

Teachers' views on conducting formative assessment within contemporary classrooms

by

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Abstract

Twenty teachers working in elementary and secondary schools were interviewed from 2 school districts in southern Ontario, Canada about their understanding and use of formative assessment. Analysis of the interviews followed a constant comparison method and revealed a variety of emerging themes. Results suggested an imbalance in the use of formative assessment methods associated with improvements in student learning and achievement. Many teachers noted difficulties in utilizing self- and peer assessment within their classrooms. The discussion focuses on the implications for transforming classroom practice and outlines factors necessary to facilitate a balanced assessment approach.

Descriptors: Formative assessment; teacher knowledge; professional development.

Introduction

Classroom assessment terminology often differs from one educational jurisdiction to the next (Harlen, 2007). Nevertheless, the distinction between assessment practices that are ongoing and take place during a lesson or unit of study and those that primarily serve an evaluative function at the end of a unit or term is well established. The former is referred to as formative assessment (also known as assessment *for* learning) and the latter is referred to as summative assessment (also known as assessment *of* learning). Formative assessment might include a student completing a journal reflection, self-assessment of a performance, or submission of a draft of a final assignment. Conversely, summative assessment methods are typically traditional paper-and-pencil measures such as quizzes, tests, exams, essays, or projects that form a portion of a student's final grade. For example, many secondary students in North America complete a final exam that is worth a significant portion of their final grade. These final exams are used to determine the degree of achievement of specific competencies in particular subject areas such as science, mathematics, geography, history, or English. It is also customary for elementary and secondary students to receive report cards at the end of each term or semester of study that summarize their achievement.

Research has suggested that the cadre of formative and summative assessment practices that are utilized by teachers can have a direct impact on student learning and achievement. In particular, four large reviews on the impact of formative assessment (Black & Wiliam, 1998; Crooks, 1988; Kluger & DeNisi, 1996; Natriello, 1987) have supported the claim that the utilization of formative strategies such as questioning techniques, feedback without grades, peer assessment, self-assessment, and formative use

of summative assessments can double the speed of student learning (see Wiliam, 2007). Even more importantly, formative assessment reduces the achievement gap by helping low achievers the most (Black, Harrison, Lee, Marshall, & Wiliam, 2004; Black & Wiliam, 1998). Unfortunately a constricted range of assessment practices, particularly those that emphasize traditional paper-and-pencil summative measures, are being overemphasized within contemporary schools (Earl, 2003; Popham, 2005; Stiggins, 2008; Volante, 2010). Thus, the reform of schools and classroom assessment strategies are intimately connected and the ability to promote diverse assessment strategies is paramount to school success (see Harlen, 2005; Popham, 2005; Stiggins, 2008; Wilson, 2008).

In order to expand the current research on formative assessment practice a group of educators were interviewed about their self-perceived skill in formative assessment. The interview protocol contained a range of questions that focused on expertise and utilization with various formative assessment methods that are associated with improvements in student learning and achievement. The primary analytic objective was to identify which practices may be under- or over-utilized, and more importantly, the critical issues that account for a potential research–practice gap. The results have the potential to inform teacher education, professional development, and capacity building efforts geared at transforming classroom practice.

Studying Perceptions

Studying teachers' perspectives of assessment is important because evidence suggests that teachers' perceptions of teaching and learning strongly influence how they teach and what students learn and achieve (Brown, 2004). To illustrate, Kahn's (2000) case study of

assessment in secondary school English classes revealed an eclectic array of conflicting assessment practices, seemingly because the teachers held differing perceptions of teaching and student learning. Similarly, research suggests that changes in formative assessment practices can be correlated to changes in teachers' attitudes (Dekker & Feijs, 2005). Therefore, it is imperative that researchers and teacher development providers gauge teachers' assessment perceptions before implementing targeted professional development programs.

Theoretical Framework

The theoretical framework for this study was guided by the work of Black et al. (2004). This research was used to develop instrumentation that could tap specific formative assessment strategies (questioning techniques, feedback without grades, peer assessment, self-assessment, and the formative use of summative assessments) that are associated with improvements in student learning and achievement. The utilization of this framework allowed us to examine formative assessment as a multifaceted construct and identify areas of self-reported strengths and weaknesses. As well, the framework provides a method for generating specific recommendations that will be useful for policy-makers, district and school staff involved in capacity building initiatives, and teacher educators. Indeed, the relative importance of formative assessment has been recognized as an urgent priority by educational researchers, assessment specialists, and practitioners around the world (Brown, 2004; Dekker & Feijs, 2005; Stiggins, 2002).

Context of Study

Unlike some jurisdictions in the Western world such as those in select parts of the United States, the United Kingdom, and Australia, there is no formal requirement to use

classroom assessment data (also referred to as curriculum-embedded assessment) for accountability purposes in Ontario (see Wilson, 2004). Provincial jurisdictions, like Ontario, mandate school board improvement plans that contain an emphasis on large-scale assessments as a gauge of educational quality in both elementary and secondary schools (Volante & Ben Jaafar, 2008). For example, in their analysis of 62 Ontario school board improvement plans developed in 2003-2004, van Barneveld, Stienstra, and Stewart (2006) found that only 31% actually made reference to classroom data. Rather, it is external testing data, gathered under the direction of the provincial testing agency – Education Quality and Accountability Office (EQAO) – that serves as the primary metric of school success. Ontario's favoritism of large-scale assessment data for driving school improvement appears, like many other jurisdictions in Canada, to be a deeply rooted practice. Thus, the present study was conducted in a context that emphasizes large-scale testing over teachers' classroom assessment for accountability purposes.

Method

Participants

Participants were selected using a mixture of purposive and convenience sampling methods across two school districts in southern Ontario, Canada. District A had an assessment consultant to support effective assessment practices within schools and she recruited participants by putting up a sign requesting those who were interested in an assessment study to volunteer. It seems logical that these volunteers were fairly knowledgeable and interested in assessment issues and therefore constituted a purposeful sample (Cresswell, 2008). In the other board, there was no consultant and participants were recruited through one of the professors in this study as a convenience sample. The

sample consisted of 20 teachers (9 elementary, 11 secondary). Teaching experience ranged between 3 and 28 years, with a mean of 12.1. Educators were drawn from 13 schools (6 elementary, 7 secondary). Eight of the participants were male and 12 were female.

Research Site

This study was conducted in two school districts located in the Golden Horseshoe – an area around the western end of Lake Ontario, mainly the south-central region of the province. Half of the population of Ontario lives in or around this area. The student population for both districts was mixed and represented a variety of cultures and socio-economic groups.

Data Collection

The interviews of approximately 60 minutes involved a set of lead questions. Participants were asked a range of general questions related to assessment experience and professional development, as well as more specific questions related to their understanding and utilization of particular formative assessment strategies. Sample questions included:

- What does formative assessment mean to you and what does it look like in your classroom?
- How do you connect formative assessment with summative assessment?
- Please share your professional development experience in assessment and evaluation?

Each of the questions was accompanied with a set of probes designed to elicit detailed responses. For example, participants were asked to describe their utilization of

questioning techniques, feedback without grades, self-assessment, peer-assessment, and the formative use of summative assessment when answering the first question above.

Data Analysis

Analysis of the interviews followed a constant comparison approach (Creswell, 2008). Codes were assigned to each line directly in the margins of the transcripts. This process was repeated for each of the transcripts. Codes from the first transcript were carried over to the second transcript, and so on. This allowed the researchers to note trends across participants. Once the initial analysis was completed, the researchers merged codes with similar meanings to create a core theme. Validity of the research findings was determined through triangulation of the data, member check of the transcripts, clarification of the researchers' biases, and the inclusion of discrepant information (Creswell 2008).

Results

This section presents the most salient findings that emerged from the current study. For ease of comprehension, the results are generally organized according to the theoretical framework underpinning the study. We conclude the results section by discussing teachers' perceptions of professional development in classroom assessment.

Shifting Classroom Emphasis from Grading to Learning

Results from this study suggested that teacher philosophies regarding the purpose of contemporary schooling are changing. Consider this response:

It is so important that children of today know the processes they need to be able to think globally. ... The facts they'll be able to find anywhere but it's going to be the thinking that they do that's going to be important. If we're so concentrated on

pinpointing the numbers, it takes away from the bigger, real-world picture. And it boils down to changing assessment practices to being more formative and process driven. (Elementary Teacher)

When you assess for learning, you follow the path you're given [from students], not the path you decided on at the beginning of September [school year].

(Elementary Teacher)

For the most part, elementary and secondary teachers alike believed the emphasis should be on the learning process rather than primarily on grades.

Unfortunately, many teachers felt students were resistant to change and have been socialized into traditional ways of thinking about assessment.

It's all about the grade to students. They constantly ask, "Does this count?" so I am trying to move away from every single thing counting for marks; but what I am finding is that they don't give their best effort because they want results immediately. There's nothing more frustrating than when students toss their assignment in the recycle bin on their way out the door because there isn't a mark on their work. (Elementary Teacher)

Clearly, changing the underlying philosophies of assessment is a gradual process, one that should begin with teachers who in turn educate students and parents about the inherent benefits of formative assessment. These and other stakeholders will align themselves with subsequent programming direction once they understand the advantages and individualized focus of such an approach.

Questioning

Questioning is one of the most powerful ways of “tracking student progress on a daily basis” (Elementary Teacher). The data in this study revealed a wide range of similarities in terms of teacher questioning techniques in order to improve student construction of knowledge. A secondary teacher described his old ways of questioning and how he would query students:

Is that clear? Does everyone understand? It’s as though I was asking for all the dumb kids to put up their hands. What student is going to put up [his/her] hand and confess that they don’t understand when it seems like everyone else in the class gets it?

The same respondent later shared the following comment: “What questioning is really about is infusing [questioning] into daily lessons. Proper questioning techniques alleviates tension. Good questioning is really about the ability to recognize when the quiet kid doesn’t get it.”

A secondary teacher described the model that guides questioning in her classroom:

We looked at questioning in terms of a hierarchy where the basic skills are at the bottom and higher order questioning skills are at the top of a pyramid. [Bloom’s taxonomy]... At the secondary level we have Q-charts to guide our questioning.

Consider another response:

Q-charts came from the elementary level. It starts to make you think about how we check for understanding in the classroom. I can’t remember thinking about my questioning techniques in my first 15 years of teaching and it wouldn’t have

crossed my mind that it could be used as an assessment technique. (Secondary Teacher)

Interestingly, the use of Bloom's taxonomy was never explicitly noted by elementary teachers.

Feedback without Grades

Teachers see the value in providing feedback without grades to students on a regular basis. Reflecting on the various formative assessment strategies, an elementary teacher noted that, "I think we have made the most difference in student progress with feedback," a notion that is expanded upon by another elementary teacher:

I usually give feedback without grades, because I teach grade 2 and grades don't mean much to them. Unless they have an older sibling or parent at home who's really focused on grades. For me, it's more about how can you make this better, as opposed to how can you make it an A.

A secondary teacher offers a similar response:

I teach grade 9/10 essential math [to vocational students] and I decided to break down the graphic assignment into steps to fit within the formative paradigm. If they want to resubmit an assignment seven times before the due date, then I will give them seven sources of feedback. If I give students feedback prior to when it's due, then I know that they're actually learning.

Overall, teachers in both panels noted the importance of providing students with feedback that did not specifically serve an evaluative purpose.

Teacher responses also indicated a competing tension between their pursuit of a feedback-driven environment and the pragmatics of the assessment and evaluation process:

We have two forces pulling us in different directions – more assessment and less evaluation is running up against reporting more frequently for parent satisfaction and student motivation. We, as teachers, are responsible for reconciliation of various assessment tools whereby magically feedback turns into a mark for reporting. In addition, I have a hard time believing that the final assignment mark is valid: Is it their work I am marking or mine? (Secondary Teacher)

This tension between assessment versus evaluation is widely supported in the existing research literature (see Harlen, 2005).

Another point of contention with providing too much feedback to students is raised by another secondary teacher:

I tell my students, I don't pull your mark out of the air... it's based on certain criteria and this is how your mark was added up. I put all these marks on your essay explaining what you did well, what you didn't do well, things you can improve on, and then we give it back. [The students] just look at the mark and don't look at all the squiggles [i.e., the feedback] and then it goes into their folder or locker and [they] never pull it out again. So that doesn't really help the students; it shows [the teacher] where [students] are but unless students use it in a constructive way it's useless and a teacher's waste of time.

For the most part, teachers in this study struggled with finding creative ways to make their students fully utilize their formative feedback.

One secondary teacher offered the following as a way to offset problems associated with too much feedback:

I don't allow for rewrites in my class, instead I rely on self-assessment. I have what's called a make-up essay rather than a rewrite essay, because otherwise I am just marking my own work. So instead what I do is kind of neat. ... Students must take their essay and consider the weakest part and tell me three ways that [they] can improve. ... So there's lots of analysis involved and then they rewrite that segment. This way the onus is on the student to improve... and next time their essay has the potential of being better because they have learned something.

The above comments support the value in enhancing feedback techniques and a shift in emphasis away from the final product to the process.

Self-Assessment

Despite the discomfort many educators feel towards self-assessment, the consensus among teachers appears to be that involving students in the assessment process is vital to student learning. Consider the following comments from the elementary panel:

Our school is going to be focusing more on assessment, particularly assessment *as* learning. Of the three [purposes of assessment], that's going to be the most important. The better the students understand what they need, the better they know what to work on. (Elementary Teacher)

A child needs to understand where he or she is having difficulties. The teacher and the student should be working together in order for it to be a learning experience for all. ... We have to figure it out together. (Elementary Teacher)

It is important to note that assessment *as* learning is considered a subset of formative assessment that focuses on student metacognition. Elementary teachers in this study tended to note the importance of this assessment phase when discussing self-assessment.

Teachers in this study shared the understanding that formative assessment performed solely by the teacher is missing an integral component whereby students reflect and take ownership of their own learning.

A frequently asked question in my classroom is “Why did I get a level 2? I tried really hard on that.” So I decided to involve the students more in the evaluation process. After marking CASSIE [standardized reading and writing assessment], I had each of the students justify why they got the mark they did. (Elementary Teacher)

In music, self-assessment is a daily skill. It is inherent in learning to play an instrument. Self-assessment is about having enough self-criticism to say, “How can I make this better?” I guess it helps that in music, there is instant feedback [i.e., sound from an instrument]. (Secondary Teacher)

These responses underscored the increasing understanding that formative assessment includes a variety of teacher- and student-directed activities.

Teachers also acknowledged the self-assessment must be carefully implemented in order to be effective.

A teacher can't rely on self-assessment alone. Self-assessment must be preceded by an introduction from the teacher because the child might get from point A to point D but still have the wrong answer. It must be a lockstep process. (Elementary Teacher)

I think a lot of times [students] just don't know what their next steps are.

Sometimes I will have my students write a list of areas in which they need to improve. I don't think it really improves their current work but it gives them a goal for next time. (Secondary Teacher)

Despite these responses, many teachers candidly admitted that they needed to do a much better job in promoting self-assessment within their classrooms.

Peer Assessment

Despite literature supporting peer assessment as an important formative assessment method, teachers in this study noted difficulties in the use of peer assessment and its practical application:

The difficulty I have with formative assessment is the peer assessment portion. I just find students for whatever reason cannot be objective, or at least cannot achieve the level of objectivity that I would like. There are friendships: John is my buddy, I've known him since grade 1; or Kathy, she's pretty and I have a crush on her. And I just find I can't get an honest response when it comes down to numbers. Qualitative data is fine; it's the quantitative data that I don't trust.

(Elementary Teacher)

A secondary teacher agreed, "I just find students for whatever reason cannot be objective, or at least cannot achieve the level of objectivity that I would like.

Teachers in this study also viewed students' unfamiliarity with content as another barrier:

A lot of the time the dilemma of the peer assessor is that s/he may not know anything about the content and might be in the interest of the student. I find peer assessment very difficult to properly implement. (Secondary Teacher)

Overall, this study identified teachers' frustrations with self- and peer assessment with only some teachers regularly utilizing these strategies – typically in select curriculum areas such as music and the arts.

Professional Development

Our study indicated that teachers often begrudge top-down, mandated professional development and do not hold much value in its execution. When specifically asked about professional development, most teachers were inclined to resist change coming from external sources. A secondary teacher explained his contention with in-service professional development:

It seems as though much of our PD at school is half-assed. Let's put all the staff in a room because we have to do something that we can go back to the SOs and say that we did what he expected of us. So we are told to read this article and think of some new ideas, but not really because when do they listen to us teachers anyway? Nothing significant happens afterwards. You know, I think it all goes in the garbage when we're done. I think it would be more productive if we just twiddled our thumbs.

Teacher responses tended to underscore the importance of self-directed professional development approaches.

About 5 years into my career, I began an Action Research Project developing portfolio assessment. Since then, portfolio assessment has been taken on by the

board and so the portfolio continues to be an important part of our assessment in order to support student learning. For my personal professional development, I guess you could say I do a little bit of reading but mostly my PD comes from PLCs focusing on assessment, we have done moderated marking of writing assessments.

(Elementary Teacher)

Overall, self-directed approaches to professional development tended to lead to more sustained changes in classroom practice.

Our study also indicated that the primary source of professional development for teachers comes from a faculty of education – either from a teacher education program or at the graduate level. One secondary teacher said, ‘I took some assessment and evaluation courses through my M.Ed... There is a lot more in-service that is being offered at the board level but I still rely on what I learned in my masters’. Furthermore, an elementary teacher agrees, “I think my masters courses offered the most information in terms of assessment. I still pull out my textbook from time to time.”

A few teachers in our study commented on the value of coupling university education with in-service professional development, specifically moderated marking sessions. Consider the following response:

I’ve taken my reading specialist and a University-type course in A&E but that was awhile back... Recently our school has initiated a lot of moderated marking with other schools... we all sit down together and define the criteria and determine what’s proficient, what’s exemplary... this way we’re all doing the same thing.

(Elementary Teacher)

Building consistency within assessment practices, across not only subject areas but also grades and schools, was a primary purpose of many professional development sessions. The elementary and secondary teachers agreed that professional development should continue to aid in teachers' understanding and utilization of daily assessment practices to ultimately improve student learning.

Discussion

More than ever, teachers are required to be accountable (e.g., standardized testing, curriculum expectations, evidence-based practice), while they simultaneously negotiate an unprecedented level of student involvement in the assessment process. Our findings indicated that teachers are becoming more familiar with a diverse range of formative assessment strategies and are beginning to utilize them on a more consistent basis within their classrooms. Nevertheless, the present study also indicated that there was an imbalance in the use of particular formative assessment strategies associated with improvements in student learning (Black & Wiliam, 1998; Popham, 2005; Stiggins, 2008). When considered along with the fact that many participants in this study were nominated by board representatives for their interest in classroom assessment, the present results likely underestimate the lack of utilization of particular formative strategies such as self- and peer-assessment. Thus, targeted professional development and greater attention at the pre-service and in-service level seems warranted by the present results.

One of the other noteworthy findings from our study was that many educators stated their primary source of professional development was from a faculty of education – either from a teacher education program or at the graduate level. Yet it is important to recognize that few faculties of education teach courses on assessment and evaluation. For

instance, Klinger (2009) noted that out of 18 teacher education programs in Ontario, only two universities offer a separate course in classroom assessment, while the other programs embed assessment into teachable subject areas such as mathematics, science or English. The limitation of this design is that not all faculty members have expertise in assessment and evaluation and, therefore, the assessment content is infused properly. Thus, teacher education reforms are pivotal for improving teacher competence in all facets of formative assessment. Ultimately, when jurisdictions create the conditions for educators to learn new skills, knowledge, attitudes, and beliefs, an increase in consistency across teachers' best practices can be more fully realized (Stoll, 2009).

Although previous research has noted significant differences in the utilization of summative assessment methods across elementary and secondary schools (see Volante, in press), the present findings suggested there were little, if any, significant differences across panels with respect to formative assessment. The only exception to the previous statement was the greater utilization of Bloom's taxonomy for guiding questioning techniques at the secondary level. The more substantive trend, however, was that elementary and secondary teachers noted difficulties in the effective use of particular formative strategies such as peer- and self-assessment. These findings suggest that pragmatic challenges are important to consider if schools are to make effective use of *all* formative assessment techniques at the K-12 level.

Conclusion

As Ontario continues to move forward with the implementation of its new assessment and evaluation policy framework *Growing Success* (Ontario Ministry of Education, 2010), it is essential that the policy carefully consider teachers' perceptions and self-efficacy in

particular facets of classroom assessment. As previously stated, teachers' perceptions strongly influence how they teach and what their students ultimately learn (Brown, 2004). Findings from our study are consistent with previous research pertaining to formative assessment and suggest that teachers, for the most part, are thoughtfully utilizing particular formative assessment practices such as questioning techniques and feedback without grades techniques. Alternatively, practical barriers associated with self- and peer-assessment affected teachers' willingness to fully execute such practices. Generating coherence and synergy between ministries of education, faculties of education, school boards, and individual schools is essential for sustainable reform. It is our hope that this study will act as a catalyst for greater attention to the conditions and factors that foster a balanced classroom assessment approach.

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