Spaces, Gaps, Exchanges, and Student Engagement:  
A Review of Recent Trends in Formative Feedback Scholarship

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Abstract:
This review examines the spaces, gaps, exchanges, and engagements associated with formative feedback in higher education – an area that has enjoyed extensive scholarly attention over the last two decades. Over time, a consensus has developed privileging timely, specific, supportive, and explanatory feedback over less effective measures that rely much too heavily upon directive, overly-negative, critical, and/or vague responses. Hoping to transform students into self-regulated and lifelong learners, formative assessment aims to reduce feedback gaps, maximize student-teacher dialogue, address critical student shortfalls, and encourage students to experiment, take risks, and achieve deep learning. Both an assessment and a learning tool, formative feedback looks beyond specific course and lesson objectives to address a student’s cognitive, behavioral, and motivational development, thereby allowing teachers and students alike to identify feedback and knowledge gaps, and, if necessary, to modify learning and teaching methods and objectives.

Keywords: formative feedback, feedback landscape, peer assessment, self-assessment, co-assessment.

Introduction:
As Carol Evans (2013) notes in her recent comprehensive review of over 460 scholarly publications relating to formative feedback and assessment, teachers must “enhanc[e] the quality of feedback to students” in light of the “massification and consumerization” of contemporary higher education (73). Indeed, perhaps today more than ever, prevailing conditions, including increased class-sizes and teaching loads, limited resources and external, non-academic pressures, require teachers to maximize efficiencies inside and outside the classroom. Extensive research over the last two decades in the fields of assessment, formative feedback, and self-, peer, and co-assessment suggest that effective feedback practices reinforce classroom instruction and help students transform into self-regulated, lifelong learners (Nicol and Dick, 2006). Studies confirm that such formative feedback allows teachers to identify and address gaps in student learning and, where necessary, to modify teaching methods and learning objectives. Moreover, major contributions by Juwah, Dick, et. al. (2004), Nicol and Dick (2006), and Evans (2011, 2013) identify specific principles, characteristics, conditions, and frameworks that facilitate effective formative feedback practices.

One Size Does Not Fit All:
Valerie Shute (2008) defines formative feedback as “information communicated to the learner that is intended to modify his or her thinking or behavior for the purpose of improving learning”
Beyond merely assessing student performance on a specific assignment, such feedback considers a student’s emotions, motivations, and self-concept while self-consciously fostering a mutually supportive and beneficial relationship between what Higgins, Hartley, and Skelton (2006) identify as feedback “producers” – teachers - and “consumers” – students. Gibbs and Simpson (2004) and Weaver (2006) insist that timely, detailed, specific, focused, supportive, and explanatory feedback helps students receive, interpret, and appropriately act upon noted strengths, weaknesses, and shortfalls while controlling, critical, vague, and comparative feedback tends, conversely, to undermine their best efforts. Furthermore, as Hyland (2003) notes, “what is effective feedback for one student in one setting is less so in another” (219). Thus, despite the fact that one-size-fits-all assessment techniques are understandable given the “massification and consumerization” of higher education noted by Evans, such feedback is neither ideal nor especially formative for students.

Noting these concerns and other mitigating factors, like a student’s personality, gender, previous experiences, and cognitive styles, Evans (2011) identifies what she calls the “feedback landscape,” which accounts for the comprehensive “nature of feedback exchanges, the roles of those involved, the nature of networks, exploration of facilitators, barriers, and mediators of feedback within an academic learning community” (97). Her model reflects feedback as a two-way process impacted by a number of factors often outside the direct control of either the teacher or the student. Of course, students get and interpret feedback from a number of formal and informal sources; teacher feedback represents but one of many – and not necessarily the most privileged – sources. Nevertheless, as Evans’s landscape illustrates – and as Dochy, Segers, and Sluijsmans (1999) insist - teachers must retain necessary control over – and their central role in – the formative feedback process. In this fashion, feedback is an academic, social, integrated, holistic, and iterative process, with the student and teacher engaged in two-way communication predicated upon interactive, timely, and integrated feedback.

For such feedback to be effective, however, students must understand, internalize, and act upon it, a fact reinforced in virtually every major study published in the last twenty years. Too often, however, students fail to capitalize upon feedback. For her part, Evans proposes a number of techniques to address this so-called “feedback gap” – a phenomenon also addressed by Juwah, Dick, et. al. and Sadler (2010). Effective formative assessment techniques aim to minimize this gap as teachers ensure their feedback: helps students reflect upon their learning, encourages two-way communication, clarifies course and assignment goals, criteria and standards, improves student performance, helps them maximize their potential, provides timely and relevant information, and develops students’ self-esteem.

**Expanding the Feedback Landscape:**

Beyond teacher feedback, recent scholarship on formative feedback has increasingly focused on the efficacy of using self-, peer-, and co-assessments to augment – or complement – more traditional feedback practices. Evans and Dochy, Segers, and Sluijsmans advocate for a combination of each form of assessment, empowering students to make informed judgments about their knowledge and learning based upon feedback from themselves, their peers, and their teachers. To maximize the effectiveness of these techniques, of course, teachers must educate their students on effective self- and peer-feedback techniques and then supervise implementation throughout the assessment process.
Insisting that formative feedback must provide motivational and informational reinforcement of established and mutually understood course standards, criteria, and objectives, Evans finds such assessment both a corrective and a challenge tool. Positing an equation of sorts, she finds that student investment, combined with a student’s expectation for success and the value he or she assigns to a specific task, determines how well or productively that student will receive and act upon feedback. Along these lines, Nicol and Dick offer a formative model comprised of seven principles of “good feedback practice” that supports the development of self-regulation in students (205). First, teachers must illustrate unequivocally what “right looks like” – essentially establishing the parameters for excellent, superior, and even satisfactory performance. They must then facilitate their student’s self-assessment before providing timely, relevant, detailed, and supportive feedback and opening up productive two-way communication. Then, through encouragement and positive reinforcement, teachers must build their students’ self-esteem while motivating them to act upon their feedback and to close the “gap” between their performance and their potential. Last, in keeping with Gibbs and Simpson and Evans, teachers must then evaluate their own lessons learned from engaging in the feedback process to modify and improve their teaching.

Thus, if constructed, used, and delivered correctly such formative feedback significantly improves self-regulated and lifelong learning as students immerse themselves within the feedback landscape, move deliberately to eliminate existing feedback gaps, and begin to care more about their feedback than their grades.

Conclusions:
The following conclusions summarize best practices gleaned from formative assessment and feedback research over the last half century.

• Effective formative feedback is specific, supportive, timely, consistent, task-appropriate, explanatory, and contextual.
• Ineffective feedback tends to be overly critical, vague, irrelevant, and/or comparative – ranking students’ work against their peers.
• Where practicable, teachers should contextualize their feedback, tailoring assessments to the specific needs of each individual student while taking into account the student’s ability, needs, personality, and culture.
• The most effective formative feedback encourages students to experiment, take risks, and achieve deep learning.
• Given increasing class-sizes, teaching loads, limited resources, and external pressures, teachers must resist the tendency for one-size-fits-all assessment techniques.
• Peer-, self-, and co-assessment techniques reinforce traditional feedback methods.
• Effective formative feedback is both an assessment and a learning tool.
• Effective formative feedback helps students transform into self-regulated, lifelong learners, looking beyond specific lesson objectives to consider or address a student’s cognitive, behavioral, and motivational development, thereby allowing teachers to identify feedback and knowledge gaps, and to modify teaching methods and, if necessary, learning objectives.
• Too often students dismiss or ignore formative feedback, especially when they do not understand it or believe the feedback is subjective, poorly defined, or irrelevant.
Annotated Readings:


Dochy, Segers, and Sluijsmans examine the relationship between reflective learning and assessment, focusing upon self-, peer-, and co-assessment techniques identified in a review of 63 scholarly studies. Ultimately, they advocate a combination of each form of assessment, privileging the central role of students making judgments about their learning based upon feedback from themselves, their peers, and their teachers and adjusting their efforts and processes accordingly to achieve positive and ever-improving results. Less positive of the impact of peer feedback, they note its efficacy primarily as a learning tool for the reviewer rather than as a viable measure for the reviewed student. For peer assessment to be effective, students must receive extensive training on how to provide useful feedback. Last, co-assessment involves both teachers and students in the feedback process, with faculty retaining necessary control over final assessments. The study concludes that combining all three best produces lifelong learners.


Evans examines 460 studies produced between 2000-2012, focusing primarily upon dominant themes, methods, and gaps in contemporary assessment scholarship and recommending future research avenues. She conceptualizes a “feedback landscape” as a framework to study “the issues and processes implicit in implementing effective assessment feedback” (70). Insisting feedback must be motivational, informational, and provide reinforcement of learning objectives, Evans believes assessment should both correct and challenge students. Noting that students too often fail to capitalize upon feedback, Evans provides seven recommendations to help eliminate the resulting “feedback gap.” She suggests researchers study the relationship between student emotions, motivations, and self-concept; between individual and contextual variables; and the relationship between feedback givers and receivers. She also identifies gaps in understanding the relationship between feedback networks and communication flows. Last, Evans calls for further research on specific tools to improve self- and co-assessment and on how students receive and act upon feedback.


Gibbs and Simpson study feedback as a teaching tool, examining how assessment techniques influence student learning outside the classroom. They find that students, not teachers, are the primary variable in the feedback relationship. Successful students tend to use feedback effectively to assess their performance and adjust accordingly. Moreover, successful teachers assess how students respond to feedback to improve their teaching methods in the classroom. Arguing that looking at assessment as a teaching tool changes the dynamic of feedback, they propose eleven conditions that influence this dynamic. These conditions range from ensuring assigned tasks match study time and student effort while engaging students to meet clearly articulated expectations to ensuring feedback is appropriate, timely, sufficient, detailed, and substantive as it focuses upon student performance and learning rather than the students
themselves. Assuming these conditions are met, students will receive, interpret, and appropriately act upon assessment feedback.

Like Gibbs and Simpson, Higgins, Hartley, and Skelton also focus primarily upon the student’s role in the feedback relationship, insisting that specific, timely, and task-appropriate feedback improves the utility of assessment as a teaching tool. This said, as they note, students must read, understand, and respond to this feedback for it to be effective. As “consumers,” students tend to associate feedback with grades; the most “conscientious” and “intrinsically motivated” of these students long for feedback that moves beyond course-specific issues to address more comprehensive, inter-disciplinary skills (61). Teachers, then, should target timely, detailed, focused, and explanatory feedback to help students move beyond simply trying to earn a desired grade and towards embracing deeper learning. Moreover, Higgins et al. suggest peer feedback and student-teacher communication are essential in reinforcing most effective assessment measures.

Hyland uses a case study approach in an ESL classroom to examine more closely accuracy and form-focused assessment techniques. Given the importance of grammar and form in ESL instruction, many teachers center their feedback to address correctness concerns, a controversial strategy about which many ESL and composition and rhetoric scholars/experts disagree. Too often students do not understand their teacher’s feedback about grammar shortfalls and, therefore, cannot improve their work. This said, studies suggest such feedback on error is effective, at least in the short term. Accordingly, Hyland recommends tailoring feedback to meet the individual needs of each student, taking into account his or her ability, needs, personality, and culture, noting that “what is effective feedback for one student in one setting is less so in another” (219). Thus, while focusing on form and correctness, feedback must also address the student’s contextual needs and encourage her/him to experiment and take risks.

Juwah, Dick, et al. propose and define a range of formative assessment techniques, identifying seven principles that help students get the most out of their feedback and develop into self-regulated, lifelong learners. At the core of their argument, they contend that students often find it difficult to understand feedback messages and, more important, to transform this limited understanding into viable action. To help facilitate this transformation, teachers must ensure their feedback: helps students reflect upon their learning; encourages dialogue between teachers and students; clarifies expected goals, criteria, and standards; reduces the gap between performance and potential; provides timely and relevant information; and develops students’ self-esteem. Last, Juwah, Dick et. al. insist effective feedback also helps teachers modify and/or shape their teaching methods to help achieve the desired outcomes. To this end, they provide interdisciplinary case studies and potential workshops to help teachers implement their strategies.

Building upon their work in the previous annotation, Nicol and Dick refine their discussion and provide more substantive depth on each of the seven principles while insisting that formative assessment requires already-self-aware students to take even more responsibility for their own learning. Such a self-regulation model requires teachers look beyond assignment requirements, standards, and objectives to examine the cognitive, behavioral, and motivational aspects of their feedback. By identifying gaps – in both their own teaching methods and student performance – teachers can subsequently adjust or modify their processes.


Sadler examines the “feedback gap” noted by other scholars, analyzing why assessment often seems not to have the desired effect, despite the significant time and effort teachers put into the process. First, he insists, students must understand the feedback. Then, they must be able to identify and address specific elements within their work that fail to meet established standards. Ultimately, Sadler argues, feedback must address student understanding of three concepts – task compliance, quality, and criteria. First, they must understand what the teacher has asked them to do in a particular assignment; thus, teachers must publish precise and explicit task requirements. Second, students must know what “right looks like.” They often do not. Teachers must, therefore, ensure their students have access to exemplars and rubrics identifying assignment-specific evaluative criteria. Unfortunately, students feel that, too often, such criteria is subjective or ill-defined. Addressing these shortfalls will result in more effective student-centered learning.


Like Evans, Shute provides an extensive review of extant assessment scholarship – but focuses solely on “formative feedback,” which she defines as “information communicated to the learner that is intended to modify his or her thinking or behavior for the purpose of improving learning” (154). Insisting such feedback be student-centered, non-evaluative, supportive, timely, and specific, she mines hundreds of studies, some dating back to the early twentieth-century, only to conclude, ultimately, that despite extensive research, the findings are often conflicting and wildly inconsistent. Nevertheless, she finds that a preponderance of the studies underscores the fact that formative feedback significantly improves self-regulated learning if – and only if – “delivered correctly” (154). For Shute, “correctly” means providing students with specific, supportive, and timely task-level feedback that takes into account each student’s understanding and cognitive ability. Conversely, she identifies ineffective feedback as controlling, critical, vague, and comparative – ranking students’ work against their peers.

Weaver, almost inexplicably, considers feedback an “under-researched area,” despite the hundreds of studies reviewed and cited in the texts annotated above (379). This said, she offers interesting insight into how students receive, perceive, and act upon feedback. Like Shute, Weaver identifies as unhelpful, general or vague feedback, assessments that provide too little guidance on how to address identified shortfalls, overly negative comments, and assessments that are either overly vague or unrelated to course and/or lesson objectives. Feedback is most effective when it is consistent, timely, contextual, and leads to student reflection and development, identifying strengths and weaknesses and specific areas upon which to improve. Furthermore, it moves students to care more about the feedback than the assigned grade. Interestingly, Weaver, more than the other studies annotated here, addresses external factors – like increased class sizes and increasing demands on teachers’ time – that negatively affects feedback, as well.

**Additional Resources:**


