

## **Assessment & Evaluation in Higher Education**





ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/caeh20

# Supporting student and teacher feedback literacy: an instructional model for student feedback processes

Renske A. M. de Kleijn

**To cite this article:** Renske A. M. de Kleijn (2023) Supporting student and teacher feedback literacy: an instructional model for student feedback processes, Assessment & Evaluation in Higher Education, 48:2, 186-200, DOI: 10.1080/02602938.2021.1967283

To link to this article: <a href="https://doi.org/10.1080/02602938.2021.1967283">https://doi.org/10.1080/02602938.2021.1967283</a>

9	© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
	Published online: 24 Sep 2021.
	Submit your article to this journal $oldsymbol{oldsymbol{\mathcal{G}}}$
hil	Article views: 16227
Q	View related articles ☑
CrossMark	View Crossmark data ☑
4	Citing articles: 7 View citing articles 🗹







### Supporting student and teacher feedback literacy: an instructional model for student feedback processes

Renske A. M. de Kleijn (D)



Department of Biomedical Sciences, University Medical Center Utrecht, Utrecht, the Netherlands

#### **ABSTRACT**

Within the new feedback paradigm, the concept of student and teacher feedback literacy is gaining more and more attention, with most studies focussing on what it entails and how it can be supported by design. This paper contributes to this, by focussing on what students can do with feedback information. It proposes an instructional model for student feedback processes with the student activities seeking-, making sense of-, using- and responding to feedback information and specific prompts all four activities. Following Vygotsky, the model is built on the premise that effective feedback processes take place in social interaction with a more knowledgeable peer in the Zone of Proximal Development. In doing so, this is the first paper that addresses what students can do to contribute to scaffolded learning from feedback. The instructional model can be used by students to process feedback information and can be used by teachers to scaffold students' feedback processes. So, it is intended to support both student and teacher feedback literacy and their interplay. Future studies need to empirically validate the effectiveness of this instructional model.

#### **KEYWORDS**

Assessment—general; higher education; learning strategies; feedback literacy; study skills

#### Introduction

It has been investigated for decades how feedback can drive the learning of students. A major paradigm shift is that most higher education feedback researcher no longer define feedback as information, but take a socio-constructivist perspective and define feedback as a sense-making process in which both teachers and students have an active role (Winstone and Carless 2020). To avoid confusion, Winstone, Boud, et al. (2021) proposed to use feedback information for the old paradigm conception and feedback processes for the new paradigm conception, which is followed throughout this paper. They defined feedback information as 'information learners can use to improve the quality of their work or learning strategies' (p. 12) and feedback processes as 'the activities undertaken by learners to obtain, understand, and use feedback information' (p. 12).

However, despite the increasing attention for feedback processes, it remains unclear what specific strategies and activities students and teachers can concretely apply to create feedback processes that support learning. Using a socio-constructivist perspective, this paper therefore proposes an instructional model for student feedback processes. This model brings together ideas and empirical work related to feedback literacy, the Zone of Proximal Development (ZPD), and scaffolded learning. Whereas feedback literacy helps to understand what students and teachers need to know, value, and do in order to make effective use of feedback information, the ZDP and scaffolded learning provide a conceptual basis for strategies and activities that students can apply to enhance their learning and to support teachers in scaffolding student learning. So before describing it, these two theoretical perspectives are discussed in terms of how they inform the proposed instructional model.

#### Feedback literacy

Often the lack of effectiveness of feedback information on learning or performance is attributed to the receiver not valuing, understanding, or engaging with it (e.g. Ajjawi and Boud 2018; Carless 2006; Jonsson 2013; Winstone et al. 2017a). Indeed, several studies have indicated that students are not explicitly preparation for receiving and using feedback (Burke 2009; Robinson, Pope, and Holyoak 2013; Weaver 2006). In order to support students' feedback use, Carless and Boud (2018) suggested that scholars and educators need to focus on the development of student feedback literacy. Since this publication, the concept of feedback literacy has been taken up by multiple other scholars who have elaborated on it both conceptually and empirically and addressed how the development of feedback literacy can be supported.

Molloy, Boud, and Henderson (2020) progressed the understanding of student feedback literacy, by analysing student accounts of effective feedback uptake, and developed a framework for student feedback literacy. It contained 31 categories, comprised of seven groups: (1) committing to feedback as improvement, (2) appreciating feedback as an active process, (3) eliciting information to improve learning, (4) processing feedback information, (5) acknowledging and working with emotions, (6) acknowledging feedback as a reciprocal process and (7) enacting outcomes of processing feedback information. We thus see that four groups (1, 2, 5 and 6) refer to attitudes, and that three groups (3, 4 and 7) refer to specific activities. These three groups are used in the instructional model.

In addition, Carless and Winstone (2020) introduced the concept of teacher feedback literacy and argued that the development of student feedback literacy is related to the development of teacher feedback literacy. Almost concurrently, Boud and Dawson (2021) analysed what feedback literacy competencies could be derived from teacher accounts. This resulted in a framework for teacher feedback literacy with 19 competencies, divided in three groups: seven macro-level competencies focussing on programme design and development, nine meso-level competencies focussing on course module/unit design and implementation, and three micro-level competencies focussing on feedback practices relating to individual student assignments. These micro-level competencies specifically address how teachers interact with students, including that teachers need to identify and respond to student needs and craft appropriate and differentiated inputs accordingly. As feedback is considered a process of responsibility sharing (Winstone, Pitt, and Nash 2021), in the instructional model it is taken into account how students can support their teachers in these competencies.

Whereas these two papers provided an empirical basis for the competencies involved in feedback literacy, other scholars have put the concept in a broader context. For instance, Chong (2021) added a contextual and individual component to the conceptualisation of student feedback literacy, and Li and Han (2021) demonstrated the importance of the discipline as a context for feedback literacy.

Lastly, several papers focussed on how student feedback literacy can be supported. Carless and Boud (2018) already addressed the potential of composing and receiving peer feedback and analysing exemplars for developing feedback literacy. In what could be considered a follow-up conceptual paper, Malecka, Boud, and Carless (2020) argued that student feedback literacy can be embedded in curricula using developmental feedback requests, progressive use of self-assessment, cumulative peer review and rebuttal, and e-portfolios for feedback. Two other papers empirically studied interventions intended to support student feedback literacy. Winstone, Mathlin, and Nash (2019) developed a feedback toolkit that contained a glossary, feedback guide, feedback workshop, and a portfolio. On average, 92 undergraduate psychology students reported all four tools to be useful. In focus groups, several students indicated that the tools supported the decoding of feedback, synthesising and reflecting upon feedback, and identifying follow-up actions. Noble et al. (2020) studied a feedback literacy programme in the context of work placements in healthcare education. The programme consisted of an online primer, a face-to-face workshop, and reflective logs. Afterwards, 27 students engaged in a semi-structured interview and 'unanimously reported enhanced understandings of the purpose, key features, and their role in placement feedback processes' (61).

All in all, most literature so far has focussed on feedback literate students' attitudes (such as what they need to acknowledge, appreciate and commit to), what feedback literate students need to do in engaging with feedback (such as eliciting, processing and enacting), and what teacher could design to support students in doing so (such as peer feedback, feedback workshops and feedback portfolios). However, little attention has yet been paid to how students can elicit, process, and enact feedback and how teachers can scaffold students in engaging with their feedback (Van der Kleij, Adie, and Cumming 2019). Therefore, I intend to take a first step in describing how students can elicit, process, and act on feedback information by proposing an instructional model for student feedback processes. In doing so, the aim of this paper is to contribute to the development of student feedback literacy, by supporting students in shaping their specific feedback interactions, and of teacher feedback literacy, by addressing how the model can be used to scaffold these interactions.

# Feedback processes in the zone of proximal development and scaffolded learning

Feedback studies in higher education often use a socio-constructive perspective and the work of Vygotsky is then often referred to as an important foundation (e.g. Blair and McGinty 2013; Chong 2021; Edens and Shields 2015; Li and Gao 2016; Mercader, Ion, and Díaz-Vicario 2020; Orsmond and Merry 2011; Ion, Sánchez Martí, and Agud Morell 2019; Tam 2021; Wood 2021). Most of these studies referring to Vygotsky address at least one of these three premises. First, that learning in terms of individual meaning construction takes place in a context of social interaction with teachers and/or peers. Second, the concept of the ZPD, which Vygotsky defined as 'the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers' (Vygotsky 1987, 86). Third, that feedback interactions are a form of scaffolded learning or instruction, even though this is noted less often. In this paper, I too use these three premises of Vygotsky's socio-cultural theory in terms of learning as social interaction, the ZPD, and scaffolded learning as theoretical foundation for the instructional model for student feedback processes. While acknowledging the fact that a more capable peer can be a teacher or a fellow student, I will refer to teachers as the more capable peers and to students as the learners.

With respect to scaffolding, in their review van de Pol, Volman, and Beishuizen (2010) argued that teachers should apply diagnostic and scaffolding strategies in order to establish contingency. It is only when teachers have diagnosed where a student stands in their process that they are in a position to provide adaptive support through scaffolding strategies. In secondary education, van de Pol, Volman, and Beishuizen (2011) found that teachers barely used diagnostic strategies and Agricola et al. (2018) reported comparable findings in higher education. In their review, van de Pol, Volman, and Beishuizen (2010) also argued that over time teacher support should

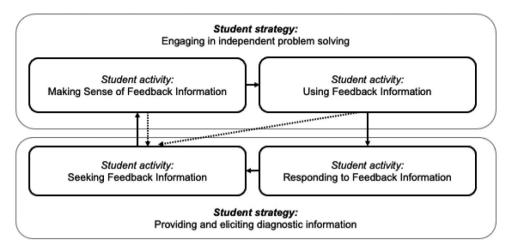


Figure 1. Proposed instructional model for student feedback processes.

be faded and student responsibility should be increased. In their model however, student strategies are simply referred to as 'response' (274). This contrasts the current idea that students have an active role in feedback processes. Therefore, it should be addressed what strategies a student can apply to contribute to this process of scaffolded learning. So I propose to mirror the two teacher strategies of diagnosing and scaffolding with two student strategies: providing and eliciting diagnostic information and engaging in independent problem solving respectively.

#### An instructional model for student feedback processes

In Figure 1 the instructional model for student feedback processes is presented. The first student strategy, which mirrors teachers' diagnostic strategies, is providing and eliciting diagnostic information. This refers to both seeking feedback information, described by Molloy et al. (2021) as eliciting (group 3), but also providing relevant diagnostic information to support the teacher strategy of diagnosing. In the model this strategy is separated into two student activities: seeking feedback information and responding to feedback information, where both seeking and responding include elements of providing and eliciting information. The importance of students seeking feedback is widely acknowledged in feedback literature in the context of professional learning (e.g. Anseel et al. 2015; Ashford, Blatt, and VandeWalle 2003) and is slowly gaining more attention in higher education (e.g. Joughin et al. 2020; Leenknecht, Hompus, and van der Schaaf 2019). However, the importance of responding to feedback has been addressed less often. Generally, it is seen as the role of the teacher to design feedback loops, but in the light of teachers and students sharing responsibility, on top of the teacher role it is considered the role of the students to make use of and seek out opportunities for responding to feedback in a meaningful way.

The second student strategy, which mirrors the teacher scaffolding strategies, is engaging in independent problem solving. This reflects Vygotsky's definition of the ZPD and refers to a student's responsibility to do individually what they can do on their own. This can also be referred to as the Zone of Actual Development (e.g. Shabani, Khatib, and Ebadi 2010). Independent problem solving here is understood to equate to independent learning. This strategy is considered to have an internal and an external process. The internal process is closely related to what Molloy et al. (2021) refer to as processing feedback information (group 4) and what Nicol (2020) refers to as internal feedback. The external process refers to students' actual use of feedback information and is closely related to Molloy et al.'s (2021) enacting (group 7). Following the

terminology used by Winstone and Carless (2020), the internal process is referred to as the activity of *making sense of* feedback information and the external activity is referred to as *using* feedback information. Several studies have shown that students experience difficulty in making sense of and using their feedback (e.g. Carless 2006; Poulos and Mahony 2008; Weaver 2006; Winstone et al. 2017b) and often have not been trained to do so (Burke 2009; Weaver 2006). This illustrates the relevance of developing an instructional model in which a first attempt is done to describe what students can do to make sense of and use their feedback.

Next, for each of the four student activities, relevant literature on feedback information and feedback processes are reviewed and summarised, after which suggestions for specific prompts are presented in a table. While acknowledging that feedback processes can start with seeking or receiving feedback information, the next section starts with an elaboration on making sense of feedback.

#### Making sense of feedback information

In the new paradigm, feedback is seen as sense-making (Carless and Boud 2018; Carless 2019; Winstone and Carless 2020). Still, so far the concept of sense-making is not explicitly defined, and scholars seem to refer to this process using varying verbs including: unpacking (Van der Kleij 2020), meaning-making (Esterhazy and Damşa 2019), self-reflecting (Yan and Brown 2017), reviewing and synthesising (Winstone 2019), processing (Barton et al. 2016; Malecka, Boud, and Carless 2020), monitoring (Butler and Winne 1995), and internal feedback generation (Nicol 2020). Though their specific focus might vary, all these authors refer to the internal process of students trying to construct individual meaning from (external) feedback information, so they can put it into action. In the next paragraphs these studies are briefly discussed and form the basis for the proposed prompts in Table 1.

Butler and Winne (1995) were the first to explicitly address how external feedback information can be used for internal feedback generation through monitoring. More recently Nicol (2020) argued that the main process underlying monitoring, which he calls internal feedback generation, is comparison. He defined internal feedback as 'the new knowledge that students generate when they compare their current knowledge and competence against some reference information' (2). Nicol convincingly argued for the importance of deliberate and mindful comparison processes and the relevance of making these comparisons explicit. He pointed out that dialogue can function as a comparator, but also as an amplifier for the power of comparisons as a whole.

Table 1. Proposed prompts for making sense of feedback information.

Target process	Prompt	
Orienting	<ul> <li>What new content knowledge can I gain from this feedback information about this specific task?</li> <li>What new content knowledge can I gain from this feedback information that overarches this specific task?</li> </ul>	
Elaborating	How can I use the new content knowledge in this specific task?     How can I use the new content knowledge in other tasks?	
Comparing	<ul> <li>How does this feedback information compare to my self-assessment, to earlier feedback information and to other comparable works?</li> <li>What can I learn from these comparisons?</li> </ul>	
ldentifying strengths and weaknesses	<ul> <li>What does this feedback information tell me about the strengths of my work?</li> <li>What does this feedback information tell me about points for improvement in my work?</li> </ul>	
ldentifying unclarities Using dialogue as an amplifier	<ul> <li>What feedback information remains unclear to me?</li> <li>Who can I discuss this feedback information with?</li> </ul>	

Esterhazy and Damsa (2019) studied how students in group discussion made sense of feedback information from their teachers on a group assignment. They summarised their findings with the processes of orienting (addressing new knowledge content, also referred to as the declarative knowledge or 'what') and elaborating (addressing following up this content, also referred to as the procedural knowledge or 'how'). They also discerned two contexts in which the feedback information was discussed, namely local (or task-specific) and general (the wider disciplinary and academic context).

Despite the important insights that both Nicol (2020) and Esterhazy and Damsa (2019) have yielded in terms of making sense of feedback information, so far little empirical evidence is available as to how students can best be instructed to make sense of or compare their feedback information (Nicol 2020). Still, in several intervention programmes to increase feedback engagement, feedback literacy, or self-assessment, students are supported to analyse the feedback in terms of what they learn to be their strengths and weaknesses (van der Kleij 2020; Malecka, Boud, and Carless 2020; Winstone 2019; Winstone and Carless 2020; Yan and Brown 2017). In the context of medical education, Barton et al. (2016) aimed to ensure that students read, critically reflected on and processed the feedback information from their tutor, by asking them to submit a reflective journal addressing the questions: (1) How well does the tutor feedback match with your self-evaluation? (2) What did you learn from the feedback process? (3) What actions, if any, will you take in response to the feedback process? and (4) What, if anything, is unclear about the tutor feedback? These reflective journals were valued by the students and half of the students indicated that it had supported their learning process (Barton et al. 2016).

Based on the literature discussed above, Table 1 proposes a set of prompts that could be used in sense-making sheets or to scaffold students' sense-making of feedback information.

#### **Using feedback information**

After having made sense of the feedback information, the next steps for the actual use of feedback are goal revision and action planning. As described by, among others, Hattie and Timperley (2007), it is important for feedback processes to be goal-related and that goals for students involve the dimensions of commitment and challenge. Indeed, Locke and Latham (2002) summarised that setting specific and appropriately difficult goals positively affects performance through the mechanisms of directing attention, energising effort, persistence, and activating task-relevant knowledge and strategies. Goal setting can be done on a local level, but also on a general level (Esterhazy and Damşa 2019). When addressing goal setting in feedback processes, we might assume that students were already working towards a goal before seeking or receiving feedback information. In that sense, goal setting becomes goal revision: looking back at the originally set goal(s) and revising them according to the sense-making of the feedback information.

When goals are revised, an action plan can be created in which students work out how their goals are going to be acted upon. Winstone et al. (2017a) concluded that out of eight studies on action planning, most indeed showed positive effects on engagement with feedback. In some of these studies, a list of possible actions was provided to students to choose from Enomoto (2012) and Quinton and Smallbone (2010), or students were supported in making a concrete and feasible action plan for using their feedback through a training or conversation (Chang et al. 2011; Dahllöf, Tsilingaridis, and Hindbeck 2004). Although not in the specific context of feedback research, McCardle et al. (2017) found that without guidance students generally tend to set vague goals for themselves. They suggested that it can help students to set more concrete goals to use the TASC framework, with the elements of Timeframe, Activities, Standards and Content. These elements can also be used for making an action plan for the use of feedback information (see Table 2).

Table 2. Proposed prompts for using feedback information.

Target process	Level	Prompt
Goal revision	Local General	<ul> <li>What goal(s) do I want to achieve within this specific task and how will I use this feedback information to reach this goal?</li> <li>What goal(s) do I want to achieve in general and how will I use this</li> </ul>
Action planning	Time frame Activities Standards Content	feedback information to reach this goal?  What is the time frame for the use of my feedback information?  What do I have to do to use/apply the feedback information?  What standards do I want my work to meet?  What content do I have to use?

#### Responding to feedback information

Responding to feedback information refers to students returning to a teacher to address how they have interpreted and used the feedback information. For instance, the earlier mentioned reflection sheets for sense-making or action plans could be shared with the teacher as a way of responding to the feedback information. In doing so students proactively provide new diagnostic information to their teachers, that the teachers in turn can use for their scaffolding strategies (van de Pol, Volman, and Beishuizen 2010). This response can be given in a dialogue or in a written document. To the best of my knowledge no studies have addressed how this can be done in a dialogue, but some authors have addressed the concept of cover letters or rebuttal writing. Daniel, Gaze, and Braasch (2015) studied the effects of students writing a cover letter in which they (1) synthesised the feedback information into the main points and (2) provided detailed explanations of how the feedback information was incorporated. They found that students in the cover letter condition tended to have higher improvement scores than those in the control condition. This shows that responding to feedback information does not only inform teachers, but can also affect and support the feedback process of students. In line with this, Malecka, Boud, and Carless (2020) argued that rebuttal writing could be a very promising direction for embedding the development of feedback literacy in curricula. Next, additional literature on synthesising feedback information and providing detailed elaboration on feedback use are now further elaborated on.

With respect to students synthesising the feedback information, this can contribute to a shared feedback perception between provider and user, for we know that feedback perceptions of the provider and seeker/receiver can differ substantially (Carless 2006; Orsmond and Merry 2011). In addition, more recently several studies have shown that students do not correctly remember different types of feedback information they have received (e.g. Nash, Winstone, and Gregory 2021). Although not studied, teachers who have read numbers of student work and have provided feedback on all of these might also not exactly remember the previous work and associated feedback information that was given.

With respect to providing detailed information on how feedback information is incorporated, there is a strong parallel with how researchers respond to journal reviews (Gravett et al. 2020), for which it is often encouraged to write a brief response to all remarks received (e.g. Cummings and Rivara 2002; Williams 2004). Additionally, it is also highlighted in what parts of the *product* or *performance* the most important changes were made. In case of a written report, changes can be highlighted or annotated in the document itself. A student can then also provide arguments for deliberately not using a certain element of the feedback information.

But besides the synthesis of, response to, and use of the feedback information there is another element that could be addressed when responding to feedback information: students could decide to address the *emotional impact* that the feedback information had while engaging with it. In a literature review on student emotions in formal feedback situations, Värlander (2008) already called for more attention to emotions being a natural part of feedback. More recently, Pitt and Norton (2017) also found emotions to be an important factor in explaining students' (dis)engagement with feedback information. More specifically, Voerman et al. (2014) described how positive feedback

information invokes positive emotions and negative feedback information invokes negative emotions, but also that the context and relationship with the feedback provider affect what specific emotions feedback information invokes (see also Carless and Boud 2018; O'Donovan et al. 2021). In other words, the emotional impact of feedback is not straightforward but rather complex. Therefore, in order to vent emotions, Värlander (2008) suggested that students give feedback on the feedback, addressing questions such as: How did you perceive the feedback? How did you feel when receiving the feedback? Furthermore, knowing the emotional impact of their feedback information on students can help teachers to better adapt their feedback information to individual students (de Kleiin et al. 2016).

Lastly, it is relevant to note that the response does not necessarily need to be addressed to the initial teacher who provided the feedback information, but could also be addressed to a teacher of another course or module with a comparable assignment. As argued above in regard to sense-making and using, feedback information can be used for revising the same assignment, but also for follow-up assignments. For instance, Winstone and Carless (2020) suggested that students can be asked to comment on how they have used feedback from previous assessments in carrying out the current task. Barton et al. (2016) asked medical students, when submitting their work, to always address in a cover letter how previous feedback had informed their current work. Students indicated that this prompt indeed encouraged them to learn from their feedback.

Based on these studies and arguments, Table 3 proposes a set of prompts that could be used for responding to feedback information, either in a written form or in dialogue with a teacher.

#### Seeking feedback information

The fourth student strategy concerns the active seeking of feedback information. This activity can be the starting point of a new feedback process, or can follow the activity of responding to feedback information, but can also be engaged in while making sense of and/or using feedback information (as indicated with the dotted arrows in Figure 1). Winstone and Carless (2020) suggested that, in order to bring dialogue into feedback processes, students can be invited to request feedback information on specific elements of their work, when submitting assignments. Malecka, Boud, and Carless (2020) also coined feedback requests as one of the four practices to embed feedback literacy in curricula. Back in 2010, Bloxham and Campbell instructed students to write cover sheets on which they had to indicate the particular aspects of their work that they wanted to receive feedback information on. The staff was positive about the intervention, but students found it difficult to ask specific questions and sometimes were too embarrassed or intimidated to do so. Agricola, Prins, and Sluijsmans (2020) invited students to use feedback request forms to indicate on what element they wanted to receive feedback information. However, they found no effect of the feedback request form on students' perceptions, self-efficacy, and motivation.

**Table 3.** Proposed prompts for responding to feedback information.

Target process	Prompt
Synthesising feedback information	<ul> <li>What were the main points of the feedback information?</li> </ul>
Justifying changes made	<ul> <li>What changes did I (not) make in response to the feedback information and why?</li> <li>Where in my document or performance can these changes be seen?</li> </ul>
Addressing emotional impact	<ul> <li>What was the emotional impact of the feedback information?</li> <li>How did I handle this emotional impact?</li> </ul>
Use in follow-up assignments	How has earlier feedback information informed my current work?

They explained this by the fact that the students might not have produced high-quality requests. The findings of these two studies show that the use of feedback requests is potentially worthwhile, but that students experience difficulty in asking specific feedback questions. This is in line with the argument of Malecka, Boud, and Carless (2020) that students need guidance and practice to make the most of opportunities for feedback requests. However, how to formulate a feedback request is not addressed in higher education literature so far, nor in feedback-seeking studies in the context of workplace learning (e.g. Crommelinck and Anseel 2013; Joughin et al. 2020). In order to fill this gap, I propose three types of feedback request that can be used to instruct and scaffold students in asking specific feedback questions. Overall, in line with the premises of ZPD and scaffolded learning, the hypothesis underlying these types of feedback request is that when students share relevant diagnostic information about their feedback process, this supports teachers in adapting their feedback information to a specific students' situation (de Kleijn et al. 2015).

First, a 'follow-up feedback request' can be formulated when students have already received and used feedback information and want to know whether their performance has indeed improved. In line with the section on responding to feedback information, students can share a synthesis of the feedback information, how it is used, where the changes in product or performance can be seen, and optionally what the emotional impact was. After sharing this diagnostic information, students can ask feedback information on the extent to which their performance has improved as a result of their feedback use? (see Table 4).

Second, when students get stuck in trying to complete a specific part of a task and do not know how to continue, a 'problem-based feedback request' can be formulated. Diagnostic information worth sharing in such situations includes a student's perception of the encountered problem. A second element is the options that they themselves see or have already tried to overcome said problem. A third element is the perceived advantages and disadvantages of these options and how they weigh these. A fourth element is what option a student would choose if no feedback information were to be given. After having shared these diagnostic elements, students can ask for feedback on their problem, their options, their weighing, and their preferred option (see Table 4). This allows a teacher to adapt their feedback information to the diagnostic information provided by the student. For example, does the student have a clear view on the problem or does the teacher see a more salient problem? Does the student see all the relevant options, or does the teacher see additional options?

Third, a 'learning objective-based feedback request' can be used when students would like to receive feedback information on the extent to which their current performance meets the educational goal(s) or criteria. Note that, following Vygotsky's work, it is expected that before students ask such a feedback question, they should have engaged in independent problem solving. Therefore, a first element of diagnostic information is whether their current performance indeed reflects the best a student could do without additional support. A second element is on what learning objectives or criteria students would like to receive feedback. If there is no specific learning objective, they can indicate that they seek feedback on the most important areas of improvement considering all learning criteria or objectives. After all, it is important for students to realise and acknowledge that it is not the responsibility of the teacher to address all issues that could possibly be improved in their feedback information (Winstone, Boud, et al. 2021). In line with the arguments during sense-making, a third element to be shared with teachers is a self-evaluation on the learning objectives or criteria (e.g. Malecka, Boud, and Carless 2020). Sharing a self-evaluation enables teachers to see whether their evaluation deviates from or matches the students' self-evaluation and where a student's possible blind spots might be. After having shared these diagnostic information elements, students can ask for feedback information on how their work can be improved (see Table 4).

The target processes of the three types of feedback requests in Table 4 are formulated in such a way that they form the acronyms SUPER, POWER and CLOSER, in order to promote applicability and recall.

Table 4. Proposed prompts for seeking feedback information.

Type of feedback request	Target process	Prompt
Follow-up feedback request	<b>S</b> ynthesising	What are the main points of the feedback information?
	<b>U</b> se of feedback	How and why did I use the feedback information?
	Performance/Product presentation	How is my feedback use reflected in my product/performance?
	Emotional impact	What was the emotional impact of (working with) the feedback information?
	<b>R</b> equesting feedback information	'Could you give me feedback on the extent to which my product or performance has improved as a result of my feedback use?'
Problem-based feedback request	<b>P</b> roblem description	What problem do I encounter?
	<b>O</b> ption overview	What options do I see for solving this problem?
	<b>W</b> eighing options	How do I weigh these options in terms of pro- and cons?
	Expressing preferred option	Given these pros and cons, what option(s) would I chose myself?
	<b>R</b> equesting feedback information	'Could you give me feedback on this (i.e. elements P, O, W, and E)?'
Learning objective-based feedback request	<b>C</b> urrent performance	My current performance, does (not) reflect the best I could do without additional assistance, because
	Learning Objective	I would like my work to be evaluated on the following learning objective(s)
	Self-Evaluation	This is what I think I did well and what I would need to further improve
	<b>R</b> equesting feedback information	'Could you give me feedback on this (i.e. elements C, LO, and SE)?'

#### **Discussion**

Even though the concept of feedback literacy seems to be accepted as a relevant competency for both students and teachers and has already yielded quite some research interest, so far little attention has been paid to how feedback literate students are expected to engage in feedback processes and how feedback literate teachers can scaffold students in doing so. Therefore, in this paper I proposed an instructional model with specific prompts for four student activities in feedback processes: seeking, making sense of, using, and responding to feedback information. The model is built on the premise that effective feedback processes take place in social interaction with a more knowledgeable peer targeted at a students' ZPD (Vygotsky 1987) and that when students engage in independent problem solving and elicit and share relevant diagnostic information, they support their teachers in scaffolding student learning (van de Pol, Volman, and Beishuizen 2010). To the best of my knowledge, in general this is the first paper in which the concepts of ZPD and scaffolded learning are used to derive student activities, rather than focussing on teacher activities and thereby applying Vygotsky's theory in an innovative way.

The proposed instructional model and accompanying activity prompts can be used to explicitly teach, scaffold, and communicate to students what they are expected to do with feedback information throughout their educational programs and beyond. The intention of the model is not to formalise the different activities in strict formats, nor to imply that students need to explicitly report on each of the activities in every situation in which they seek and/or receive feedback information. This would lead to students writing numerous cover sheets, which in turn could lead to overloaded teachers. Rather, it is intended to support students' feedback literacy in terms of providing practical tools for eliciting, processing, and enacting feedback (Malecka et al. 2020; Molloy, Boud, and Henderson 2020), and to support teachers' feedback literacy in terms of how to scaffold students in eliciting, processing, and enacting feedback so that teachers can more effectively and efficiently identify and respond to student needs and craft appropriate and differentiated inputs (Boud and Dawson 2021). So, whereas earlier papers on improving feedback literacy mostly focussed on how student feedback literacy could be improved by design (e.g. Malecka et al. 2021; Noble et al. 2020; Winstone, Mathlin, and Nash 2019), this model aims to support the specific feedback interactions between students and teachers. When both teachers and students use the model activities and prompts in their feedback interactions, it is expected that their feedback literacies will grow in interplay, as suggested by Carless and Winstone (2020).

#### Limitations and future directions

First, as this model follows the movement to new paradigm views on feedback it assumes that, when provided with feedback information, students will have the opportunity to actually use it in the same task or a comparable follow-up task. However, in practice this is not always the case yet. Therefore, the student activities from the instructional model might be less applicable to situations in which students are provided with feedback information after having submitted their final work and then go on to a next course or learning module. However, given the number of scholars pointing to the importance of viewing feedback processes from a programmatic, curricular, or spiral point of view (e.g. Boud and Molloy 2013; Carless 2019; Malecka, Boud, and Carless 2020; Winstone, Mathlin, and Nash 2019), it is expected that the new paradigm view on feedback will slowly gain the upper hand.

Second, even though the model is mostly built on insights from earlier feedback studies in higher education, it is important to note that it is a proposal and is not empirically studied yet. Especially the three types of feedback requests require empirical validation, as well as the total set of four student activities. It would be worthwhile to pursue descriptive studies to investigate the extent to which students already apply the proposed activities at current in different contexts on textual, interpersonal, instructional and socio-cultural levels (Chong 2021). Such findings could signal what student activities provide most room for improvement. Intervention studies can then empirically establish whether applying and scaffolding these student activities does indeed lead to more learning and increased performances.

Lastly, it is important to bear in mind that people with different characteristics and motives deal differently with feedback seeking (Anseel et al. 2015), that people have different views on what constitutes good and bad feedback (O'Donovan et al. 2021), that there is no one best way to give feedback information for all students for all types of learning outcomes (Shute 2008), and that some students struggle more with feedback than others (Pitt, Bearman, and Esterhazy 2020). This probably also holds for feedback processes, which implies there is no single best way of doing it. Still, the proposed instructional model is intended to be useful for all higher education students, to explore what activities could help them to improve their feedback processes. All in all, the model directs the attention to the unmistakeable importance of instructing students in how they can be proactive in their feedback processes in terms of seeking, making sense of, using, and responding to feedback information.

#### Notes on contributor

**Renske de Kleijn, PhD,** works as an assistant professor and her research interests include feedback, assessment, research supervision, motivation, and self-regulation in higher education.

#### **Acknowledgements**

I would like to thank Paul Kirschner, Marieke van der Schaaf, Claudia Tielemans, Charlotte Eijkelboom, Lieselotte Postmes, Judith Gulikers, Marije Lesterhuis, and the anonymous peer reviewers for their valuable comments on earlier versions of this paper.



#### Disclosure statement

The author has no interests to declare.

#### **ORCID**

Renske A. M. de Kleijn http://orcid.org/0000-0001-9206-4199

#### References

- Agricola, B. T., F. J. Prins, and D. M. Sluijsmans. 2020. "Impact of Feedback Request Forms and Verbal Feedback on Higher Education Students' Feedback Perception, Self-Efficacy, and Motivation." Assessment in Education: Principles, Policy & Practice 27 (1): 6-25. doi:10.1080/0969594X.2019.1688764.
- Agricola, B. T., F. J. Prins, M. F. van der Schaaf, and J. van Tartwijk. 2018. "Teachers' Diagnosis of Students' Research Skills during the Mentoring of the Undergraduate Thesis." Mentoring & Tutoring: Partnership in Learning 26 (5): 542-562. doi:10.1080/13611267.2018.1561015.
- Ajjawi, R., and D. Boud. 2018. "Examining the Nature and Effects of Feedback Dialogue." Assessment & Evaluation in Higher Education 43 (7): 1106-1119. doi:10.1080/02602938.2018.1434128.
- Anseel, F., A. S. Beatty, W. Shen, F. Lievens, and P. R. Sackett. 2015. "How Are We Doing after 30 Years? A Meta-Analytic Review of the Antecedents and Outcomes of Feedback-Seeking Behavior." Journal of Management 41 (1): 318-348. doi:10.1177/0149206313484521.
- Ashford, S. J., R. Blatt, and D. VandeWalle. 2003. "Reflections on the Looking Glass: A Review of Research on Feedback-Seeking Behavior in Organizations." Journal of Management 29 (6): 773-799. doi:10.1016/S0149-2063(03)00079-5.
- Barton, K. L., S. J. Schofield, S. McAleer, and R. Ajjawi. 2016. "Translating Evidence-Based Guidelines to Improve Feedback Practices: The interACT Case Study." BMC Medical Education 16 (1): 1-12. doi:10.1186/s12909-016-0562-z.
- Blair, A., and S. McGinty. 2013. "Feedback-Dialogues: Exploring the Student Perspective." Assessment & Evaluation in Higher Education 38 (4): 466-476. doi:10.1080/02602938.2011.649244.
- Bloxham, S., and L. Campbell. 2010. "Generating Dialogue in Assessment Feedback: Exploring the Use of Interactive Cover Sheets." Assessment & Evaluation in Higher Education 35 (3): 291-300. doi:10.1080/02602931003650045.
- Boud, D., and P. Dawson. 2021. "What Feedback Literate Teachers Do: An Empirically-Derived Competency Framework." Assessment & Evaluation in Higher Education, 1-14. doi:10.1080/02602938 .2021.1910928.
- Boud, D., and E. Molloy. 2013. "Rethinking Models of Feedback for Learning: The Challenge of Design." Assessment & Evaluation in Higher Education 38 (6): 698-712. DOI:/10.1080/02602938.2012.691462
- Burke, D. 2009. "Strategies for Using Feedback Students Bring to Higher Education." Assessment & Evaluation in Higher Education 34 (1): 41–50. doi:10.1080/02602930801895711.
- Butler, D. L., and P. H. Winne. 1995. "Feedback and Self-Regulated Learning: A Theoretical Synthesis." Review of Educational Research 65 (3): 245-281. doi:10.3102/00346543065003245.
- Carless, D. 2006. "Differing Perceptions in the Feedback Process." Studies in Higher Education 31 (2): 219-233. doi:10.1080/03075070600572132.
- Carless, D. 2019. "Feedback Loops and the Longer-Term: Towards Feedback Spirals." Assessment & Evaluation in Higher Education 44 (5): 705-714. doi:10.1080/02602938.2018.1531108.
- Carless, D., and D. Boud. 2018. "The Development of Student Feedback Literacy: Enabling Uptake of Feedback." Assessment & Evaluation in Higher Education 43 (8): 1315-1325. doi:10.1080/02602938.2 018.1463354.
- Carless, D., and N. Winstone. 2020. "Teacher Feedback Literacy and Its Interplay with Student Feedback Literacy." Teaching in Higher Education, 1-14. doi:10.1080/13562517.2020.1782372.
- Chang, A., C. L. Chou, A. Teherani, and K. E. Hauer. 2011. "Clinical Skills-Related Learning Goals of Senior Medical Students after Performance Feedback." Medical Education 45 (9): 878-885. doi:10.1111/ i.1365-2923.2011.04015.x.
- Chong, S. W. 2021. "Reconsidering Student Feedback Literacy from an Ecological Perspective." Assessment & Evaluation in Higher Education 46 (1): 92-104. doi:10.1080/02602938.2020.1730765.



- Crommelinck, M., and F. Anseel. 2013. "Understanding and Encouraging Feedback-Seeking Behaviour: A Literature Review." Medical Education 47 (3): 232-241. doi:10.1111/medu.12075.
- Cummings, P., and F. P. Rivara. 2002. "Responding to Reviewers' Comments on Submitted Articles." Archives of Pediatrics & Adolescent Medicine 156 (2): 105-107. doi:10.1001/archpedi.156.2.105.
- Dahllöf, G., G. Tsilingaridis, and H. Hindbeck. 2004. "A Logbook for Continuous Self-Assessment during 1 Year in Paediatric Dentistry." European Journal of Paediatric Dentistry 5 (3): 163-169.
- Daniel, F., C. M. Gaze, and J. L. Braasch. 2015. "Writing Cover Letters That Address Instructor Feedback Improves Final Papers in a Research Methods Course." Teaching of Psychology 42 (1): 64-68. doi:10.1177/0098628314562680.
- de Kleijn, R. A. M., L. H. Bronkhorst, P. C. Meijer, A. Pilot, and M. Brekelmans. 2016. "Understanding the Up, Back, and Forward-Component in Master's Thesis Supervision with Adaptivity." Studies in Higher Education 41 (8): 1463-1479. doi:10.1080/03075079.2014.980399.
- de Kleijn, R. A. M., P. C. Meijer, M. Brekelmans, and A. Pilot. 2015. "Adaptive Research Supervision: Exploring Expert Thesis Supervisors' Practical Knowledge." Higher Education Research & Development 34 (1): 117-130. doi:10.1080/07294360.2014.934331.
- Edens, K., and C. Shields, 2015. "A Vygotskian Approach to Promote and Formatively Assess Academic Concept Learning." Assessment & Evaluation in Higher Education 40 (7): 928-942. doi:10.1080/02602 938.2014.957643.
- Enomoto, K. 2012. "A Study Skills Action Plan: Integrating Self-Regulated Learning in a Diverse Higher Education Context." In Bridging Transcultural Divides: Asian Languages and Cultures in Global Higher Education, edited by X. Song and K. Cadman, 101–130. Adelaide, Australia: University of Adelaide Press.
- Esterhazy, R., and C. Damşa. 2019. "Unpacking the Feedback Process: An Analysis of Undergraduate Students' Interactional Meaning-Making of Feedback Comments." Studies in Higher Education 44 (2): 260-274. doi:10.1080/03075079.2017.1359249.
- Gravett, K., I. M. Kinchin, N. E. Winstone, K. Balloo, M. Heron, A. Hosein, S. Lygo-Baker, and E. Medland. 2020. "The Development of Academics' Feedback Literacy: Experiences of Learning from Critical Feedback via Scholarly Peer Review." Assessment & Evaluation in Higher Education 45 (5): 651-665. doi:10.1080/02602938.2019.1686749.
- Hattie, J., and H. Timperley. 2007. "The Power of Feedback." Review of Educational Research 77 (1): 81-112. [Database] doi:10.3102/003465430298487.
- Ion, G., A. Sánchez Martí, and I. Agud Morell. 2019. "Giving or Receiving Feedback: Which Is More Beneficial to Students' Learning?" Assessment & Evaluation in Higher Education 44 (1): 124-138. do i:10.1080/02602938.2018.1484881.
- Jonsson, A. 2013. "Facilitating Productive Use of Feedback in Higher Education." Active Learning in Higher Education 14 (1): 63-76. doi:10.1177/1469787412467125.
- Joughin, G., D. Boud, P. Dawson, and J. Tai. 2020. "What Can Higher Education Learn from Feedback Seeking Behaviour in Organisations? Implications for Feedback Literacy." Assessment & Evaluation in Higher Education, 1-12. doi:10.1080/02602938.2020.1733491.
- Leenknecht, M., P. Hompus, and M. van der Schaaf. 2019. "Feedback Seeking Behaviour in Higher Education: The Association with Students' Goal Orientation and Deep Learning Approach." Assessment & Evaluation in Higher Education 44 (7): 1069-1078. doi:10.1080/02602938.2019.1571161.
- Li, F., and Y. Han. 2021. "Student Feedback Literacy in L2 Disciplinary Writing: Insights from International Graduate Students at a UK University." Assessment & Evaluation in Higher Education, 1-15. doi:10.1 080/02602938.2021.1908957.
- Li, L., and F. Gao. 2016. "The Effect of Peer Assessment on Project Performance of Students at Different Learning Levels." Assessment & Evaluation in Higher Education 41 (6): 885-900. doi:10.1080/026029 38.2015.1048185.
- Locke, E. A., and G. P. Latham. 2002. "Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey." American Psychologist 57 (9): 705-717. doi:10.1037//0003-066x.57.9.705.
- Malecka, B., D. Boud, and D. Carless. 2020. "Eliciting, Processing and Enacting Feedback: Mechanisms for Embedding Student Feedback Literacy within the Curriculum." Teaching in Higher Education, 1-15. doi:10.1080/13562517.2020.1754784.
- McCardle, L., E. A. Webster, A. Haffey, and A. F. Hadwin. 2017. "Examining Students' Self-Set Goals for Self-Regulated Learning: Goal Properties and Patterns." Studies in Higher Education 42 (11): 2153–2169. doi:10.1080/03075079.2015.1135117.



- Mercader, C., G. Ion, and A. Díaz-Vicario. 2020. "Factors Influencing Students' Peer Feedback Uptake: Instructional Design Matters." Assessment & Evaluation in Higher Education 45 (8): 1169-1180. doi:1 0.1080/02602938.2020.1726283.
- Molloy, E., D. Boud, and M. Henderson. 2020. "Developing a Learning-Centred Framework for Feedback Literacy." Assessment & Evaluation in Higher Education 45 (4): 527-540. doi:10.1080/02602938.2019. 1667955.
- Nash, R. A., N. E. Winstone, and S. E. Gregory. 2021. "Selective Memory Searching Does Not Explain the Poor Recall of Future-Oriented Feedback." Journal of Applied Research in Memory and Cognition, 1–12. doi:10.1016/j.jarmac.2021.01.003.
- Nicol, D. 2020. "The Power of Internal Feedback: Exploiting Natural Comparison Processes." Assessment & Evaluation in Higher Education, 1-23, doi:10.1080/02602938.2020.1823314.
- Noble, C., S. Billett, L. Armit, L. Collier, J. Hilder, C. Sly, and E. Molloy. 2020. ""It's Yours to Take": Generating Learner Feedback Literacy in the Workplace." Advances in Health Sciences Education 25 (1): 55-74. DOI: 0.1007/s10459-019-09905-5 doi:10.1007/s10459-019-09905-5.
- O'Donovan, B. M., B. den Outer, M. Price, and A. Lloyd. 2021. "What Makes Good Feedback Good?" Studies in Higher Education 46 (2): 318-329. doi:10.1080/03075079.2019.1630812.
- Orsmond, P., and S. Merry. 2011. "Feedback Alignment: Effective and Ineffective Links between Tutors' and Students' Understanding of Coursework Feedback." Assessment & Evaluation in Higher Education 36 (2): 125-136. doi:10.1080/02602930903201651.
- Pitt, E., M. Bearman, and E. Esterhazy. 2020. "The Conundrum of Low Achievement and Feedback for Learning." Assessment & Evaluation in Higher Education 45 (2): 239-250. doi:10.1080/02602938.2019 .1630363.
- Pitt, E., and L. Norton. 2017. "Now That's the Feedback I Want! Students' Reactions to Feedback on Graded Work and What They Do with It." Assessment & Evaluation in Higher Education 42 (4): 499-516. doi:10.1080/02602938.2016.1142500.
- Robinson, S., D. Pope, and L. Holyoak. 2013. "Can We Meet Their Expectations? Experiences and Perceptions of Feedback in First Year Undergraduate Students." Assessment & Evaluation in Higher Education 38 (3): 260-272. doi:10.1080/02602938.2011.629291.
- Poulos, A., and M. J. Mahony. 2008. "Effectiveness of Feedback: The Students' Perspective." Assessment & Evaluation in Higher Education 33 (2): 143-154. doi:10.1080/02602930601127869.
- Quinton, S., and T. Smallbone. 2010. "Feeding Forward: Using Feedback to Promote Student Reflection and Learning-a Teaching Model." Innovations in Education and Teaching International 47 (1): 125-135. doi:10.1080/14703290903525911.
- Shabani, K., M. Khatib, and S. Ebadi. 2010. "Vygotsky's Zone of Proximal Development: Instructional Implications and Teachers' Professional Development." English Language Teaching 3 (4): 237–248. doi:10.5539/elt.v3n4p237.
- Shute, V. J. 2008. "Focus on Formative Feedback." Review of Educational Research 78 (1): 153-189. doi:10.3102/0034654307313795.
- Tam, A. C. F. 2021. "Undergraduate Students' Perceptions of and Responses to Exemplar-Based Dialogic Feedback." Assessment & Evaluation in Higher Education 46 (2): 269-285. doi:10.1080/02602938.202 0.1772957.
- van de Pol, J., M. Volman, and J. Beishuizen. 2010. "Scaffolding in Teacher-Student Interaction: A Decade of Research." Educational Psychology Review 22 (3): 271-296. doi:10.1007/s10648-010-9127-6.
- van de Pol, J., M. Volman, and J. Beishuizen. 2011. "Patterns of Contingent Teaching in Teacher-Student Interaction." Learning and Instruction 21 (1): 46–57. doi:10.1016/j.learninstruc.2009.10.004.
- Van der Kleij, F. M., L. E. Adie, and J. J. Cumming. 2019. "A Meta-Review of the Student Role in Feedback." International Journal of Educational Research 98: 303–323. doi:10.1016/j.ijer.2019.09.005.
- Van der Kleij, F. M. 2020. "Evaluation of the 'feedback engagement enhancement tool' to examine and enhance students' engagement with feedback on their writing." Studies in Educational Evaluation, 66: 1-12. doi:10.1016/j.stueduc.2020.100907.
- Värlander, S. 2008. "The Role of Students' Emotions in Formal Feedback Situations." Teaching in Higher Education 13 (2): 145-156. doi:10.1080/13562510801923195.
- Voerman, L., F. A. Korthagen, P. C. Meijer, and R. J. Simons. 2014. "Feedback Revisited: Adding Perspectives Based on Positive Psychology. Implications for Theory and Classroom Practice." Teaching & Teacher Education, 43: 91–98. doi:10.1016/j.tate.2014.06.005.



- Vygotsky, L. 1987. "Zone of Proximal Development." In Mind in Society: The Development of Higher Psychological Processes, edited by M. Cole, V. John-Steiner, S. Scribner, E. Souberman, Vol. 157, 52-91. Cambridge: Harvard University Press.
- Weaver, M. R. 2006. "Do Students Value Feedback? Student Perceptions of Tutors' Written Responses." Assessment & Evaluation in Higher Education 31 (3): 379-394. doi:10.1080/02602930500353061.
- Williams, H. C. 2004. "How to Reply to Referees' Comments When Submitting Manuscripts for Publication." Journal of the American Academy of Dermatology 51 (1): 79–83. DOI: 10.1087/20110109
- Winstone, N. 2019, "Facilitating Students' Use of Feedback; Capturing and Tracking Impact Using Digital Tools." In The Impact of Feedback in Higher Education, edited by M. Henderson, R. Ajjawi, D. Boud, E. Molloy, 225-242. Cham: Palgrave Macmillan.
- Winstone, N., D. Boud, P. Dawson, and M. Heron. 2021. "From Feedback-as-Information to Feedback-as-Process: A Linguistic Analysis of the Feedback Literature." Assessment & Evaluation in Higher Education, 1-18. doi:10.1080/02602938.2021.1902467.
- Winstone, N., and D. Carless. 2020. Designing Effective Feedback Processes in Higher Education: A Learning-Focused Approach. New York: Routledge.
- Winstone, N. E., G. Mathlin, and R. A. Nash. 2019. "Building Feedback Literacy: Students' Perceptions of the Developing Engagement with Feedback Toolkit." Frontiers in Education 4: 1-11. doi:10.3389/ feduc.2019.00039.
- Winstone, N. E., R. A. Nash, M. Parker, and J. Rowntree. 2017a. "Supporting Learners' Agentic Engagement with Feedback: A Systematic Review and a Taxonomy of Recipience Processes." Educational Psychologist 52 (1): 17-37. doi:10.1080/00461520.2016.1207538.
- Winstone, N. E., R. A. Nash, J. Rowntree, and M. Parker. 2017b. "It'd Be Useful, but I Wouldn't Use It': Barriers to University Students' Feedback Seeking and Recipience." Studies in Higher Education 42 (11): 2026–2041. doi:10.1080/03075079.2015.1130032.
- Winstone, N., E. Pitt, and R. Nash. 2021. "Educators' Perceptions of Responsibility-Sharing in Feedback Processes." Assessment & Evaluation in Higher Education, 1–14. doi:10.1080/02602938.2020.1748569.
- Wood, J. 2021. "A Dialogic Technology-Mediated Model of Feedback Uptake and Literacy." Assessment & Evaluation in Higher Education, 1-18. doi:10.1080/02602938.2020.1852174.
- Yan, Z., and G. T. Brown. 2017. "A Cyclical Self-Assessment Process: Towards a Model of How Students Engage in Self-Assessment." Assessment & Evaluation in Higher Education 42 (8): 1247-1262. doi:10 .1080/02602938.2016.1260091.