



# Using Learning-Oriented Online Assessment to Foster Students' Feedback Literacy in L2 Writing During COVID-19 Pandemic: A Case of Misalignment Between Micro- and Macro- Contexts

Maggie Ma<sup>1</sup> · Chuang Wang<sup>2</sup> · Mark Feng Teng<sup>2</sup>

Accepted: 24 June 2021 / Published online: 8 July 2021  
© De La Salle University 2021

**Abstract** Online learning has emerged as the “new norm” due to the COVID-19 crisis. Compared with institutions’ and teachers’ responses to online teaching, little is known about students’ perceived influence of online assessment practices. The present study explored the perceived effects of learning-oriented online assessment on L2 students’ feedback literacy and individual differences in feedback literacy development from an ecological perspective. We used multiple sources of data, including a survey on student feedback literacy, semi-structured interviews with two focal students, drafts produced by them and related teacher feedback, and supplementary data reflecting the online assessment practices in the course. Results demonstrated that the students held less favorable opinions of the online mode of learning in promoting feedback literacy. However, they perceived positively the development of feedback literacy in the aspects of appreciating feedback, developing judgements, and taking actions. Considerable variations were identified in the development of two focal students’ feedback literacy, especially in the aspects of managing affects and taking actions. The findings revealed the negative influence of misalignment between micro- and macro- factors on student feedback literacy and how such a misalignment interacted with learner factors to influence

individual students’ feedback literacy when learning-oriented assessment (LOA) was implemented during COVID-19. The paper proposed a fine-grained model for developing student feedback literacy through learning-oriented online assessment. With a special focus on misalignment, the model provided insights into the interactional dynamics among learners, classroom, and larger contexts in using LOA to enhance student feedback literacy online. Relevant pedagogical implications for developing student feedback literacy within and beyond COVID-19 were discussed.

**Keywords** Learning-oriented online assessment · Feedback literacy · L2 writing · COVID-19

## Introduction

The spread of COVID-19 has affected all social sectors, including education. Closure of schools worldwide resulted in emergency remote teaching, as a temporary solution, to mitigate the impact of the pandemic on education (Bozkurt & Sharma, 2020). As online instruction and assessment have become the “new normal” and because of the crucial role that assessment plays in students’ learning, it is important to understand students’ perceptions of the influence of teachers’ online assessment practices. This study addressed the gap by investigating students’ perceived impact of learning-oriented online assessment in an academic English writing course at a Hong Kong university during the COVID-19 crisis. It specifically focused on students’ perceived impact of learning-oriented online assessment on their feedback literacy and individual differences in feedback literacy development. As the activities commonly used in learning-oriented assessment (LOA) (e.g., exemplar analysis and peer feedback) have the

✉ Mark Feng Teng  
markteng@um.edu.mo

Maggie Ma  
maggiema@hsu.edu.hk

Chuang Wang  
wangc@um.edu.mo

<sup>1</sup> Department of English, The Hangseng University of Hong Kong, Hong Kong, China

<sup>2</sup> Faculty of Education, University of Macau, Macau, China

potential to develop student feedback literacy and such literacy is crucial to realizing the potential of feedback (Carless & Boud, 2018), it is essential to explore student perceptions of LOA in relation to their feedback literacy development in an online environment during the COVID-19 pandemic. Findings may shed light on the challenges and pedagogical implications for developing feedback literacy from learning-focused online assessment.

## Literature Review

### Student Feedback Literacy in L2 Writing

Feedback plays a crucial role in enhancing students' learning, but its benefits depend greatly on students' feedback literacy. Built on Sutton's (2012) initial conceptualization, student feedback literacy is defined as "the understandings, capacities, and dispositions needed to make sense of information and use it to enhance work or learning strategies" (Carless & Boud, 2018, p. 1315). Student feedback literacy encompasses four components, including appreciating feedback processes, making judgments, managing affect, and taking actions (Winstone & Carless, 2020).

Appreciating feedback means that students acknowledge the value of feedback and understand their active role in the feedback processes (Winstone & Carless, 2020). Learners need to conceptualize feedback as an important source of learning, i.e., feedback is concerned not only with the quality and quantity of knowledge the learners possess but also with how they can further develop their skills and knowledge (Sutton, 2012). Students also need to understand that they should play an active role in the feedback processes by seeking, understanding, and using feedback to improve their performance and learning strategies (Carless & Boud, 2018).

Making judgments is related to the development of evaluative judgment. Students need to develop a deep understanding of the qualities of good work and the ability to make sound judgments of others' or their own work. Composing and receiving peer feedback and analyzing exemplars promote the development of evaluative judgment if they are well executed (Carless & Boud, 2018).

Managing affect is the third element of student feedback literacy. It implies that the learners need to develop positive dispositions (e.g., learner motivation), which are indispensable for their engagement with feedback-related activities (Han & Xu, 2019a). Feedback-literate students also know how to manage emotional reactions to feedback and focus on formative information to strive for continuous improvement (Carless & Boud, 2018).

Taking actions is a critical aspect of feedback literacy. The potential of feedback can only be realized if learners engage with and act on it. Students should possess a repertoire of strategies to use feedback and develop identities as proactive learners (Carless & Boud, 2018).

Despite an increasing attention to the concept of student feedback literacy, empirical research on this topic is still in its infancy in educational studies in general and in L2 writing in particular. Studies report an urgency to enhance L2 students' feedback literacy. For example, students possess limited feedback literacy regarding written corrective feedback, such as low motivation to act on feedback (Han & Xu, 2019b). Learners also seem to have inadequate feedback literacy related to peer feedback (e.g., a low level of willingness to engage with feedback activities) (Han & Xu, 2019a).

Limited research is available to develop L2 students' feedback literacy. Teacher feedback has been shown to positively impact students' literacy related to peer feedback; however, individual variations exist owing to learner factors such as language proficiency, beliefs, and motivation (Han & Xu, 2019a). Student feedback literacy in the context of written corrective feedback is also situated and open to change with the mediation of local textual and instructional contexts and learner factors such as motivation and beliefs (Han & Xu, 2019b). Yu and C. Liu (2021) argued that student feedback literacy in the context of academic writing depends on knowledge bases (e.g., different types of knowledge required of a feedback literate academic writer), technical facilitators (e.g., educational technologies that connect feedback providers and receivers), social-interactive scaffolding provided by teacher and peers, which features feedback-related dialogue (e.g., instructor-student dialogue around feedback), and learner agency (e.g., learner proactivity). More empirical research is required to understand how different instructional approaches facilitate the development of student feedback literacy (Winstone & Carless, 2020). For example, little is known about how an online implementation of LOA may be perceived by L2 student writers in relation to their feedback literacy and whether individual differences exist in its development. The next section reviews the components of LOA.

### Learning-Oriented Assessment

Learning-oriented assessment (LOA) is characterized by three interlocking elements, including LOA tasks, development of evaluative expertise, and student engagement with feedback (Carless, 2015). LOA tasks should be designed to promote deep approaches to learning and facilitate the development of appropriate learning outcomes. The second element of LOA underscores the

importance of promoting students' evaluative expertise. Students should know what quality performance involves so that they can appropriately conduct self-assessment to improve their performance. The third element of LOA emphasizes students' active engagement with feedback. To facilitate this, students should use feedback to improve their current or future work. The first element of assessment design impinges on developing evaluative capabilities and engagement with feedback. For example, assessment designs, such as draft-plus-rework and two-part tasks, enable learners to be exposed to cycles of feedback and to uptake it (Winstone & Carless, 2020).

LOA carries the potential to develop student feedback literacy. The LOA tasks, when properly designed, can enhance learners' ability to make evaluative judgments and facilitate their engagement with and actions on feedback, making it possible to promote the corresponding components of student feedback literacy. When feedback dialogues are incorporated into LOA, they may ease learners' difficulties in understanding or appreciating the feedback and support the relational dimension of feedback, with this dimension being closely related to students' emotional and motivational reactions to feedback (Winstone & Carless, 2020).

### **An Ecological Perspective on Student Feedback Literacy**

Given the situated nature of student feedback literacy, an ecological perspective on student feedback literacy (Bronfenbrenner, 1979; Chong, 2020) was adopted in the study. This perspective considers that the four components of student feedback literacy, manifested as the cognitive (i.e., appreciating feedback processes and making judgments), emotional (managing affects), and behavioral (i.e., taking actions) dimensions of student engagement with feedback, are susceptible to contextual and individual differences factors.

On the one hand, student feedback literacy development depends on four levels of contextual factors, including textual level (e.g., features of feedback), interpersonal level (e.g., learners' relationship with the teacher), instructional level (e.g., methods of assessment), and sociocultural level (e.g., educational policy in a society). Teacher, as a key agent of the classroom ecosystem, creates learning resources that are likely to be used by students (Q. Liu & Chao, 2018) in each of the four levels. Moreover, an ecological perspective emphasizes the interplay among resources in the classroom ecosystem and the interaction between micro-level (e.g., classroom instruction), meso-level (e.g., school community), and macro-level contexts (e.g., wider sociocultural contexts) in a holistic-systemic manner (Bronfenbrenner, 1979; Cowie & Khoo, 2018). For

example, the positive impact arising from the alignment among classroom, school, and wider policy contexts contributed to student engagement with peer assessment of writing in a New Zealand primary school. That is, students' experience with peer feedback was facilitated through teacher orchestration of classroom resources supported by school and educational policies (Cowie & Khoo, 2018). Research on student feedback literacy, however, needs to explore the contextual influence of not only alignment but also misalignment between levels of contexts. Particularly relevant to the paper is the potential misalignment between micro-level classroom context and the macro-level context of the educational policy of online teaching as incurred by COVID-19 pandemic. When micro-level classroom resources do not match those mandated by the educational policy of online teaching, there may be negative contextual impact on student feedback literacy development.

On the other hand, learner factors such as motivation and beliefs about writing as well as the possession of learning strategies influence student writers' engagement with feedback (Han & Hyland, 2015; Zhang & Hyland, 2018). These factors affect whether and how students perceive learning resources (e.g., learning activities) as affordances, that is, "opportunities for learning, which the students perceive within the learning structure" (Cotterall & Murray, 2009, p. 42). A match or mismatch between contextual and individual variables may either facilitate or constrain the perceptions of affordances in relation to feedback literacy development (Chong, 2020). In other words, the different degrees of alignment between learner and contextual factors enable students to perceive affordances for feedback literacy development in different ways. For example, misalignment between learner and contextual factors may constrain learners' agency in developing feedback literacy.

### **Theoretical Framework**

Based on the literature review, a conceptual framework on student feedback literacy development (Fig. 1) was constructed to guide the current study. This framework was built based on Chong's (2020) student feedback literacy framework. The framework shows that learners are situated within different layers of contexts, including micro-level (i.e., classroom), meso-level (i.e., school), and macro-level (i.e., sociocultural factors) contexts. Note that LOA constitutes only one part of the instructional context in the classroom. Based on the interaction between learner and micro-level factors (see the double arrows connecting learners and classroom ecosystem), learners develop their feedback literacy by perceiving and drawing on learning affordances in the classroom ecosystem, created through the interplay among classroom resources/activities in the

textual, instructional, and interpersonal contexts (see the arrows connecting these contexts). At the same time, learners' perceptions of affordances in the classroom (i.e., their interaction with classroom resources) may mediate or be mediated by the interactional impact of the micro-, meso-, and macro-level contexts (see the double arrows connecting learners and classroom ecosystem as well as those connecting different levels of contexts). The interactional dynamics among learners and various layers of contexts (represented by the double arrows connecting these elements) shape student feedback literacy (see the arrow from nested contexts to student feedback literacy) when LOA is implemented. Knowledge about the development of student feedback literacy, in turn, suggests the need to attend to the contextual dynamics among learners and multiple levels of contexts (see the arrow from student feedback literacy to the nested contexts). Research on student feedback literacy from an ecological perspective has explored the positive influence of the alignment between different levels of contexts in relation to student engagement with peer feedback (Cowie & Khoo, 2018) or focused on the interplay between learners and contextual factors regarding student feedback literacy (Chong, 2020). However, there is a need to explore both the (mis)alignment between multiple layers of contexts and how such (mis)alignment may be connected to the interplay between contextual and learner factors to shape student feedback literacy in different ways. During emergency remote teaching incurred by COVID-19 pandemic, the micro-level classroom resources may not align with those required by educational policy of online teaching. It is thus important to explore how such potential misalignment may mediate or be mediated by the interaction between contextual and learner factors, that is, learners' perceptions of classroom affordances for enhancing their feedback literacy, when LOA is implemented online.

### Research Questions

This study explored student feedback literacy by examining the contextual dynamics among learners and various layers of contexts. It involved the following two research questions:

- RQ1 From the participating students' perspective, what was the influence of LOA on their feedback literacy in an online academic English writing course?
- RQ2 What were the individual variations, if any, in the focal participants' feedback literacy development?

## Method

### Context

The study was conducted in a 14-week academic English writing course for year-1 English majors at a Hong Kong university. Following the announcement of the Education Bureau regarding the suspension of kindergarten, primary, and secondary school classes due to the COVID-19 pandemic, universities in Hong Kong, including the one where the study was conducted, decided to implement online teaching in February 2020. The teacher of the writing module implemented LAO through Microsoft Teams.

The teacher used three design features, namely, pre-task guidance, draft-plus-rework, and two-part tasks (Winstone & Carless, 2020), to allow students to enhance their evaluative judgment and generate and act on feedback. The two major assignments in the course were secondary and primary research papers with self-selected topics (Table 1) to promote academic writing and research skills. Pre-task guidance required learners to engage with student exemplars to develop their evaluative judgment. Before submitting the final draft of each paper, the students were asked to read an exemplar posted on Moodle (the learning management system used in the course) before class (see weeks 4 and 12 in Table 1). In the online lessons, they shared their analysis of the exemplar with the teacher. Following student–teacher dialogues about the sample, the teacher provided her comments on its strengths and weaknesses.

Draft-plus-rework design required the students to submit outlines/proposals, first drafts (optional), and final drafts to Moodle for each type of paper (see Table 1 for weighting of each assessment element). This design enabled the learners to engage with teacher feedback and use it to improve subsequent writing. Teacher feedback was inserted into Word files of students' writing and was emailed to them. Furthermore, the students had opportunities to discuss their writing, either synchronously or asynchronously, with the teacher on Microsoft Teams.

Two-part tasks required the students to present the preliminary findings of their research papers in the online lessons (see weeks 7 and 14 in Table 1), followed by teacher and peer oral feedback to inform the final drafts. This design allowed students to receive teacher and peer feedback as well as to develop evaluative expertise by giving peer feedback and reflecting on their own research. In the online lessons, the teacher and students provided oral feedback to the presenters. After the class, the students submitted via Moodle what they could learn from the presentations and what they should avoid. Due to limited knowledge about assigning the students to different groups

**Table 1** Assessment tasks and activities in the module

Week	Assessment activities and tasks	Weighting	Research activities
<i>Secondary research paper</i>			
4	Exemplar analysis	N/A	
5 & 6	Outline	5%	
7	Presentation	5%	
8	Final draft	30%	
9			Collection of focal students' drafts and teacher feedback Interviews with focal students Collection of supplementary data, including course outlines, teaching slides, grading rubrics, essay instructions, student exemplars, and peer comments posted on Moodle
<i>Primary research paper</i>			
10	Proposal	5%	
12	Exemplar analysis	N/A	
14	Presentation	5%	
15	Final draft	40%	Survey on student feedback literacy Collection of focal students' drafts and teacher feedback Interviews with focal students Collection of supplementary data, including course outlines, teaching slides, grading rubrics, essay instructions, student exemplars, and peer comments posted on Moodle
Throughout the course	Participation	10%	
	Total	100%	

in Microsoft Teams, the teacher did not give her students a chance to further exchange ideas with peers.

In brief, the LOA was intended to facilitate student feedback literacy in terms of developing evaluative expertise and engaging with feedback. Moreover, it involved dialogue opportunities (e.g., dialogues around exemplars and teacher-student dialogues about student work) that would help students appreciate the value of feedback and develop positive emotions and dispositions related to feedback in the assessment processes.

## Participants

The participants were Mary (pseudonym), with 8 years of teaching experience, and her students enrolled in an academic English writing course at a Hong Kong university. The teacher was selected because she had previous experience with implementing LOA in the English writing module and demonstrated great enthusiasm for research. The 21 students in her class were year-1 English majors and were around 18 years of age. They were exposed to exam-oriented product-based writing instructions in secondary schools. To explore individual differences in feedback literacy development, two focal students, Jane and Robert (pseudonyms), were selected after all students submitted the final drafts of the secondary research paper.

Based on teacher observation of her students' classroom performance, attitudes towards feedback-related activities, and use of feedback in relation to the four components of feedback literacy (i.e., students' understanding of the value of feedback and assessment criteria, their attitudes toward feedback and feedback-related activities, and their use of feedback for revision), the teacher found that Jane and Robert represented different patterns of feedback literacy development, especially in the aspects of managing affects and taking actions. Although both students demonstrated development in the other two aspects of student feedback literacy, that is, appreciating feedback and developing judgements, they were very different in that Jane became an active seeker and user of feedback while Robert remained to be unmotivated to seek and use feedback. The different patterns of feedback literacy development as observed by the teacher were also consistent with the survey data related to the two students, which were collected at the end of the module.

## Data Collection and Analysis

Multiple sources of data were used to answer research questions, including an online survey constructed based on the four elements of student feedback literacy (Carless & Boud, 2018) that provided an exploratory indicator of the

perceived influence of LOA on student feedback literacy (Table 2), drafts produced by the two focal students, teacher feedback on their writing, semi-structured interviews with the students, and supplementary data sources that were used to describe the assessment practices in the course (see “Context” sect.). Table 1 shows the data sources and data collection procedures.

Both quantitative and qualitative analyses were conducted. To answer RQ1, a survey was used to generate descriptive statistics. The mean score for each survey item and each of the four aspects of feedback literacy was calculated. To answer RQ2, textual analysis of teacher written feedback and students’ revisions was performed. Teacher feedback was divided into feedback points (Hyland, 1998) and coded as positive or negative. Among negative feedback, usable feedback points were further distinguished based on the potential for revision. Students’ revisions were identified based on comparison across drafts and were cross-linked to teacher feedback. The acceptance rate in response to teacher feedback was calculated by dividing the total number of usable teacher feedback points by the total number of revisions. A qualitative analysis of the interview data involving data reduction, data display, and drawing and verifying conclusions (Miles et al., 2014) was performed. All interview data were transcribed verbatim and checked for accuracy. Data reduction was performed by coding only information related to the four aspects of student feedback literacy. Case narratives were developed, with supplementary data providing a deep understanding of the context. Then the data were displayed in a table for cross-case analysis. Based on the cross-case analysis, conclusion was drawn about the two students’ feedback literacy development and verified through member-checking.

## Findings

### Student Feedback Literacy Development: A General Picture

Survey results (see Table 2) showed that the students perceived positively the impact of learning-oriented online assessment in promoting their feedback literacy in terms of appreciating feedback, i.e., understanding the value of feedback and student role in the feedback process (items 1–5,  $M = 3.90$ ,  $SD 0.39$ ), and developing judgements, i.e., developing the ability to make decisions about the quality of their and others’ work (items 6–10,  $M = 3.76$ ,  $SD 0.38$ ). The students also held favorable opinions of the influence of LOA on feedback literacy in terms of taking actions on feedback (items 14–18,  $M = 3.78$ ,  $SD 0.39$ ). Eleven out of 12 students reported that teacher feedback was “detailed

and easy to understand,” “useful and detailed,” “good and clear,” and “helpful” (see the coding results related to item 19 in Table 2). Two out of 13 students mentioned that online peer feedback was “good for writing the essay” and assisted them to know “how to improve the content” and 3 out of 13 students considered that the exposure to or evaluation of peers’ presentations facilitated the evaluation of their own work (see the coding results related to item 20 in Table 2). Nine out of 10 students reported that exemplar analysis helped them have a better understanding of writing tasks, learn from the strengths of the exemplars, and avoid the weaknesses in their own writing (see the coding results related to item 21 in Table 2). In contrast to the aforementioned positive responses, the students only tended to slightly agree that the online mode of learning during the COVID-19 pandemic, compared with face-to-face learning, made it easier for them to appreciate the usefulness of feedback, to make sound judgments of their writing, and to act on feedback (see items 5, 10, and 18, respectively). Responding to the question on the impact of online mode of learning (see the coding results related to item 23 in Table 2), 4 out of 10 students reported that they “felt lazy” and “easily lost focus” during online learning due to a lack of face-to-face interaction.

The students agreed to a lesser extent that LOA exerted a positive influence on managing affects, which included the development of positive dispositions related to feedback and the ability to manage affects (items 11–13,  $M = 3.43$ ,  $SD 0.54$ ). This less favorable response could be attributed to the neutral attitude regarding whether they were motivated by feedback because of the online mode of learning during the COVID-19 pandemic (item 13,  $M = 2.95$ ,  $SD 0.92$ ). The neutral attitude could be explained by student responses to the question on the impact of online learning (item 23), in which 6 out of 10 students believed that they became “less motivated to seek teacher’s clarification of feedback and to revise.” Further, 5 out of 14 students suggested that more opportunities to communicate with their peers would make online feedback motivating (item 22).

### Individual Differences in Feedback Literacy Development

In this section, the focal students were compared in terms of their development in the four aspects of student feedback literacy, including appreciating feedback, developing judgements, managing affects, and taking actions. Jane and Robert both possessed a medium level of English writing proficiency and were exposed to a product approach to writing during secondary school. Due to great interest in English, Jane transferred from the Chinese Department to the English Department and just started her first writing

**Table 2** Descriptive statistics of the survey items

Five-point likert scale items (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)	<i>M</i>	<i>SD</i>
<b>Appreciating feedback</b>		
1. After taking the online course, I think that feedback on writing provides information on my current levels of writing skills	4.05	.59
2. After taking the online course, I think that feedback on writing promotes my learning of writing skills	4.05	.59
3. After taking the online course, I think that I should seek and use feedback for my writing assignments	4.33	.58
4. After taking the online course, I think that I should use technology (e.g., Microsoft Word) to access, store, and revisit feedback on my writing	3.81	.75
5. I think that online learning in the course during COVID-19 made it easier for me to appreciate the usefulness of feedback in the course	3.24	.70
<b>Developing judgements</b>		
6. After taking the online course, I think that I understand the assessment criteria for the writing assignments	4.10	.44
7. After taking the online course, I think that I develop the ability to make sound judgements about my writing	3.76	.54
8. After taking the online course, I think that peer feedback activities are useful for the evaluation of writing	3.76	.77
9. After taking the online course, I think that analyzing student writing samples is useful for the evaluation of writing	4.00	.77
10. I think that online learning in the course during COVID-19 made it easier for me to make sound judgements of my writing	3.19	.68
<b>Managing affects</b>		
11. After taking the online course, I think that I become motivated to write because of feedback	3.43	.93
12. After taking the online course, I think that I want to engage with the feedback on my writing (that is, understand and use feedback) even if it makes me feel worried to read it	3.90	.62
13. I think that I am more motivated by feedback because of the online learning during COVID-19	2.95	.92
<b>Taking actions</b>		
14. After taking the online course, I think that students need to act upon feedback on their writing in order for it to be useful	3.81	.51
15. After taking the online course, I think that I want to take on board the feedback on my writing and learn from it	3.90	.62
16. After taking the online course, I think that it is the responsibility of the students to make their own decisions about how to implement feedback on their writing	4.00	.55
17. After taking the online course, I think that I know how to act on feedback on my writing	3.81	.60
18. I think that online learning during COVID-19 made it easier for me to act on feedback	3.38	.97
<b>Open-ended questions</b>		
19. Any comments on the teacher feedback received in the online course? Usefulness of teacher feedback (11 out of 12) Suggestion on teacher feedback (1 out of 12)		
20. Any comments on the online peer feedback activities on student presentations? Benefits of peer feedback: writing improvement for receivers (2 out of 13) Benefits of peer feedback: enhancing evaluative capacities for givers (3 out of 13) Suggestion on peer feedback: more interaction between peers (5 out of 13) Problems of peer feedback (3 out of 13)		
21. Any comments on the exemplar analysis activities? Benefits of exemplar analysis: better understanding of qualities of good writing (9 out of 10) Problem of exemplar analysis: difficult to read long samples (1 out of 10)		
22. Any suggestions on making online feedback motivating? More interaction and communication with peers (5 out of 14) More support from teacher (3 out of 14) Contented with the current arrangement (3 out of 14) Use synchronous rather than asynchronous means of communication (3 out of 14)		
23. Any comments on the impact of the online mode of learning on your learning of academic English writing in the course? Negative impact on learning: difficult to focus (4 out of 10) Negative impact on motivation: less motivated to engage with teacher feedback (6 out of 10)		

course as an English major when the study was conducted. Although she had limited exposure to activities associated with LOA (e.g., multiple drafting, peer feedback, and exemplar analysis) before, she demonstrated development in the four aspects of feedback literacy. Unlike Jane, Robert was not highly interested in academic writing. He had the experience of activities associated with LOA in another university-level writing course before the one in the study; however, he demonstrated limited development in his feedback literacy, particularly in the dispositions associated with feedback-related activities and limited actions on feedback.

#### *Appreciating Feedback and Developing Judgements*

As a transfer student, Jane had limited experience of feedback-related activities and little knowledge of writing academic papers, but she was able to appreciate the value of feedback and to develop a good understanding of writing criteria through the course. She valued the multiple drafting process because of the opportunity to use feedback for improvement. Teacher feedback on her weak areas (i.e., content and language use) was “helpful” and that “communication with the teacher” enabled her to “do a better job.” She also liked peer feedback because it “was very accessible.” Teacher instructions and exemplar analysis were also “useful” and enabled her to become more familiar with the assessment criteria and “avoid logic or grammar problems.” Jane’s interview data were consistent with her survey data, which showed that her mean scores for the two components related to appreciating feedback and developing judgements were above the class averages, respectively (i.e., 4.60 vs. 3.90 for appreciating feedback and 4.0 vs. 3.76 for developing judgements).

Robert also demonstrated development in the aforementioned two aspects of student feedback literacy, albeit to a lesser extent compared with Jane and the class as a whole. He mentioned that feedback was “a must for writers” and that he had enhanced his understanding of the criteria for good academic writing through exemplar analysis and peer feedback. However, his mean scores for the two components of student feedback literacy were slightly lower than the class averages, respectively, (i.e., 3.6 vs. 3.9 for appreciating feedback and 3.6 vs. 3.76 for developing judgements) and much lower than those of Jane.

#### *Managing Affects and Taking Actions*

Since the case study data showed the close connection between the other two aspects of student feedback literacy, that is, managing affects and taking actions, findings related to these two aspects were presented together for each

case. Despite limited experience of seeking and using feedback on English writing in her secondary school, Jane displayed positive dispositions toward feedback-related activities and became motivated to seek and use feedback starting from the first major assignment related to the secondary research paper. She proactively sought teacher feedback by submitting extra drafts through Microsoft Teams and raising questions about teacher feedback. Jane explained that she was motivated to learn English writing and to achieve a high GPA. She also believed that “learning writing is about overcoming problems and doing a better job.” Therefore, she took the initiative to seek feedback. Previous research demonstrated that a growth mindset in learning writing predicted L2 writing motivation, which strongly correlated with feedback orientation (Waller & Papi, 2017). It is likely that Jane’s writing belief and motivation allowed her to see the learning potential of communicating with her teacher, contributing to her active seeking of teacher feedback. In addition, she was not discouraged by negative teacher comments and was motivated to use them. She used 60% of them (i.e., 9 out of 15) after carefully considering whether and why she needed to revise. L2 learners’ motivation and beliefs about writing affect their engagement with written corrective feedback (Han & Hyland, 2015). In this study, a high level of writing motivation and belief about improving writing through efforts probably enabled Jane to recognize the usefulness of teacher feedback on academic writing, show positive attitudes toward it and act actively on it.

For the second major assignment of primary research paper, Jane kept the momentum of seeking and using feedback. Although she complained about online learning and was eager to go back to campus for face-to-face communication with the teacher and her peers, she was not constrained by the online mode of learning. She continued to seek teacher feedback and displayed a calm response to the overwhelmingly negative teacher feedback (1 positive comment vs. 22 negative comments), using 40.9% of teacher comments (i.e., 9 out of 22), with the use rate being influenced by her “busy schedule” near the end of the semester. Survey data corroborated with interview and textual data: Jane’s mean scores for the two components of managing affects and taking actions were higher than class averages, respectively (i.e., 4.50 vs. 3.43 for managing affects and 4.60 vs. 3.78 for taking actions).

In contrast, Robert displayed negative dispositions toward feedback-related activities and was reluctant to act on feedback. For the secondary research paper, Robert did not appear to be highly motivated to engage with feedback and writing/revising. He thus addressed only 2 oral comments received from the teacher during the presentation of his paper and ignored all 9 written comments on his first draft, which was written as a “script” for him “to present.”

Robert acknowledged that he had the habit of “freestyle”, meaning that he “casually wrote anything” without further revision, and he complained that multiple drafting was time-consuming. His habit of “freestyle” reflected the belief about writing as a product. A product view of writing seems to be associated with L2 students' reluctance to treat feedback as learning potential and to conduct revision (Ma & Teng, 2021). In addition, Robert was not interested in academic writing: “you cannot really push people who dislike writing to like it, especially academic writing style.” He also found it difficult to change his writing style based on teacher comments because he did not write “really academically.” While a high level of motivation and a repertoire of learning strategies positively affect learner engagement with writing feedback (Han & Hyland, 2015; Zhang & Hyland, 2018), a lack of interest in academic writing and strategies to act on feedback probably constrained Robert's detection of the learning opportunities afforded by feedback and contributed to his unwillingness and inability to engage with it and revise accordingly.

For the primary research paper, unlike Jane who kept seeking and using feedback, Robert was unmotivated to seek teacher feedback and did not have a chance to act upon it because he did not submit his research proposal, which accounted for 5 points of the total grade. He explained that he forgot to complete the assignment due to a lack of teacher monitoring in online learning: “If you do not talk, nobody knows you are here or you are gone. You can literally be sleeping or whatever, doing your stuff.” It appeared that online learning further diminished Robert's motivation to learn writing and to seek teacher feedback. After the teacher's reminder, he only emailed her the proposed research topic and submitted the final draft near the end of the course, losing the opportunity to obtain teacher feedback to improve his writing. Survey data were consistent with interview and textual data: Robert's mean scores for the two components of managing affects and taking actions were much lower than class averages (i.e., 2.50 vs 3.43 for managing affects and 3.00 vs. 3.78 for taking actions) and those of Jane, respectively.

Table 3 summarizes the two students' feedback literacy development in the aspects of appreciating feedback, developing judgements, managing affects, and taking actions.

## Discussion

This study explored students' perceived impact of LOA on their feedback literacy in an online academic writing course during the COVID-19 pandemic and individual differences during such development. Survey results showed a primarily positive view of the influence of LOA

on feedback literacy development in the aspects of appreciating feedback, developing judgements, and taking actions, but less favorable student opinions of the online mode of learning in promoting such literacy. Moreover, students perceived less positively the development of feedback literacy in terms of managing affects. Qualitative data further revealed great variations in the two case students' feedback literacy development, particularly regarding managing affects and taking actions.

The students' self-reported feedback literacy development concerning appreciating feedback, making judgements, and taking actions reflected a synergy between the learning resources in the classroom context but a misalignment between the micro-level classroom and macro-level sociocultural contexts. On the one hand, the students positively perceived the development of their feedback literacy in appreciating feedback, developing judgements, and taking actions. They also held favorable opinions of the resources in the classroom textual (e.g., online teacher/peer comments) and instructional contexts (e.g., exemplar analysis and evaluation of peers' presentations). The students' positive views suggested that they perceived and drew on a well-coordinated array of learning resources in the textual and instructional contexts of the classroom ecosystem to develop their feedback literacy. On the other hand, the students favored less the online mode of learning during the COVID-19 pandemic to enhance their feedback literacy development in appreciating feedback, developing judgements, and taking actions (see items 5, 10, and 18) because they considered online learning less engaging than face-to-face learning. The less favorable opinions suggested a mismatch between the requirement of the sociocultural contexts (i.e., the government policy of mandatory online learning due to health risk) and the classroom context into which more learning resources (e.g., strategies of online engagement) should be integrated for students to draw on to enhance the aforementioned three aspects of their feedback literacy. The contrast between students' positive perceptions of LOA-related resources/activities and their less positive views of the mandated online mode of learning indicated that the teacher should adopt a holistic systemic perspective (Cowie & Khoo, 2018) when facilitating student feedback literacy development. As a key agent in creating learning resources in the classroom ecosystem (Q. Liu & Chao, 2018), the teacher needs to not only foster synergy between different components of the classroom ecosystem, but also align classroom and sociocultural contexts, given the negative impact of misalignment identified in the study.

The misalignment between classroom and sociocultural contexts is most clearly reflected in the students' less favorable views of their feedback literacy development in managing affects, particularly their neutral attitude toward

**Table 3** The two focal students' feedback literacy development

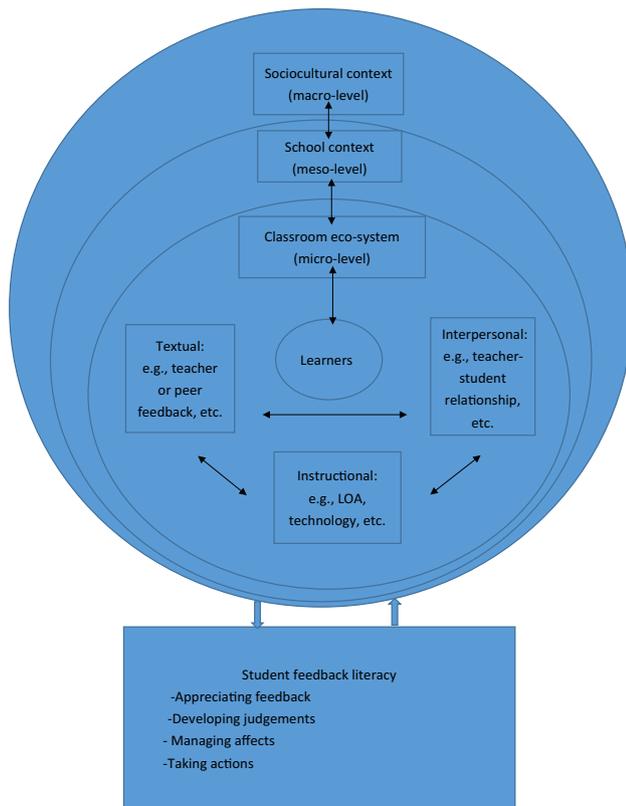
	Jane	Robert
Appreciating feedback	Appreciated teacher feedback and communication with the teacher Appreciated peer feedback Valued multiple drafting process	Acknowledged the value of feedback
Developing judgements	Developed a good understanding of writing criteria	Enhanced understanding of good writing
Managing affects	Motivated to seek and use teacher feedback Remained calm in response to negative teacher feedback	Unmotivated to engage with teacher feedback and to seek feedback
Taking actions	Acted on teacher feedback	Limited action on teacher feedback

the online mode of learning in fostering motivation in response to feedback (item 13). Compulsory online teaching during the COVID-19 pandemic (i.e., the government policy) requires creating a social presence, “the social communication channels that teachers must open to maintain and possibly enhance the lost spontaneous student–student and student–teacher interactions” (Rapanta et al., 2020, p. 938) to build student–student and student–teacher relations. Such relations greatly influence the affective and motivational impact of feedback (Winstone & Carless, 2020). However, students' suggestions to increase peer dialogues revealed a need for enhanced communication channels/resources in the interpersonal context. Despite opportunities for teacher–student conversations via email or Microsoft Teams, the students were not involved in peer dialogues because the teacher was compelled to teach online and lacked relevant knowledge of information technology. In academic writing, student feedback literacy depends on technical facilitators and social-interactive scaffolding provided by teachers and students, among other things (Yu & C. Liu, 2021). The study showed that social-interactive scaffolding provided by the teacher alone may not be sufficient to promote the emotional aspect of student feedback literacy in an online environment. If the teacher lacks knowledge of utilizing technology to enable students to provide scaffolding through peer dialogues, the potential of LOA in developing the emotional aspect of student feedback literacy (i.e., the development of positive dispositions such as motivation) would be susceptible to the mismatch between the classroom interpersonal and socio-cultural contexts.

While survey data revealed the negative influence of the misalignment between micro-level and macro-level contexts on student feedback literacy, data related to the two focal students further showed how such a misalignment mediated or was mediated by the interplay between micro-level classroom and learner factors, leading to individual differences in student feedback literacy, especially in managing affects (i.e., motivation to seek feedback and to

revise) and taking actions (i.e., action on feedback). Jane's feedback literacy development could be explained by an overall alignment between learner factors and resources in the classroom ecosystem, and such an alignment counterbalanced the mismatch between the classroom and socio-cultural contexts. Although Jane did not have access to LOA-related learning resources/activities (e.g., teacher/peer feedback) before, the current writing course provided her with these resources. Meanwhile, learner factors that largely shaped learner agency, such as writing motivation and a growth mindset about learning writing, enabled her to perceive affordances (Cotterall & Murray, 2009) in the textual (e.g., the usefulness of teacher/peer feedback), instructional (e.g., appreciation for multiple drafting), and interpersonal (e.g., the effectiveness of communicating with the teacher) contexts. She subsequently acted on these affordances to develop her feedback literacy. For example, she actively sought teacher feedback through online communication, responded calmly to it, and used it to improve her writing through multiple drafting. In other words, the alignment between the resources in the classroom ecosystem and Jane's writing motivation and belief facilitated the recognition and utilization of affordances and her subsequent feedback literacy development. Although she did not favor online learning during the COVID-19 pandemic, indicating a mismatch between the demand of sociocultural contexts and the supply of adequate classroom resources, Jane was not influenced by such a mismatch because it was counterbalanced by the alignment between the classroom activities/resources and her writing belief and motivation.

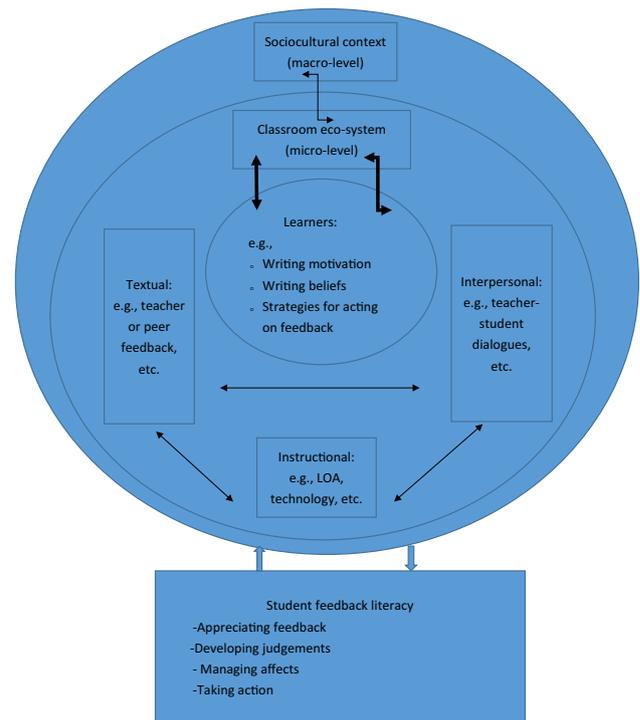
In Robert's case, a misalignment was observed between learner and classroom factors, which was further exacerbated by the mismatch between the classroom and socio-cultural contexts. Although he was surrounded by LOA-related learning activities/resources in the textual (e.g., teacher feedback), instructional (e.g., multiple drafting), and interpersonal contexts (e.g., opportunities to communicate with the teacher), he overlooked classroom resources and did not utilize them for seeking and using feedback



**Fig. 1** An ecological perspective on developing student feedback literacy through learning-oriented assessment

because of his belief about writing as a product, a lack of interest in academic writing, and limited strategies to act on feedback. That is, the misalignment between classroom resources and learner factors constrained Robert's perceptions of and actions on affordances to develop his feedback literacy. Moreover, Robert procrastinated submitting his proposal of primary research paper for teacher feedback due to the perceived lack of online monitoring by the teacher. This finding suggested that the perceived insufficient classroom resources associated with teacher online monitoring (against the demand of the sociocultural contexts) further diminished Robert's motivation to learn writing. The diminished motivation in turn exacerbated the misalignment between learner and classroom factors by preventing Robert from completing the compulsory assignment as an opportunity to obtain teacher feedback as learning affordance.

The contrast between the two students illustrated the complexity involved in using LOA to develop student feedback literacy during the COVID-19 pandemic. Such a contrast provided empirical support for the argument that the alignment between learner and contextual factors facilitated student feedback literacy (Chong, 2020), reflected particularly by the students' feedback literacy in managing affects and taking actions in the context of



**Fig. 2** An ecological perspective on developing student feedback literacy through learning-oriented assessment: The case of misalignment between macro- and micro-contexts

academic English writing. The findings further revealed a more fine-grained view of contextual dynamics in connecting the interaction between personal and classroom contextual factors to the interplay between micro- and macro- contexts. That is, the alignment between person and classroom factors may offset the negative impact of the mismatch between the classroom and sociocultural contexts, whereas the misalignment between learner and classroom factors may be worsened by the incongruence between the classroom and sociocultural contexts. The teacher thus needs to be sensitive to differences in student feedback literacy development and consider the various patterns of interaction among personal, classroom, and sociocultural contexts (see the cases of Jane and Robert).

The discussion above suggests a refined model of an ecological perspective on developing student feedback literacy through learning-oriented online assessment, depicting the contextual dynamics among learner, micro-level classroom and macro-level sociocultural contexts when there is misalignment between micro- and macro-factors (Fig. 2). While the theoretical framework (Fig. 1) provides a general account of the interactional dynamics involved in influencing student feedback literacy through LOA, the more fine-grained model (Fig. 2) highlighted the misalignment between micro-level classroom and macro-sociocultural contexts (see the elbow double arrows

between the two contexts) when LOA is implemented online and how such misalignment may be connected to the match (see the double arrows) or mismatch (see the elbow double arrows) between learners and micro-level factors to shape students' development of feedback literacy in different ways. The misalignment between micro- and macro-contexts can be counterbalanced by the match between learners and classroom ecosystem, with such a match exerting a stronger influence on facilitating student feedback literacy development (see the double arrows connecting learners and classroom ecosystem, which are thicker than the elbow double arrows connecting micro- and macro- contexts). However, the misalignment between micro- and macro- contexts may aggravate the existing mismatch between learners and classroom ecosystem, with such aggravated mismatch further constraining student feedback literacy development (see the elbow double arrows connecting learners and classroom ecosystem, which are thicker than the elbow double arrows connecting micro- and macro- contexts). Previous research from an ecological perspective either focused on the positive influence of the alignment between different levels of contexts in relation to student engagement with feedback (Cowie & Khoo, 2018) or emphasized the interplay between learners and contextual factors regarding student feedback literacy (Chong, 2020). This study contributed to research on student feedback literacy by revealing not only the negative impact of misalignment between different layers of contexts on student feedback literacy, but also how such misalignment may be connected to the interplay between learners and micro-level factors to shape individual differences in student feedback literacy development when LOA is employed online during COVID-19.

### Conclusion and Implications

From an ecological perspective (Chong, 2020), this study investigated the perceived influence of LOA on the students' feedback literacy development in an online writing course during the COVID-19 pandemic and individual differences in feedback literacy development. Survey results showed that the students positively perceived the development of their feedback literacy in appreciating feedback, developing judgements, and taking actions, although they held less favorable opinions of the online mode of learning in promoting such literacy. Student perceptions also showed that the development of student feedback literacy in the aspect of managing affects lagged behind the other three aspects. Qualitative data further revealed individual variations in the two focal students' literacy development, particularly in managing affects and taking actions. The findings revealed the negative impact of the misalignment between the micro- and macro-level

contexts on student feedback literacy and how such a misalignment was connected to the interplay between learner and micro-level contextual factors to shape individual differences in feedback literacy when LOA was implemented online during COVID-19. Based on the findings, a fine-grained model was proposed according to an ecological perspective on developing student feedback literacy through learning-oriented online assessment, particularly in the case of misalignment between micro- and macro- contexts. With a special focus on misalignment, the model can serve as a framework for exploring interactional dynamics among learners, classroom, and larger contexts in using LOA to enhance student feedback literacy online, both during the present crisis and in the future.

As the current study involved only one writing class, its findings can only be applied to similar settings. The study also focused on the contextual dynamics of learners, classroom, and sociocultural contexts without involving the school context whose influence was only limited to following the government's policy of online teaching. Future research on online implementation of LOA can adopt an ecological perspective to investigate different student populations, with a focus on creating alignment among learner, classroom, school, and sociocultural contexts to foster a balanced development of the four components of student feedback literacy according to individual differences. In addition, students' self-efficacy belief, which was an important variable in L2 writing (Kong & Teng, 2020), was not considered.

The study has three implications. First, to promote student feedback literacy online through LOA, teachers should play the role of resource integrator in creating learning potential for students. They should learn to link LOA and technology in the instructional context synergistically to resources/activities in the textual (e.g., qualities of teacher/peer feedback) and interpersonal (e.g., student-teacher dialogues) contexts in the classroom. They should also create alignment between the classroom and sociocultural contexts by considering the implications of the latter (e.g., the government's policy of mandatory online teaching) for including appropriate resources in the classroom context. Second, teachers should attend to individual differences in student feedback literacy development in implementing LOA online. A diversity of resources should be provided to meet the diverse needs of individual students considering their writing beliefs, motivation, and strategies for acting on feedback. In this way, alignment between personal and classroom factors can be created, given that such alignment can offset the negative impact of a mismatch, if any, between classroom and sociocultural contexts. Third, other than merely following the government policy of online teaching, the university where the study was conducted should provide

guidelines regarding effective online teaching and assessment and practical workshops for enhancing teachers' information technology literacy. At the sociocultural level, training programs focusing on a holistic systemic perspective on using LOA to develop student feedback literacy online are needed.

## References

- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15(1), i–vi.
- Carless, D. (2015). Exploring learning-oriented assessment processes. *Higher Education*, 69(6), 963–976.
- Carless, D., & Boud, D. (2018). The development of student feedback literacy: Enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, 43(8), 1315–1325.
- Cotterall, S., & Murray, G. (2009). Enhancing metacognitive knowledge: Structure, affordances and self. *System*, 37(1), 34–45.
- Chong, S. W. (2020). Reconsidering student feedback literacy from an ecological perspective. *Assessment & Evaluation in Higher Education*, 46, 92.
- Cowie, B., & Khoo, E. (2018). An ecological approach to understanding assessment for learning in support of student Writing achievement. *Frontiers in Education*, 3, 1–13. <https://doi.org/10.3389/educ.2018.00011>
- Han, Y., & Hyland, F. (2015). Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom. *Journal of Second Language Writing*, 30, 31–44.
- Han, Y., & Xu, Y. (2019a). The development of student feedback literacy: The influences of teacher feedback on peer feedback. *Assessment & Evaluation in Higher Education*, 45(5), 680–696.
- Han, Y., & Xu, Y. (2019b). Student feedback literacy and engagement with feedback: A case study of Chinese undergraduate students. *Teaching in Higher Education*. <https://doi.org/10.1080/13562517.2019.1648410>
- Hyland, F. (1998). The impact of teacher written feedback on individual writers. *Journal of Second Language Writing*, 7(3), 255–286.
- Kong, A., & Teng, F. (2020). The operating mechanisms of self-efficacy and peer feedback: An exploration of L2 young writers. *Applied Linguistics Review*. <https://doi.org/10.1515/applirev-2020-0019>
- Liu, Q., & Chao, C. C. (2018). CALL from an ecological perspective: How a teacher perceives affordance and fosters learner agency in a technology-mediated language classroom. *ReCALL*, 30(1), 68–87.
- Ma, M., & Teng, M. F. (2021). Metacognitive knowledge development of low proficiency Hong Kong English as a Foreign Language university students in a process-oriented writing course: An action research study. In B. L. Reynolds & M. F. Teng (Eds.), *Innovative Approaches in Teaching English Writing to Chinese Speakers* (pp. 117–144). De Gruyter Mouton.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 2, 923.
- Sutton, P. (2012). Conceptualizing feedback literacy: Knowing, being, and acting. *Innovations in Education and Teaching International*, 49(1), 31–40.
- Waller, L., & Papi, M. (2017). Motivation and feedback: How implicit theories of intelligence predict L2 writers' motivation and feedback orientation. *Journal of Second Language Writing*, 35, 54–65.
- Winstone, N., & Carless, D. (2020). *Designing effective feedback processes in higher education: A learning-focused approach*. Routledge.
- Yu, S., & Liu, C. (2021). Improving student feedback literacy in academic writing: An evidence-based framework. *Assessing Writing*, 48, 100525.
- Zhang, Z. V., & Hyland, K. (2018). Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing*, 36, 90–102.

**Publisher's Note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.