Improve Your Assessment ROI: Transforming feedback into learning

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Abstract

Feedback failure is a concern shared by many higher education instructors who report that they are unhappy with their assessment ROI (return on investment). They are devoting more and more hours each week to evaluating students' work and to giving them feedback without a corresponding improvement in their progress. Research suggests that feedback which is not perceived as "helpful" by students may actually inhibit their progress by adding an additional layer of frustration to their learning experiences (Gibbs and Simpson, 2004-5, 10). Judging the quality of students' work in a summative way and giving feedback at the same time results in the feedback being "backward looking." Because it arrives too late to affect the learning outcome, students tend to discount its value or even ignore it altogether (25).

During this workshop, participants explored two ways to ensure that their feedback adds value to students' learning by: (1) developing action-oriented rubrics using John Hattie's three-question model (Hattie, 2009) and then (2) following up with guided, small group practice in their presence. The 2013 presentation slides (with text) and full bibliography are available for downloading at http://goo.gl/xSsOz6 and http://goo.gl/6XEGec respectively.

I.

In higher education, assessment seems to be something of an instructional black hole, 'sucking in' huge amounts of instructors' time, energy, and concern with little light in the form of improved student success escaping back into the learning environment. In 2004-5, Graham Gibbs and Claire Simpson conducted an extensive literature review to determine the value of assessment as it is commonly carried out in higher education. They found that that it is "enormously expensive [in terms of time and dollars invested], disliked by both teachers and students, and largely ineffective in supporting learning" (11). Despite that, assessment "has long been recognized as the single most influential factor in shaping what and how students in higher education choose to learn," swamping the effects of even the most innovative and engaging aspects of curriculum (Fostaty Young, 2005, 1-2).

If the timing, amount, and frequency of feedback are the assessment elements which most contribute to improved learner success, then UNBF students should be making good gains as a result of our instructors' efforts. Nearly 50% of our faculty who teach at least one undergraduate course spend from 5 to 20 hours grading papers and exams in a typical week. Close to 40% devote from 5 to 30 hours

or more to providing other forms of written and oral feedback (FSSE Pilot, 2011). The majority of our students acknowledge that they are receiving feedback that is prompt (96% of first years and 98% of fourth years), detailed (89%, 95%), or formative (80%, 90%) (NSSE, 2012). Despite all this, it is not uncommon for UNBF instructors to say that their assessment ROI is exasperatingly low.

Clearly, then, there must other factors at work -- shortcomings which additional hours, a faster turnaround time, and more detailed comments on more frequent assignments will not remedy. During this workshop two issues were explored: (a) the extent to which students perceive feedback as "helpful" (Gibbs and Simpson, 10) and (b) the lack of instructor follow-up which permits feedback to be ignored with impunity (25). A key question I wanted participants to consider was whether students are not acting on the feedback they receive because they don't care or because they don't know how.

II.

Students crave guidance, and lacking what they perceive as clear direction, they "will work out for themselves … what they think counts" (Gibbs and Simpson, 10). Unfortunately, they don't always get it right. There is a growing body of research revealing that students and instructors, often and unbeknownst to each other, have very different concepts of many fundamental academic success tasks. For instance, they commonly do not define 'participation' or 'active learning' in the same way (Fritschner, 2000) and may vary widely in their perception of what becoming 'knowledgeable' means (Gibbs and Simpson, 23-4). In his 2010 paper exploring students' competence in academic writing, Huang states that while teachers and learners generally agree on which skills are important, they do not even come close to "seeing eye to eye" when it comes to assessing whether and how much improvement is required (517). The students surveyed for this study mostly believed their skills to be satisfactory; whereas, their instructors identified a minimum of nine areas of serious deficiency in the writing at both the undergrad and graduate levels.

This pattern of mismatch carries over into assessment as well. In a 2001 study by MacLellen (in Gibbs and Simpson), although the majority of the students respondents indicated that feedback "only seldom" helped them to understand, most of the instructors reported that they thought it frequently did. Half of the students said that feedback did not prompt discussion; nearly two-thirds of the instructors believed the contrary. Giving helpful feedback has a greater impact on learners than anything else that higher education teachers do, but what 'helpful' means differs significantly depending on which side of the podium one finds oneself (10).

Instructors know what makes for strong work, but feedback which does not communicate that understanding to students in ways *they* find helpful adds little value to their learning. This problem may arise because the criteria instructors have in mind are not always explicit -- even to themselves (Wolf and Stevens, 2007, 4) or because the feedback may not sufficiently deconstruct the instructor's "sophisticated level of knowledge and understanding" (Gibbs and Simpson, 22) in a way that makes it accessible to students. "Many academic tasks make little sense to students" (21), so feedback that does

not clarify for them what is expected, where they went wrong, and how to fix it may have the unintended negative consequence of training learners to discount its value or ignore it altogether (22-3).

Rubrics, an assessment tool with the potential to deliver action-oriented feedback, tend not to be widely used in higher education. I'd assumed this was because writing student-friendly criteria can be a very challenging and time-intensive, but Reddy and Andrade (2010) suggest another reason in their review of rubric use in higher education. Compared to students, instructors view rubrics as having quite a narrow purpose, making this assessment tool yet another example of the teacher/student perception mismatch mentioned earlier. Students rely on rubrics as roadmaps for "learning and achievement" (439). Instructors, on the other hand, employ them primarily to ensure more quick, objective, consistent, and accurate evaluation (439) or to "reduce arguments with students" (University of Illinois, 2012). This observation from Reddy and Andrade sheds some light on why many higher ed. rubrics do not appear to be written with learners' needs in mind. They aren't.

III.

One pre-requisite to writing more learner-centric rubrics is understanding the difference between 'evaluation' and 'assessment'. When I asked the participants in a 2013 workshop what, if any, distinction they make between these terms, most said they use them interchangeably. A few suggested that 'evaluation' involves giving some sort of feedback or that 'assessment' refers to the instrument (e.g. a quiz or test) used to collect information on student progress. According to Penn State's Schreyer Institute for Teaching Excellence (2004-5), the definition of assessment is: "using information to improve learning." If what instructors do when marking and commenting does not enhance learner success, then they are engaged in evaluation and giving feedback but not in assessment.

As participants in this workshop discovered when asked to consider samples from the learners' point of view, 'unhelpful' rubrics contain:

- repetitive language and empty comments which do not sufficiently differentiate one performance level from the next,
- reliance on words which make sense to academic experts but not to novice learners,
- negatively framed descriptors which say only what was lacking, and
- comments which may be meant constructively but nevertheless carry the sting of disparaging criticism.

Such rubrics are antithetical to the goal of assessment. By compounding students' frustrations and anxieties, they put very real roadblocks in the way of improved performance.

How can rubrics be redesigned to become drivers of student improvement? John Hattie, a New Zealand researcher whose meta-analysis of more than 50 thousand studies involving more than 240 million students is making possible evidence-based conclusions as to which teaching practices have the greatest effect on student achievement, says learners should be able to use rubrics to answer three questions (Hattie, 2009):

(1) Where am I going?	Learners can see from the outset what they need to know and be able to do in order to progress from novice to expert.
(2) How am I doing?	They find out as they are going along what they are doing well on each dimension of the developmental continuum.
(3) Where to next?	This points the way for improvement or extension by the student and additional follow-up by the instructor.

It is important to recognize, however, that the problem of how to get students to learn from feedback is unlikely to be resolved with a 'set-it-and forget-it' solution. "Teaching is an intentional effort to constructively alter the brain function of students in a lasting fashion" (Gislason, 2011, 55). All knowledge is encoded in neural networks in the brain (Zull, 2012), and learning requires *significantly* changing brain structures (Wieman, 2011). Existing brain cells, known as neurons, in which prior learning is housed must grow new branches and literally reach out to connect with each other (Zull, 2012). Repeated use makes new learning increasingly accessible and durable by causing neurons that fire together to become wired together ("Hebbian Theory," 2013) into enhanced and strengthened pathways which operate almost like a reflex. If pre-existing learning is incorrect or ineffective, in order for it to be let go, stable connections in the neural network must be 'pruned' or abandoned to degrade through disuse while a new preferred pathway is mapped out and takes over (Pliny-the-in-Between, 2011). This cannot occur without repeated effort over time.

In the context of a course, closing the learning gap that lies between what students bring with them on the first day of class and what they need to know and be able to do by the last requires a lot more than just adding or deleting bits of knowledge (Wieman, 2011). Students will be able to fulfill some course goals and objectives with little or no assistance. Those they cannot master independently fall into what is known as the 'zone of proximal development' (bcb704, 2012) or ZPD which varies across individuals and topics. Incremental 'scaffolding' -- a metaphor for the interventions which shape and buttress learning and move it forward (Verenikina, 2008) -- nurtures the acquisition of new skills and understandings as well as the replacement of faulty or incomplete former learning.

Writing helpful rubrics is akin to building the scaffold structure, but new experiences change the brain, not new information (Andreasen in Brain Plasticity, n.d.). According to Gibbs and Simpson, instructor follow-up checks and corrective activities are as important to the assessment process as providing the feedback in the first place. During this workshop, the 'practice in your presence' strategy was suggested as a scaffolding technique that could be effective even in large higher education classes. 'Practice in your presence' shifts the emphasis from the giving of feedback by the instructor to its use by students to work on their deficits and consolidate their learning (Gibbs and Simpson, 12) -- on the spot, in the classroom, with guidance from both instructor and peers. This may sound like handholding, but as supports are gradually relentlessly withdrawn, the range, complexity, and level of tasks learners can capably manage on their own increases.

The more generic and forward-looking the practices tasks are, the more transferable the learning will be (25). For example, traditionally when a test is returned, common errors are explained and examples of strong answers may be provided for comparison purposes, but then the attention in class turns to something new, and whether the feedback is heeded or absorbed becomes a hit or miss proposition. Using the 'practice in your presence' strategy can decrease the likelihood of students' getting away without taking corrective action. In this case they might be asked to collaborate in small groups for fifteen or twenty minutes to revise a one of the test answers. The goal would be to produce one new response by blending the best of their individual attempts, referring to exemplars provided, and addressing their collective feedback comments. An opportunity to boost the original grade could be offered as an incentive to participate. To qualify, each student might be required to submit an individual reflection about how the group version was an improvement over his/her original answer. Students who did not maintain their improvements in the next similar task would be flagged for one-on-one follow-up.

The intention here is to make it easier for students learn from feedback received by making it more difficult for them to simply set it aside (25). As well, working with peers has documented benefits (Crouch and Mazur, 2001). Some students find it reassuring just to know that everyone is struggling with similar issues and worries. Creating one revision as a group can encourage individuals to draw on their strengths, as confirmed by the assessment information received in their rubrics, in order to help each other across their respective ZPDs. Thus, the process does not stall when instructors and T.A.'s cannot get to everyone, and it is possible for an them to overhear enough of the general wayfinding and sensemaking to judge whether the feedback was well received, helpful, and action-oriented (Hattie, 2009).

IV.

Evaluating the quality of students' work and giving them feedback at the same time is referred to as assessment ***of*** learning. This kind of summative judgment generally arrives too late to motivate learners to make the hoped-for changes (Gibbs and Simpson, 25). Assessment ***for*** and ***as*** earning, on the other hand, extend an instructor's ability to shape the learning experience and help more students get across their zones of proximal development. Pairing action-oriented feedback with guided, corrective practice in class is one way to ensure that the existing neural architecture which embodies poorly understood or wrong learning is pruned and replaced with robust new connections and durable networks of reliable skills and knowledge. Developing this kind of reciprocal teaching/learning partnership can have the added benefit of fostering a *rapprochement* of sorts between instructor and students. Students are not left to their own devices to figure out what their next steps should be. Instructors are able to see the impact of their feedback first hand. Creating opportunities for each 'side' to see the learning experience through the other's eyes is one way to begin resolving the perception mismatches that can confound both good teaching and good learning.

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