience led to her willingness to continue peer reviews in the future. From Olva’s perspective, observing Adam’s less-than-satisfactory performance compared to hers was a kind of downward comparison; however, Olva could be a mastery-oriented learner who could “gather task-diagnostic information from social comparisons for self-improvement” (Lee and Evans 2019, p. 833). In the end, Olva felt superior to her partner, as noted in her comment, “I am more professional,” and this consolidated her SE for executing peer review in the future.

However, Olva’s partner displayed a more complicated orientation in the construction of his SE through social comparison. As reported in the interview findings, Adam responded less intensively during peer review compared to his partner, Olva. In addition, his comments were less “sophisticated” than Olva’s. In the end, Adam’s SE for future peer reviews was slightly reshaped. At the beginning of the course, Adam had strong SE in being a capable peer reviewer, but in the end, the SE to become a peer reviewer in the future became more conditional, that is, only if the peer was not a girl.

From Adam’s perspective, Olva’s more authoritative image caused a kind of upward comparison, making him seemingly inferior as a peer reviewer. A noteworthy point is that Adam attributed his shyness to his gender role. Although it is true that there could be a relationship between gender, self-efficacy, and self-regulation (Pajares 2002; Pajares et al. 1999; 2000; 2001; Pokay and Blumenfeld 1990; Yilmaz 2010; Zimmerman and Martinexpons 1990), Adam’s belief in his future ability to conduct peer review may conceivably be the result of the stereotypic beliefs about how male students should behave rather than about the gender factor (Eisenberg et al. 1996). For example, Pajares and Valiante (2001) reported that despite nonsignificant gender differences, a feminine orientation was observed with regard to writing self-efficacy, favoring girls in self-efficacy for self-regulation. These results undergird the possibility that the differences in self-efficacy and self-regulated learning between male and female students may be explained by the students’ very own gender stereotypes, rather than by their gender. In fact, Adam did not entirely lose confidence in his ability to carry out peer review in the future; rather, he only showed his reluctance to be paired-up with a female because he felt stressed to maintain his “gentleman persona”. This once again showed his self-efficacy belief could be influenced by gender stereotype. Another possible explanation of Adam’s newly formed SE for future peer review could be due to his goal-oriented performance. When a learner is performance-oriented, he/she only emphasizes the performance compared to those of others and defines his/her SE based on others’ performances (Ames 1992; Brophy 2005; Butler 1992). That Olva was performing more “professionally” than him during
peer review could be a blow to Adam’s self-confidence, diminishing his original high SE for peer review.

When both peers are at the same level of performance during a task, lateral comparison is formed. Hattie and Wynne displayed similar levels of abilities. Most importantly, both had higher SESR. In other words, each had some strengths and was willing to teach the other. Perhaps, this complementary relationship allowed for open peer review in which both gave and received appreciations and respected each other’s comments. It was also an ideal relationship suggested by Vygotsky’s Zone of Proximal Development (ZPD) (1978), where the novice learned from the expert to move across the ZPD. In this case, Wynne was the one who provided scaffolding to Hattie to improve her language, whereas Hattie assisted Wynne improve her content. Such complementary relations were also reported in other studies (De Guerrero and Villamil 1994; Kong and Bui 2019), where students displayed SER/OTR orientations after receiving training, that is “the self-regulated (SER) learner was able to provide scaffolds to the other-regulated (OTR) learner so that the latter can potentially progress under the guidance provided by the former” (Kong and Bui 2019, p. 145). Such complementary relationships allow the students to have more responsibility for their own learning, promote learning autonomy, and shift the traditional L2 writing classroom from teacher-based to student-based (Benson 2016; Hyland 2000; Kong 2021). What was observed in the case of Hattie and Wynne also echoed Zheng et al. (2018)’s study, which reported that the discussions between reviewers and writers helped the students identify their strengths and weaknesses and thus significantly improved their SE for future peer review.

On the other hand, although Andrew and Ian also demonstrated lateral comparison, both displayed low SESR. They both worked on their own, without interacting with each other to improve their writings. In the end, they displayed similar or even lower SE compared to what was reported during the pre-interview session. Although Ian seemed to be a mastery-oriented learner as he “appreciated” Andrew’s comments, he continued to have the same attitude to peer review throughout the study, that is, he did not mind doing peer review, but he would still be too lazy to read the peer’s writings. As for Andrew, he appeared to be a performance-oriented learner who focused on his peer’s low performance during peer review instead of learning whatever he could from reading the peer’s writings (Ames 1992; Brophy 2005; Butler 1992). After learning that his partner was as incompetent as himself in regulating the peer review sessions, his skepticism of the effectiveness of peer review was greatly enhanced, leading to his total reluctance to conduct peer review in future.

The cases of Hattie and Wynne as well as Andrew and Ian expand on the theory of lateral social comparison (Dijkstra et al. 2008). Not only did the learners
compare their performances with students of similar levels (Vrugt et al. 2002), but also let their different performance levels shape their SE for future tasks differently. As Hattie and Wynne had similar high levels of SESR, their SE levels for implementing future peer review were also enhanced. On the other hand, when the peers showed similar, low levels of performances (as displayed by Andrew and Ian), the SE levels for conducting future peer reviews did not improve; in fact, the levels got further diminished.

Based on the data interpretation, we conceptualized a model on delineating the operating mechanisms of the different sources of SE when students engaged in collaborative peer review tasks (Figure 1).

When students have prior peer review experience and if the mastery experience (Bandura 1986; Schunk and Pajares 2009) are positive too (Route 1 & 2), they have high SESR and also display the use of strategies introduced in training (Pintrich and Schunk 2002). For these high SESR learners, if one peer shows better performance than that of the other, it results in upward/downward comparison (Dijkstra et al. 2008; Pajares 2003). At this point, the students’ learning orientations (mastery- or performance-oriented) (Brophy 2005; Butler 1992) become a determining factor in shaping their SE for future peer reviews. Even in the cases of downward comparisons (the peer performing worse than oneself), if the students are mastery-oriented (Route 1), they are still able to appreciate the peer’s strengths and seek continuous self-improvement. On the other hand, if the learners are performance-oriented and experiencing upward comparison (the peer performing better than oneself; See Route 2), they may slightly reshape the future SE by setting...
a condition; for example, avoiding interacting with more capable peers to maintain their dominant control of the collaborative learning task.

On the other hand, when students do not have any prior mastery experience of peer reviews, they rely on their imagined experiences (Maddux and Kleiman 2016) to evaluate their SE for peer review (Route 3, 4, 5). If they have positive imagined experience, high SESR is witnessed (Route 3); in contrast, negative imagined experiences cause lower SESR (Route 4). The high/low SESR is predictive of the students’ regulatory behavior during peer review.

In addition, when peers of different performance levels and learning orientations engage in a lateral comparison, the effects on the future SE could be different. When mastery-oriented peers who have high SESR implement peer reviews collaboratively (Route 3), both of them would identify each other’s strengths and complement each other’s weaknesses, resulting in high SE for both for peer review in the future.

Different learning orientations also impose an effect on the future SE when low SESR learners experience a lateral comparison (Route 4, 5) during peer review. For mastery-oriented learners (Route 4), even though they acknowledge their inability to regulate the task effectively, they may still appreciate the peer’s strengths. This results in them achieving a fair SE for having peer reviews in the future—that is, they do not mind doing the task in the future, but without a strong belief in doing it effectively. In contrast, for performance-oriented learners (Route 5), they only emphasize on the peer’s low performance as a reviewer but neglect the peer’s strengths. As a result, their peer’s low performance, coupled with their own incompetency in being an effective reviewer, further disrupts their SE for conducting peer reviews effectively in the future.

6 Conclusion

Through providing in-depth case studies of three pairs of secondary-one students, this investigation has illustrated the mediating system where the different sources of SE for peer review are interplaying with the training factor. This provides a useful reference for teachers to design collaborative learning tasks, such as a peer review. To maximize learners’ SE for regulating an L2 learning task, apart from offering pre-training and clear guidelines, teachers should consider learners’ previous experience and imagined experience as these factors affect the expected outcomes of the training. Teachers should also pay attention to the effect of peer comparisons during the task on learners’ SE for the future task.

Although the current study has shed light on the interconnectedness of the various sources of SE, training, and peer review execution, it is based on the
findings of three pairs of students. It may not cover all the relationships in the complex mediating network involving SE, training, and strategy use. More case studies should be conducted to illustrate different agentic orientations in this complex network to conceptualize L2 learners as complex social beings situated in a collaborative language learning context.

References


**Supplementary Material:** The online version of this article offers supplementary material (https://doi.org/10.1515/applirev-2020-0019).

**Bionotes**

**Amy Kong**
Department of English, The Hang Seng University of Hong Kong, Hong Kong, Hong Kong
amykong@hsu.edu.hk
https://orcid.org/0000-0001-9377-6171

Amy Kong is the Senior Lecturer and English Language Centre Coordinator in the Department of English, the Hang Seng University of Hong Kong. With the research interest in L2 writing and collaborative learning, Dr Kong worked on the topic related to peer review in the ESL writing classroom for her PhD dissertation. Her recent works include a book chapter in Innovative Approaches in Teaching Writing to Chinese Speakers, as well as research articles in the *Asian EFL Journal* and *Journal of Writing Research*.

**Mark Feng Teng**
Faculty of Education, University of Macau, Taipa, Macau, China
markteng@um.edu.mo
https://orcid.org/0000-0002-5134-8504

Mark Feng Teng is a language teacher educator with extensive teaching and research experience in China. His main research interests include metacognition in L2 writing, and L2 vocabulary acquisition. His work has appeared in high-impact, refereed journals, such as *TESOL Quarterly, Applied Linguistics, Language Teaching Research, Computer Assisted Language Learning, and Computers & Education*. His recent monographs were published by Springer, Palgrave, and Routledge.