Is Fine-Tuning Possible with Grade-Focused Students?

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In our service-learning courses, students work with real people and record and reflect on these experiences, to learn appropriate professional behavior, how to think creatively, and how to respond to changing circumstances. Many of our students are strategic learners, characterized by alertness to assessment and intention to achieve the highest possible grades (Entwistle, Tait, & McCune, 2000). Their need to be correct often overrides the opportunity to explore ideas, troubleshoot, and problem solve. Their slavish allegiance to one correct answer prevents many from engaging in the messy processes of trial and error, formative feedback and assessment, reflection, and refinement (Dewey, 1938). They not only avoid the benefits of proximal learning, they also deny themselves the benefits of cognitive play that Vygotsky (1962) encourages. An end of term binge, their rush to get work done at the eleventh hour, can occur because many seem reluctant to take advantage of formative feedback opportunities (i.e. fine tuning) during the term. Accompanying this binge is the concomitant expectation of immediate feedback from the instructor, and the equally unrealistic expectation of their own spontaneous comprehension of the material without adequate assimilation time. This paper will describe our efforts to implement formative assessment in our classes. We present a number of formative assessment examples, discuss the pros and cons of teaching this way, and suggest some implementation strategies that enhance student motivation and timely engagement.

Introduction

Formative assessment is designed to give learners feedback on aspects of their performance with respect to specific learning goals (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010; Sadler, 1998) and has been recognized as an important component of self-directed or self-regulated learning (Butler & Winne, 1995). Learners are active participants in the process, which has been described as both assessment *for* learning and assessment *as* learning (Clark, 2012). Assessment *for* learning helps students understand what 'good' performance is, how their current performance relates to good performance, and what to do to close the gap between the two (Sadler, 1989). Assessment *as* learning involves both teachers and learners in a process of creating, monitoring and reflection that can help students become better evaluators of their own learning (Clark, 2012; Woods, 2015). Formative assessment, done well, will go beyond the traditional model of feedback as simply a transmission from the teacher to the student of what is right and wrong in their academic work (Nicol & Macfarlane-Dick, 2006).

In our kinesiology and physical education service-learning courses, students work in groups with real people (clients) and record and reflect on these experiences to learn appropriate professional behavior, and how to think creatively and respond to changing circumstances. This course design reflects competencies that our graduates will need to demonstrate in their commonly chosen professions. To give our students feedback on this work in ongoing ways

we have committed to using a variety of formative assessment opportunities.

This commitment has not been without its challenges, because many of our students are strategic learners, characterized by alertness to assessment and intention to achieve the highest possible grades (Entwistle et al., 2000). They display a need to be correct that overrides the opportunity to explore ideas, troubleshoot and problem solve, all of which are essential skills in the world of work in which they will find themselves. Additionally, the slavish allegiance to one correct answer prevents many from engaging in the messy processes of trial and error, formative assessment, reflection and refinement (Dewey, 1910, 1938; Kolb, 1984). They not only avoid the benefits of proximal learning, they also deny themselves the benefits of cognitive play that Vygotsky (1962) encourages.

Engagement with formative assessment encourages our students to practice reflection on and in action (Schön, 1987). We explicitly designed the reflective activities *and* the ongoing processes of participation in, and formative assessment of, the problem-based and service-learning experiences to align with Dewey's (1910, 1938) idea of reflective thinking as a four-stage process. First, according to Dewey, there is presence to experience, where the habitual ways of dealing with the world break down and there is a move to positive perplexity and engaging with the situation at hand (this positive perplexity is almost impossible to avoid if one is working with a client, who brings a whole set of contingencies to the experiential learning situation). Second, there is description of experience, which involves achieving critical distance from the existential situation rather than rushing to solve it. Here, group members can attempt to figure out what they know, what they do not know, and what they need to find out. Third, there is analysis of experience, a series of dry runs through the problem/challenge and its various conclusions, which is the trying out of possibilities mentioned in step two. Fourth, there is intelligent action, where the informed choice made through the dry run process is moved into a chosen course of action, and then monitored for how it works or does not work.

The overall process we wanted for our students was an application of these steps: noticing and describing perplexing experiences, imagining other ways of handling the situation, and testing the outcomes obtained from the analytical phase in actual practice. In addition, we hoped to develop their metacognitive awareness so that when they reflect, they reflect *on* a specific object, *with* certain conceptual tools, *from* given interests and values *within* a specific context. As well, we hoped that they would realize that taking these steps into consideration would make a difference in terms of how they might work in the world of professional practice. This shift would then lead students to a sense of their cultural agency. No longer disconnected from their subject matter and professional practice - in Freire's (1987) and Vygotsky's (1962) terms, no longer alienated from their forms of expression - they would have the potential to move into cultural agency, and be a contributor within their disciplinary culture and within the larger culture, with the ability and capacity to analyze, respond to, and transform it.

We thought these were realistic goals and that our commitment to formative assessment would allow the students to gain confidence as they moved through our courses, tried the activities in what we designed as 'low risk' encounters, and received feedback from us on how their ongoing decisions and actions fulfilled the prompts, went beyond what was simply required, or needed more refining. We underestimated our students' aversion to positive perplexity, to considering more than one approach to the situation, to working in a systematic and unfolding way through the term, and to trial and error. Indeed, upon our own reflection, we suspect it is the error part of trial and error that may be the lynch pin in the whole conundrum.

With our initial course organization structure, an end of term binge, a rush to get work done at the eleventh hour, could occur because many students seemed reluctant to take advantage of formative feedback opportunities (i.e., fine tuning) during the term. Accompanying this binge is the concomitant expectation of immediate feedback from the instructor and the equally unrealistic expectation of their own spontaneous comprehension of the

material without adequate assimilation time. Although many of our students seem to have a sense of how learning works, and an understanding that ongoing engagement with assignments is better than end of term cramming, some have difficulty actually applying this knowledge to their decision-making and subsequent behavior in our classes. The result is a rush to finish work.

Thus, our experiences have lead us to think that many of our students do not seem to understand *the relationship between timing and learning* so they believe that they *can* respond to all the reflective writing prompts (that were distributed throughout the term) during the last two weeks of term and reap the benefits as if they had done the work in an ongoing way. Or, they at least behave in ways that suggest that they have made decisions about how to spend their energy in the service of their various priorities.

Their urgency regarding our immediate feedback when they do indeed submit work underscores this seeming lack of understanding of the relationship between timing and learning and, more specifically, how feedback works to support the iterative and recursive process of learning. They do not seem to understand that assimilation of new material and new processes takes time. They also do not acknowledge the role or the value of failure (or error) in the formation of new strategies and new insights. Error, or failure, *during* the term is seen as cumulative in the same way that other formative experiences are seen as cumulative, an arithmetic accrual of scores that will add up to the proof of their acquisition of knowledge (or lack thereof). Perhaps this is a pattern they have learned in previous educational and/or life experiences, a materialist acquisition relation with knowledge, and so formative experiences are not seen as processes that can be flexible and adaptable, but rather as one more thing to be acquired, with the timing of the acquisition being an irrelevant variable.

If so, then there is no place for error or failure, that is, non-accrual of the intended object, and there is no need for attention to the timing of learning episodes, since it is the overall acquisition of material that matters, not the ongoing engagement with experiences, nor the dwelling with the puzzles, possibilities, and insights that this ongoing engagement typically entails. Ironically, to think like an adult (Mezirow, 2000) our students need to be more childlike in their approach to wondering, playing, and making mistakes. We wonder how we can encourage this in our experiential learning and in our formative assessment options. How can we build in failures that the students believe are indeed low risk and valuable enough to do and reflect on during the term? How can we engage in fine tuning with grade-focused students?

Working on this project on formative assessment has lead us to recognize that we may also need to devote time to explaining what formative assessment is and how it works in relation to overall evaluation. Perhaps if students understand that the flexibility and adaptability associated with formative assessment allows them to make errors, or even fail, and NOT have this result in a disastrous final summative evaluation, then they might embrace the risk-taking and error-making and do this in an ongoing way, rather than an eleventh hour push to the finish line.

In an earlier study (Frost & Connolly, 2015), we discovered that many of our students lacked the ability to take field notes, i.e., to note the details of interactions with their clients in a way that allowed them to identify which of their behaviours and techniques were effective and which were not – an essential skill for many of them in their future careers. This led us to devote class time to providing students with the tools they needed to take useful field notes, and to make their field notes journal an instrument for formative feedback. Students write a short entry after every interaction with their client and these entries receive timely feedback. The ongoing journaling and/or blogging in our courses constitutes 10-30% of the final mark, making it worth the effort to do the work, and because there are many journal entries (and/or blog posts), not doing well on one is not disastrous. Once the field notes journals were addressed, we began to build other opportunities for formative-type assessment into our courses.

Formative assessment examples

Below are several examples of formative assessment we have been experimenting with that have varying degrees of complexity and risk. We offer these, with brief elaborations, in an effort to consider their pros and cons as possible formative experiences, and their implementation potential and challenges for our overall goal of student comfort with trial and error. We have included the source material that was the inspiration for our applications.

1) Small group, collaborative work done at regular intervals including a consideration of group process roles/functions: Introducing students to small group process and roles allows them to understand how group functioning affects the planning, implementation, and refinement of the plan. Using scheduled time in class for group work also reduces the need for students to meet outside of class. (see Brookfield and Preskill's (2005) for discussion formats; Taylor, Cook, Cunningham, King, & Pimlott, 2004)

2) Online follow-up activities in solo, twos, threes, and small groups (e.g. forums, wikis, and etherpads): Students may engage in an online activity that asks them to respond to a prompt that allows for elaboration, refinement, and practice of a skill or process. Groups or partner set ups allow for more efficient assessment and for more brainstorming on the part of the students. (Fink, 2013)

3) Optimizing social networking opportunities: Students may resist the use of their personal social networking tools in the service of course based learning; however, if the social networking contexts can be presented with critical distance, then students might be more amenable to track trends or search terms that relate to the subject matter being studied or applied. (Adapted from the work of Zimmet, 1987.)

4) Blogs and/or other alternative creative writing options - peer assessment and/or comment: Writing activities that do not count in terms of an assessment score, but offer opportunities to explore different genres and forms of writing. This often allows students to unhinge from their habitual ways of writing and usually results in writing being fun. (One of the authors adapted this from her online creative writing group; Brookfield (2006) also advocates using reflective writing as a means of deep engagement.)

5) Monte Carlo format quizzes: The instructor generates six questions (this can be done with or without students contributing to the construction of the questions, depending on the timing) and the students have a set period of time (usually several days, up to a week) to prepare the answers. On the appointed day for the in-class assessment, the instructor rolls the dice, and whatever number shows is the question that the class then does and submits for assessment. (One of the authors discovered this technique at a workshop on her home campus; the second author promptly stole it from her.)

6) Show what you know exams: Exams with a variety of different forms and formats of questions, each assigned a percentage value. Students choose from the array until the choices add up to the amount that the exam has been assigned. (Chickering & Gamson, 1987; Weimer, 2015a)

7) Matrix options: An example would include a grid with five topics across and five applications down; students can only do a particular topic/application combination once and then they have to do a different set as they shift from one topic to the next. (Adapted from performance-based class activities Kuppers, 2014.)

8) Choose your poison—an array of different assessment options timed on a bi-weekly schedule which includes choice: Students can only do each form once and then must attempt different forms in subsequent assessments. (This is a combination of several of our listed options.)

9) Translate the feedback: Learners tell the teacher what they perceive the feedback is saying to them; peers tell other peers what they perceive the feedback

is saying to them. (Chickering & Gamson, 1987; Weimer, 2015b)

10) Master classes (volunteer only): A piece of student work is used to receive deep and detailed feedback so that the whole class can be workshopped via the feedback given to the one student. This is not for the fainthearted, but is effective when the feedback is offered in a sensitive and descriptive (not judgemental or personal) fashion. (One of the authors adapted this from her former life in dance performance.)

11) In class bell-ringers with set up preparation and follow up debriefing: These give immediate knowledge of results and allow unpacking of how the reasoning was done. (This is a standard type of assessment in kinesiology-based subject matter; e.g. anatomy.)

12) Digital literacy assignments: Activities that allow students to gain awareness of *how* a digital context works as well as *what* the content at the site might be. For example, providing students with criteria for assessing a good website so that when they search for information, they can be more discerning about the site from which they get it. (This was adapted from a library workshop on the authors' home campus.)

13) Unobtrusive assignments that apply course concepts: Using readily available, public domain material as a site for application or exploration. For example, cartoons, movies, television shows, and found artifacts. (See the descriptions of a variety of unobtrusive inquiry options in van den Hoonaard, 2012.)

Discussion

Each or several of the aforementioned formative options might be used as low risk opportunities for error or failure and Dewey's subsequent unfolding process of reflection. However, preparation /education of the students regarding assessment and how it works will allow for a more likely engagement with the processes. As teachers, we also have to allow ourselves to make errors and fail as we continue to refine the number and timing of formative assessments and forms of feedback.

There are a number of good reasons for using formative-type assessments. They can provide many different ways for learners to engage with subject matter and with their peers, acknowledging diversity across a number of spectra, with a lot of variety in both format and content. Novel assignments and exams are possible, and the dispersed practice and dispersed percentages mean that no single form of assessment can fail the student. In addition, this type of assessment allows an instructor to see the process aspects of students' work, and evaluate the degree and kind of change in their work over time (Nicol & MacFarlane-Dick, 2006).

Formative assessment is not without its challenges, and time management may be the primary one, for both the student and the instructor. Students who use the aforementioned end of term binge technique to complete course requirements may have difficulty keeping up with many small assignments over the course of the term or doing large assignments in smaller pieces, and may feel overwhelmed by having something due every week, or every other week. Deadlines should have consequences in order to be effective. Likewise, instructors who typically have two (the midterm and the final exam), or three (midterm, final and a paper) heavy marking times during the term will need to schedule weekly or bi-weekly marking time in order to keep up with student submissions. If partner or group work is used, group process must be discussed and understood early in the term to avoid habit-based group issues. Additionally, many students (and teachers) may be overwhelmed by *too many* options, preferring to be given (or to give) direct commands or limited choices. It may be that the use of choice has to be introduced gradually, or introduced as an in-class participation activity that has no assessment value but plenty of learning and/or practice potential. Further, both teachers and students will have to engage in the ongoing and necessarily messy consultation about what is too many assignments, regardless of their potential for learning, and what is too many choices.

Conclusion

Some of the following strategies may be helpful for those considering implementing formative assessment, with the goals of timely engagement and student motivation. Optimizing the online environment can be very helpful. Online submission of small assignments provides flexibility for the marker and a quicker turnaround for giving feedback to the student. Not allowing submission after the due dates will ensure that students submit work in a way that allows feedback and time for reflection before the next piece of work is due. If students are working on several different things at once, consider sending a 'work for the week' email reminding them of what is required for each particular week. Although this may seem to be subverting the goal of helping students become self-directed learners, informal polling in my class has shown that it is reassuring for students who are new to a class that is not lecture-based, with a midterm, paper, and final exam as the sole means of assessment.

Reorienting the classroom to facilitate new types of assignments early in the term and making them brief, with swift turnaround of feedback will get students involved in thinking formatively from the outset, however it is also helpful to spend time explaining the process to them. This may necessitate some trimming of content in the course, but will be well worth it. Consider adopting a goal of doing less, better; that is, identifying threshold concepts for the course (formative process could be one), and engaging in them deeply. Threshold concepts are those ideas, premises, or constructions that *next* learning relies upon (Meyer & Land, 2006). In effect, if a particular threshold is not grasped or learned, then other learning in the course would be adversely affected. Threshold concepts have domino effects, hence teachers need ways of assessing them in an efficient and timely fashion so that the remainder of the course material can be engaged in meaningful ways and so refinements can be made to compensate when necessary. Inviting students to help create the formats, content, and rubrics of some assignments and assessments, and making the work relevant, with post-graduate meaningfulness built in, will also help with the transition. Using some peer assessment can reduce the amount of marking for the instructor and also create a useful learning experience for the students. Teachers and students may have to make the transition to seeing process *as* content rather than as something that detracts from content.

Learning how to learn is valuable content. Making it visible as an outcome may be a longer term process and insight. Many of the implementation strategies that we have mentioned involve constraint—working within time limits, adhering to deadlines, facing the consequences of lack of planning or attention to detail. These constraints may seem harsh or unyielding, but they encourage realistic decision making as well as manageable failure. Believing in and understanding the value of constraint allows both teacher and student to buy in to what formative assessment can offer: flexibility, adaptability, and individualized consideration of how students' responses can be reconfigured, over time and across contexts, in a more authentic summative evaluation.

Is fine tuning possible with grade focused students? If we educate them about assessment, consult with them about timing, and make error and failure both expected and manageable, perhaps they will become more learning focused and their subservient relationship with grades will change as well. Stay tuned.

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