

EXCERPTS FROM THE ARTICLE

Supporting teacher responsiveness in assessment for learning through disciplined noticing

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Assessment for learning (AfL) has been a focus of attention in classrooms in many countries over the last two decades. The AfL encompasses everyday classroom processes that enable teachers to gauge their students' current understanding. Teachers then use the insights they gain to tailor their actions and activities to students' learning needs, during the learning process (Assessment Reform Group, 1999; Black & William, 1998; Black, Harrison, Lee, Marshall, & William, 2003; Cowie & Bell, 1999; Klenowski, 2009). Deciding how to respond to student ideas in the moment as part of AfL planned activities can be challenging for teachers as this vignette and the following analysis illustrates:

The teacher began the lesson by explaining to her class of seven-year-olds that they were going to learn about adaptation and with the overall goal of answering the question, "Why do animals live where they live?" The starter activity was a discussion in small groups about: "Which is the odd-one-out in bird, cat, fish and elephant?" The groups engaged in animated discussion about this question. The teacher then called for answers. The first group answered, "Elephant", to which the teacher responded "No" before she moved onto to ask another group for an answer. Following the teacher's dismissal of the 'elephant' answer, other groups appeared reluctant to answer questions and engage in the lesson.

In this AfL classroom example, the teacher intended to elicit and develop student ideas. In the lesson described above, the teacher had planned to stimulate student thinking about animal adaptations by presenting them with animals from distinctly different environments. The teacher expected that the answer to her question would be 'fish' and this was the premise on which she had planned the follow-on activities. However, the animal identified by the first group of students was elephant, which was very different from the teacher's expectations and so she passed over their answer. Student actions following this teacher action indicated that, albeit almost certainly unintentionally, she had provided feedback to the class that she was not interested in student

ideas or reasoning per se but rather as a means towards an end she had pre-determined. When the children were later asked by the researcher why they had said elephant, they responded, 'Well your mum and dad would let you have a bird, fish or a cat as a pet, but never an elephant'. Clearly, the students had engaged in reasoning to reach a consensus for their answer based on their everyday experiences of animals. By not asking for student reasoning, the teacher missed the opportunity to make connections to student learning and redirect student attention to a consideration of animal physical structure and function, and hence assist them to develop one of the 'big' ideas of science (adaptation) even though this was her goal.

This example illuminates how teachers face the challenge of noticing these every-day discretionary moments when they are striving to use classroom assessment in the service of learning. The AfL occurs as part of everyday classroom practice whereby teachers, and students, seek out, reflect upon and respond to information from dialogue, demonstration and observation in ways that aim to enhance student learning, during the learning (Cowie & Bell, 1999; Klenowski, 2009). While teachers can plan a specific activity to create opportunities to make visible what the students are thinking and focusing on, how the teacher responds to this evidence communicates to students what the teacher deems important. A teacher's response frames what counts as valued learning and determines if and how their actions advance or inhibit student learning and learning motivation. As we can see from the vignette, acknowledging and responding to student ideas is challenging work when it happens as part of planned activities, and it is all the more so when it happens on-the-fly (Harrison et al., 2018; Shavelson, 2003) or in moments of contingency when student answers are unexpected (Black & William, 2009; Rowland & Zazkis, 2013).

Teacher noticing involves two main processes, attending to specific events within classroom interactions and then making sense of these events within the instructional setting in order to broaden the range of responses a teacher has in their repertoire (Sherin, Jacobs, & Phillip, 2011). The importance of the act of noticing to trigger teacher responsive action is evident in the definition by Black, Harrison, Lee, Marshall and William (2003, p. 10) that 'assessment becomes 'formative assessment' when the evidence is actually used to adapt the teaching work to meet learning needs'. Cowie and Bell (1999, p. 32) define interactive formative assessment as: 'the process used by teachers and students to notice, recognise and respond to student learning in order to enhance that learning, during the learning'.

As the account of learning at the start of this paper highlights, for a teacher to respond productively in the moment, in ways that builds on unexpected or partially formed student ideas, she needs to attend to how students are making meaning. This is necessary for the students to be able to preserve their agency and advance their learning.

Scholars focusing on professional noticing have also directed attention to the need to step outside of the realm of the expert to observe, attend and interpret from the perspective of the learner (Ball, 2011), while still keeping an eye on what Ball (1993) calls the ‘horizon’ of content knowledge. Ball describes this as a kind of ‘peripheral vision’ or view of the larger disciplinary landscape. Attending to several foci is essential to support students to meet both the immediate and longer term goals of learning. The three frames for noticing and responding as part of AfL that are proposed in this paper are ways that teachers might use to explore multiple accounts for what they notice, as well as provide new ways to give accounts of what they notice during AfL interactions. Through consideration of these three frames, teachers will be able to consider different and possibly multiple routes forward to advance student learning. Our suggestion is that through their *connoisseurship of the curriculum, making cultural and community connections, and valuing of collaborative ways of working* teachers can become more finely attuned to how classroom interactions may lead to productive learning.

The notion of framing provides a means to understand and account for the dynamics of teacher noticing for AfL action. A frame renders a context meaningful to participants so that they are able to respond to the question: ‘What is it that is going on here?’ (Goffman, 1974). Our proposition is that when teachers are making sense of student ideas and actions through classroom assessment, then a framework that encompasses curriculum expectations, attention to student diversity as a resource and learning as a social–emotional process is useful. We propose that these three frames embody some of the overlapping pedagogical commitments involved in enacting rigorous, responsive and equitable AfL and that they can help teachers deliberately manage the dynamics of attention and action (Erickson, 2011).

Curriculum connoisseurship includes teacher overall curriculum knowledge, discipline knowledge, pedagogical content knowledge, as well as assessment knowledge and capability. It encapsulates the complex blending of knowledge and action needed to progress student

learning of the curriculum while also developing students' sense of themselves as knowledge makers and knowers.

Cultural and community connections as a frame directs teacher attention to the funds of knowledge and experience students bring to their learning from their everyday life experiences and from their families and communities as a resource within and for classroom learning (Gonzalez, Moll, & Amanti, 2005). Knowledge of the learner's world can inform a teacher's noticing and responses in the moment during classroom events when a student might be drawing on their funds of knowledge from home as a basis for their comments and actions. When teachers design AfL practices that build on student experiences in this way, they can support students to develop their identities as knowledgeable people and create productive patterns of participation within classrooms (Cowie, 2013; Willis, 2010).

Collaborative ways of working grounded in trust and respect allow student thinking and ways of working to be revealed, developed and revised as their ideas are affirmed, challenged, adopted and adapted. For students, some of the benefits are in establishing conditions for productive peer assessment, both as an end in itself and as a scaffold towards independent self-monitoring (Sadler, 2010; Willis & Klenowski, 2017). For teachers, the process of collaborative learning also sets up a chain of evidence as students move through a variety of social contexts that require students to articulate and justify their ideas. As part of this frame, teachers need to ensure that all their students understand the 'rules of the game' for how to contribute to classroom discussions (Pryor & Crossouard, 2008). Importantly, teachers can also make decisions about which aspects of the discussion to act on immediately, which to leave for later consideration and which to ignore. Noticing within this frame therefore enables teachers and students to weave evidence of learning together as part of the collaborative endeavour of AfL classrooms.