"Professor, Slide Jumping was Pretty Intense Today: " Undergraduate Peer Educators as Formative Evaluators

H. Russell Searight

Lacey Johnson

Molly Hartman

Mari Schupp

Lake Superior State University
650 W. Easterday Avenue
Sault Sainte Marie, MI 49783
USA

Abstract

While summative evaluations in the form of examinations, term papers, standardized tests, and end-of-term student ratings of instructors are common forms of assessment in higher education, much less attention has been devoted to formative assessment. By obtaining ongoing feedback while a course is in progress, formative assessment can provide detailed information about specific aspects of student and/or instructor performance as well as course content. Instructors may use this information to make changes in content or alter pedagogical strategies within an ongoing course. The current project describes a newly developed approach to formative course assessment involving undergraduate peer educators as evaluators. The peer educators, advanced students who provided review sessions and tutoring for a specific course, attended the class and completed weekly assessments focusing on the instructor's teaching style, course content, and student response. The opportunity to receive "micro-level" feedback about specific class periods and/or the teaching of specific content was very helpful to the instructor and led to course revision. The results of this project are discussed from the perspective of Schon's (1983) description of reflective practice. The peer educators found their role to be beneficial and included the further development of their metacogntive skills.

With increased calls for accountability by accrediting bodies and government officials, universities in the United States are being challenged to document educational outcomes (Dill & Berkens, 2011). Accountability is now a frequently-cited value enacted by holding colleges and universities responsible for student learning and the "product" that educational institutions provide. This emphasis on accountability reflects a broader decline in public trust in many U.S. institutions including health care institutions, banks, and religious institutions (Eaton, 2011; Yankelovich, 2006)

Governmental response to this reduced public trust has been to increase regulatory activity. To provide the information required by the accountability emphasis, universities have increasingly become focused on outcome-based assessment (Eaton, 2011). In higher education, these outcomes are in the form of "…knowledge, skills, and abilities, which a student has attained as a result of engagement in a particular set of higher education experiences" (Eaton, 2011; p. 14). Documenting these outcomes has been the focus of summative assessments of individual courses and programs in which student achievement is compared to pre-established benchmarks. This external oversight has led to a strong emphasis on summative evaluation (Falchikov, 2005) in the form of test scores or quantitative indices such as rubrics.

With this emphasis on outcomes, much less attention has been devoted to another established form of evaluation—namely, formative assessment (Falchikov, 2005). Formative assessment is process oriented rather than outcome focused and is consistent with models such as Total Quality Management (Sallis, 2002). Formative assessment is a dynamic, ongoing process for the purpose of continuous improvement. However, in recent years, the boundary between summative and formative has become less clear (Harlen & James, 2007). An arbitrary, yet useful, distinction may lie in the evaluation's purpose.

Formative assessment is "real time" evaluation designed to improve a course-in-progress. To date, most descriptions of formative assessment examine intermediate outcomes such as student performance on low-stakes quizzes. The development of online education-particularly in the form of competency-based, asynchronous curricula- has contributed to a greater use of formative assessment such as self-paced quizzes completed after student exposure to a new body of material (Dunn & Mulvenon, 2009). Based on quiz performance, a student may be directed to repeat a content module. Similarly, while less common, classroom instructors can use the results of quizzes to return to a topic in which students exhibited difficulty.

Formative Assessment and Reflective Teaching

Reflective practice is a term popularized by Schon (1983) to describe an ongoing process of questioning and self-analysis among practitioners while engaged in day-to-day professional activities.   For example, educators engage in critical reflection while developing course. During course development, in addition to content, university faculty consider their students' educational background, techniques for optimal presentation of the material, and how to assess students' acquisition of relevant knowledge and skills.   While students' knowledge of course content may be assessed through examinations, papers, student presentations, other measures of instructor effectiveness are available only after the course has been completed. End-of-semester evaluations of individual instructors reflect students' views of the instructor around dimensions such as engagement with the students during and outside of class , use of specific pedagogical techniques, and perceived knowledge of the subject matter. These summative ratings and comments may lead the instructor to change their instructional approach or revise course content for the next time that the class is taught. However, the information will not directly impact the students providing these data.

Formative assessment is consistent with both types of reflective practice described by Schon: reflection *in* action and reflection *on* action (Schon, 1983; Smith, 2011).   Reflection *on* action typically occurs immediately after a class period and is characterized by the instructor's informal self-analysis. Reflective instructors routinely ask themselves questions such a "1. What went well today? Why? 2. What could have been better and how?   3. What should I continue to do and what should I do differently ?" (Smith, 2011).

Reflection-*in*- action can be extremely helpful but is also cognitively challenging for the instructor. This "in-the-moment" formative assessment may include the instructor's perception of students' apparent level of attention, their current engagement in class discussion, and their answers to questions posed by the instructor. While optimal, the ability to engage in ongoing self-analysis and simultaneously presenting material and participating in "here and now" interactions with students is, at minimum, intellectually and emotionally challenging and may often not be feasible. However, this micro-assessment, in which a daily class period or a specific segment of a class period is examined in detail, can be inordinately valuable for improving instruction.

Peer Educators

Undergraduate Peer Educators (PEs) are students who have previously performed well in a given class and are selected to provide ancillary academic support to students currently enrolled in the course (Newton, Ender, & Gardner, 2010).   PEs receive specific training and ongoing supervision . They may conduct regular review sessions of course material or work with students in a one-on-one tutoring capacity. It is advantageous for PEs to attend the class for which they are providing support. However, from the PE's perspective, attending the same class over multiple semesters may provide minimal stimulation and diminishing returns in terms of review of content.

In the current project, PEs (student instructors) assigned to two large undergraduate psychology classes (Lifespan Development and Abnormal Psychology) were asked to provide weekly written feedback to the instructor about each individual class period. Since this was a pilot project, the formative assessment tool was fairly simple. It asked the PEs to comment on the best and worst parts of each class period and suggest areas for improvement (See Table 1 for the form used by PEs to evaluate each class period).   Because of a growing conflict between the amount of course material and the time allotted, the instructor requested practical feedback about elements of each lecture/discussion that could possibly be eliminated without compromising student understanding.

Method

PEs regularly completed the assessment form for the week's class periods. At the end of each week, the PEs provided the instructor with the completed form. Upon receiving the forms, the instructor read the PEs' comments and reflected on the feedback.

Originally, the instructor's intent was to simply read the weekly feedback and incorporate relevant suggestions into the course during the current or future semesters. .However, from the instructor's perspective, the PEs' comments provoked considerable self reflection as well as, on occasion, further questions. In order to organize the material generated from the process, the instructor summarized his reactions in a weekly e-mail that was sent to each of the PEs. On occasion, the response included a request for the PE to meet with the instructor to discuss specific points. These conversations focused on clarifying feedback and/or further questions stimulated by the PEs' comments.

In order to understand their experience as formative evaluators, PEs were interviewed at the end of the semester by the Learning Specialist overseeing the PE program. Questions focused on the PEs' comfort providing the instructor with weekly feedback, the perceived value of this activity, and any benefits that the PEs experienced as a result of being in this role. In order to illustrate this approach to formative assessment, examples of PEs' written feedback and the instructor's written responses and reflections are presented organized according to topic.

Results

To illustrate formative feedback, excerpts of the written exchanges between the PEs and instructor are presented below. To provide some structure, the excerpts are organized according to themes. Most of the thematic labels are self-explanatory. "Student Engagement" refers to the interaction between the students and instructor during the class period as well as students' reactions to classroom techniques or content. "Peer Educator's Instruction" addresses issues or course content that arose in the PEs' work with students. In the excerpts below, the two PEs are identified as "PE-1 and "PE-2." The instructor's responses are denoted with "I." Grammar and syntax were intentionally not edited to preserve the colloquial nature of the exchanges. To assist with clarity, within a given theme, each exchange between the PE and instructor is separated and denoted as Exchange 1, 2, etc. .

I. Clarity of Instruction
Exchange 1

PE-1 (Peer Educator 1) "I'm not sure how important Mozart was to this class [note- the topic was "Does listening to Mozart make you smarter ?"]…*may have been better to put Mozart with pseudoscience…"*

I (Instructor): You are right on the Mozart clip--it was done too abruptly; I think your suggestion of putting it with pseudoscience is a good idea. If you have any thoughts about the pseudoscience content, I would appreciate it--I added this section about 2 semesters ago and it still feels a bit disjointed.

Exchange 2

PE-1: Thalidomide topic seemed jumpy. Went from depression to thalidomide memorial --didn't really flow well.

I: I agree with you on the thalidomide discussion. I should put it at the beginning of the material on teratogens. The depression and pregnancy discussion: I probably should not have started the material on antidepressants in one class and then come back to it two days later—that did make it confusing.

Exchange 3

PE-2: Before going to the history [of treatment of mental disorders]*, when the DSM* [note: DSM refers to Diagnostic and Statistical Manual for psychiatric diagnosis] *criteria for OCD* [Obsessive Compulsive Disorder] *were covered as review, students seemed a little lost or confused. It could be because we haven't covered OCD yet.*

I: The use of OCD was to attempt to review DSM criteria and how the DSM is set up but I did not think it through well-enough.

Exchange 4

PE-1: Jumpy! Went from spanking to guilt trip back to spanking; kind of left spanking without really concluding about it. Example- a bunch of people in the class had been spanked but they did not become serial killers- why ? Alternatives?

I: I could put the topic of spanking earlier in the course when we talk about Skinner. It also might be a little more engaging there since I could ask students about their own experiences again. I agree with you that I was jumping back and forth from guilt induction and spanking and it probably was somewhat confusing to the students. I should do one topic then go to the next or should I drop the topic of guilt induction as discipline altogether?

II. Student Engagement

Exchange 1

PE-1: Personal stories were fun! Students liked them…keep up the humor.

I: I should keep the personal stories per your feedback. Today's story came to me while I was talking and those "inspirations" are not always the best. Thanks-- I will keep it but I think I need to do better about making sure that it illustrates qualitative research.

Exchange 2

PE2: Very good discussion on ECT [electroconvulsive therapy]*; students were very interested and inquisitive.*

I: You had mentioned the video on ECT …I like it because the young woman receiving the treatment is relatively close in age to many of the students. I agree with you that it also "humanizes" the treatment. It was interesting that the students had so many questions about it. I was not sure what triggered all of the questions –any ideas?

Exchange 3

PE-1-: A lot of interaction during the marital satisfaction topic

I: I *believe that the marital satisfaction topic came up indirectly. I could do more with this topic. I probably should since it is very practical material and students are usually interested in issues around relationships. …I try to avoid recycling material through different classes if I can. When I first started teaching here it was less of a problem because students would typically take just one or two of my classes. Now I have a number of students who take all of my classes and there is some content overlap so I try to use different examples. This is a question that I could benefit from some feedback about. How much repetition across classes is useful versus being boringly redundant? I often experience a responsibility not to repeat material. Even if topics are repeated I try to address them differently. However, is this an issue for students or is it just me?*

Exchange 4

PE-2: The video about the police shooting [CNN clip of a person with mental illness being shot and killed by police officers] *facilitated good discussion*

I: Thank you for the feedback on the videos. I have never shown the police shootings before. I had several clips that I came across this summer but these recent ones were more provocative. I was a bit anxious about showing the first one—even though from CNN-it was pretty graphic. I personally found it somewhat emotionally disturbing. Am I giving enough of a warning to the class before I show the more graphic/disturbing videos ? While I want to challenge the students, I do not want to provoke excess distress in someone who might be vulnerable and I certainly do not want to offend anyone. Any thoughts you have would be appreciated.

Exchange 5

PE-1: Keep up the sense of humor—it keeps class interesting…Hearing students contribute to the conversations was nice; continue to challenge them to think about challenging scenarios. Being attentive to students' questions; you usually notice them fairly fast and it's appreciated by students.

I: Student questions: You mentioned that this was a positive aspect of the class during the past two weeks. One of the issues I was having this week was that students were raising really interesting questions but the questions were perhaps only tangentially related to the lecture content. For example, a student asked about when a psychologist or physician should break confidentiality and warn another person of potential harm (Case example in class of woman who had breast cancer gene and refused to disclose the information to other female relatives). I always like these questions; I am glad students are thinking about broader issues--. Do you have any reactions ? Do many of the students in the class "tune out" when I'm responding to these questions ? (I couldn't tell) I think on that particular day I was also concerned about getting through the material for the exam. I do get concerned that I might be losing some of the students who are focused on the topics from the slides. Is this something I should be concerned about ?

Exchange 6

PE-1: It was fun to watch their faces during the delivery video [a clip from the Discovery Channel depicting birth]. *It showed them what many of them may one day be working with* [Note: the majority of the students were in pre-nursing].

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I: I am glad you were watching the students during the birth video. I was, too. I wonder if I need a stronger warning the day before I show this one. Some students seemed to be deliberately looking away during parts of it.

Exchange 7

PE-2: "Good class discussion and interest about bipolar disorder – they asked a lot of good questions this week.

I: Questions/ Discussion on Bipolar Disorder—I agree with your observation; the class did seem to get into the discussion of Bipolar –I am not sure what exactly triggered it. Do you have any ideas ? The questions were excellent and built on each other in a useful way educationally. I wish this could be recreated every class period.

III. Content/Activities to Consider Eliminating
Exchange 1

PE-2 Learning about PMDD [Premenstural dysphoric disorder] *is interesting but the video we watched wasn't the best. She said "you know" an uncomfortable amount of times and it was very distracting. Maybe there's a different video that illustrates PMDD ?*

I: Drop the video on PMDD—I agree; the woman has some other issues and odd mannerisms that really detract from understanding the condition. I would like to show a video interview on this condition to distinguish between "normal" premenstrual issues and PMDD.

Exchange 2

PE-2 The video about the Canadian war and PTSD is good for illustrating PTSD but maybe something about law enforcement related PTSD situations that these students (most of whom will go into criminal justice) may be exposed to.

I: I do like the video clip about Romeo Dalliaire [head of UN peacekeeping force in Rwanda during the genocide]. *I think it illustrates how severe PTSD can arise because of the conditions under which Dallaire worked in Africa. However, it is possible and even likely that this video falls under the category of "things that the professor likes " rather than perhaps being optimal for student learning. ...However, your point is well taken and I will look for a domestic PTSD video. I also think I need to remove a lot of the statistics on war trauma. Again, this is an area in which I have done research but it may be restricted in its generalizability to situations that the students will encounter.*

IV. Controversial Topics
Exchange 1

PE-1: You discuss really touchy subjects really well (15 to 16-year-olds who are pregnant) and dealing with passionate students (old age of birth mothers) [in vivo fertilization]

I: I try to be nonjudgmental about teen pregnancy and the 60+ year old women having babies through in vitro fertilization. I am not sure the issues around sex education, etc., and the reasons for the higher teen pregnancy rate in the U.S compared with other Western countries was getting across this time. I usually have more Canadian students in the class who will talk about how these issues are handled in Canada. I am going to look up more information on this one including research on abstinence education.

Exchange 2

PE-2: The video on assisted suicide was very interesting. I'm not sure if you recently added this because I can't remember it but it's very compelling.

I: Yes; I did add the film clip from "The Suicide Tourist" recently. I am not sure that I have ever shown it in class. I've sometimes been concerned that it might be too disturbing because the video does show the man dying. I believe that I will show it in the future. I probably should give a warning before showing it. Do you think there are any problems with using the film clip ?

V. Peer Educator's Instruction
Exchange 1

PE -1 in my SI [review session with students] *the main confusion appeared to be between stage five and stage six of Kohlberg* [model of moral reasoning] *so maybe that could be cleared up.*

I: You also mentioned Kohlberg. As I was teaching moral reasoning this time, I wondered if it should be given as much attention as it is in the course. I find it interesting and I think it is a good exercise in critical thinking.

However, you'll notice that our textbook gives far less attention to it than I do….I do agree that if I keep this material in the course, I need to do a better job with some of the explanations—specifically distinguishing between stages.

Exchange 2

PE-2: *When going through the different schools of psychology, I always show my tutoring students a timeline of psychoanalytic behaviorism, etc; it. helps organize everything and gives a visual representation*

I: *Using a timeline for the different schools of psychology --- where do you end up? Cognitive ?*

PE-2 (response): *In the psyc 101 book I do believe there's a timeline in the back and I just circled for my tutoring students the different major topics we talked about (psychodynamic, behaviorism, etc..) and where they happened in time, it helped them remember by using the visual aids and also knowing the time period they can connect things happening in history (ex. humanistic psychology/civil rights*

Exchange 3

PE-2: *Diathesis stress model is very helpful in explaining genes and environment. In my SI [*review sessions*] I use this all the time.*

I: *Diathesis stress – do you have any ideas how to get this across better? I still use that graph. Frankly, it was the way that I was taught about diathesis stress. I think I draw the same graph from 30 years ago. Can you think of any better ways to convey this?*

PE-2 (response): *As for diathesis stress model I like the one that you draw, I think it's clear and helpful. I think it's important to emphasize it because it explains disorders well (schizophrenia, bipolar, etc.) in SI [*review sessions*] I always use the stress model to help explain disorders. I found [a] lecture slide on Google that discusses the stress model, maybe something like this along with the graph you draw?*

Discussion

Overall, this formative assessment process was very beneficial to the instructor. As is evident, the PEs raised issues triggering critical reflection by the instructor. While there has been concern about the quality and usefulness of university students' course feedback (Blair & Noel, 2014), the PEs' commentary often coincided with the instructor's visceral recognition that students were becoming confused or disengaged. However, in their written comments, PEs often described issues that the instructor recognized at some level, but had not articulated. However, the PEs also noted problems of which the instructor was unaware –specifically, certain content areas that were confusing some students. This feedback prompted the instructor to return to the topic under the guise of a "quick review" and attempt to explain the material more clearly.

In addition to revisiting topics for clarification, the feedback also led to a number of changes in the current or future courses. Some examples of changes to the ongoing course included providing students in Abnormal Psychology with symptom checklists so they could "diagnose" patients depicted in video clips. Other "mid-course" corrections included using more examples relevant to the major field of study (criminal justice) of many of the students and being more consistent in review content from the previous class before embarking on the next topic.

In other instances, the recommended course revisions were added the next time the class was taught. Examples included eliminating some video clips and changing the order in which some topics were covered. In addition, the PEs pointed out redundancies as well as raised questions about the importance of some of the material covered. This feedback directed the instructor to content that could possibly be removed from the course so that the final weeks of the semester were not spent in "catching up" on material.

As noted earlier, the PEs participated in an end-of-semester interview focusing on their experience of this new role. The interview was guided by a series of open-ended questions and was intentionally not conducted by the instructor. From the perspective of the student instructors, it was clear that the process required greater effort on their part compared with their usual role as a quasi student—primarily attending class to review material ("It might be time consuming and a time commitment but it pays off"). Both PEs indicated that they approached the formative assessment task from a different perspective than their usual peer educator role ("…with a student mindset instead of a student instructor…it made me pay more attention to what the questions were and how engaged the students were. It made me pay attention to whether they were paying attention or zoning out—what was interesting to them.")

There was some concern that the student instructors might be uncomfortable providing critical feedback to the instructor. While difficult to fully assess, the PEs indicated that they were comfortable in this regard. They also made some suggestions about altering some of the wording of the assessment form (Figure 1). The PEs also reacted positively to receiving the instructor's written responses to their comments (" I liked getting the e-mails and responses back because I knew my time was validated.") and that it was beneficial to their own work with students (" You asked follow-up questions; I liked that. [it also] validated…what I should include in my S/I [review] sessions."

Finally, being in a critical observer role helped PEs develop their metacognitive skills and place themselves in the role of someone new to the course ("Think about it as a new student who may not be a psychology major.") The PEs' feedback and comments during the interview also suggested that they felt that they were having direct impact on the course content and the instructor rather than simply serving as leaders of review sessions.

Conclusion

Through the process described, formative assessment became, and will continue to be, part of the instructor's two large undergraduate courses. In order for PEs or other advanced students to provide useful feedback, it is imperative that the instructor be open, appreciative, and accepting of feedback without any suggestion of defensiveness or implied criticism of the PE. Instructors should frequently convey appreciation to the PEs for their work as evaluators. In this case example, the instructor conveyed this support in writing by acknowledging and expanding on PEs' comments. While not originally intended, the weekly responses to the feedback established a new routine for the instructor--a weekly period of critical reflection on his teaching. Further application of this model will include refinement of the assessment form as well as greater exploration of the impact of this role on PEs' development as young adults.

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FIGURE 1

Formative Assessment Document
(Completed at least once each week)

Student Instructor Completing This Evaluation:_____

Formative Assessment of Today's/This Week's Class(es)

1. What was the best thing about today's class?
2. What was the worst or least effective aspect of today's class ?
3. Based on today's class observation, the professor should do more of:
4. Based on today's class observation, the professor should do less of:
5. Based on today's class observation the professor should continue to:
6. Based on today's class observation, the professor could eliminate the following content without impacting students' understanding:
7. Other comments (e.g., Feedback about class discussion-too much, too little, unproductive)