

Overview

Action research projects focused on the impact of assessment for learning strategies on teacher practice and student learning

Research Team

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Background:

Teaching is complex and demanding and the task of raising standards can only happen when teachers understand students' progress and difficulties with learning so that they can adapt their work and meet the learning needs. So concludes Black and Williams (1998) after reviewing twenty or more studies showing that assessment for learning (AFL) had the biggest effect of all educational interventions. An effect size of between .40 and .70 was produced for all ages of students with AFL strategies, with the biggest difference made for low-attainers and students with learning disabilities.

In this paper, the term assessment (for learning) refers to all those activities undertaken by teachers and by their students to assess themselves; activities which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. "Such assessment becomes formative when the evidence is actually used to adapt the teaching work to meet the learning needs" (Black & Williams, 1998, p. 2).

Much has been written on the motivational aspect of AFL strategies and the effect on raising achievement levels. The conditions that are attributed to the success of AFL strategies are: the enhanced feedback it affords between teacher and student; the active involvement of students in their learning; the adjustment to teaching as a result of the assessment; the motivation produced in students; the building of student self-esteem; and self-assessment skills of students (Black & Williams, 1998, p. 3-4).

Black and Williams (1998) identify three difficulties in traditional assessment with a focus on evaluation. First, tests encourage superficial learning, questions are not critically reviewed to determine if they do test what we want them to, and quantity and presentation are often emphasized over quality. Second, marks and grades are over-emphasized while the learning process is under emphasized,

and comparisons based on marks de-motivate low-achievers. Third, feedback is often managerial and social, tests predict external tests rather than used to find out about learning needs, and the collection of marks is a priority over the analysis of learning needs (p. 4). In other words, evaluative assessment has little impact on the cycle of teaching and learning.

Based on Black and Williams' (1998) review, the evidence suggests that improvements in assessment can be achieved when feedback is about the qualities of the work with advice on how to improve. Students can learn to self-assess -- to understand the main purpose of their learning and grasp what they need to do to achieve. Opportunities for students to express their understanding should be designed into any piece of teaching. The dialogue between students and a teacher should be thoughtful, reflective, focused to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and express their ideas. Tests and homework can be an invaluable guide to learning but exercises must be clear and relevant to learning aims. The feedback should give guidance to each student on how to improve and each student must be given opportunity to work at the improvement (p. 6).

Methodology:

Demonstration teachers in the Rainbow District School Board were invited to participate in action research projects focused on the effects that assessment for learning strategies have on teacher practice and student learning.

At the time of this research, demonstration classrooms were a professional learning strategy used in the Rainbow District School Board to support the learning of elementary and secondary teachers. Demonstration teachers open their classrooms to colleagues within the system as sites for observation and dialogue about teacher practice. Teachers sign up for a half-day observation of the demonstration teacher as s/he teaches followed by a half day of dialogue

with the demonstration teacher about the classroom observations. In 2009 - 2010, assessment for learning was to be the focus in the teaching-learning cycles (6-8 week instructional blocks) in elementary and secondary schools. It seemed a natural fit then to ask the demonstration teachers to engage in this research, to implement these strategies, and to share what they were learning about the value of assessment for learning practices with the observing teachers who could serve as critical friends.

Two elementary and two secondary demonstration teachers took up the challenge to engage in this research. The two elementary teachers taught different grade levels at different schools with unique demographics. The two secondary teachers taught different subjects at two distinct secondary schools. These teachers committed to spending time preparing for the research by familiarizing themselves with assessment for learning strategies prior to the commencement of the research that would occur during one six to eight week learning cycle in the second half of the 2009-10 school year.

Definition of Terms:

In this paper and this research, we define AFL strategies as the investigative tools that assist teachers and students in monitoring teaching and learning. For teachers, AFL strategies assist them to make student learning visible and based on this information teachers adjust their practice in order to advance student learning. For students, AFL strategies provide a means for students to communicate their comfort with their learning, to identify the areas where they feel they need support, and a means to provide more immediate feedback to teachers about the effect their teaching strategies are having.

We resisted defining AFL as particular strategies but left this interpretation open for the teachers to explore and adapt through the course of the research.

Overview of the Process:

The action research model, as a framework for this classroom-based research, was introduced to the teachers at an introductory meeting. From Queens University Faculty of Education Action Research site comes this definition of Action Research.

Action research is a reflective process of progressive problem solving led by individuals working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems.

The teachers felt comfortable with this model since it was responsive to their own questions, and had built-in flexibility for revision throughout the inquiry process. Within the context of action research there is an underlying assumption of subjectivity involved in the questions teacher pose and their interpretation of the results. While teachers expressed some initial uncertainty about the collection and interpretation of classroom data they were quite interested in test driving AFL strategies in their classrooms and measuring the effects. It was agreed that we would meet several times over the course of the research to share developments (questions, methods, collection of data). The completion dates were set and the process outlined.

Stage 1:

Meet with colleagues to determine focus

Determine area of need: starting points

Decide on assessment for learning strategy

Design assessment measure or task for pre and post assessment-
collection of data

Engage in teacher moderation of pre-assessment results

Stage 2:

Plan for a 6-8 week instructional cycle

Meet with colleagues through cycle to determine how things are going, what is working based on assessment for learning strategy, what is not and mid course corrections or how to take strategy to a deeper level

Stage 3:

Complete the post assessment

Engage in teacher moderation of results

Prepare report and learning fair presentation

Each demonstration teacher prepared during the summer and over the course of the first term to define the focus of the research in their classroom and to determine strategies they would employ. The elementary teachers decided that the assessment for learning strategies would align with the Guides for Effective Practices used as references in their classrooms (as part of demonstration classrooms) and the secondary teachers would use the Differentiated Assessment Kit (being implemented through the learning cycles in secondary schools).

We met several times to share and discuss the learning needs they had identified in their classes, the strategies they were thinking of employing, and what they were finding as they implemented the AFL strategies. These meetings helped to advance the questions, confirm hypothesis, and support their colleagues by offering strategies and providing feedback. The teachers met in elementary and secondary teams to review results and produce a presentation of the research at the NEOEN research symposium (the funders of these research projects).

In total, six different AFL strategies were employed in the research conducted in the four demonstration classrooms. The AFL strategies included learning goals, entry and exit cards, traffic lights, descriptive feedback, self-assessment, and conferencing.

A Summary of the Projects:

1. Student Conferencing in Reading/Writing in a Grade 4 Classroom

In this research project, a grade 4 teacher poses the question, how do I make conferences more student-directed and purposeful? The question, was rooted in a concern that students did not see the value of reading conferences and too readily defaulted to the teacher's judgements when it came to setting reading goals. By timing the amount of time the teacher and the student talked during reading conferences, the teacher made a determination about the degree to which the student owned the conference. She surveyed the students to find out what they thought the purpose of the conferences was. She responded to the results through a series of teacher actions that scaffolded towards greater student ownership. This included coaching students to run conferences with their peers. After interventions the teacher assessed talk time again, as well as, the types of goals students were setting independently and concluded that significant gains had been made over the course of the teaching – learning cycle in students' ownership of the conferences and their ability to identify their own strengths and weaknesses in writing.

2. Student Self-Reflection in Writing in a Grade 6 Classroom

Responding to his research question about how to make student reflection on writing more relevant and meaningful, the teacher changes his practice from asking students to reflect at the end of the writing process, and instead asks them to reflect before revisions to their writing. Using a pre-assessment survey, the teacher determined that the majority of students in this grade 6 class, lacked self-reflection skills when it came to their writing. The teacher set about to change this through his teaching – by modelling, providing anchor charts, exemplars and conferencing with students. Throughout the action research, the teacher responded to the identified learning challenges by modifying his instruction. A second

survey of students revealed that their reflections on their writing did not match the actual weaknesses in their writing. Through modelled lessons, sharing of work, and conferences based on identified weaknesses, students began to make improvements. Grouping students by shared weaknesses and working together also supported improvements in key areas of their writing. Based on the final assessment, where growth in student reflection and student writing was indicated, the teacher concluded that the students had generally improved in the ability to self-assess and to meet the provincial standard.

3. Learning Goals, Traffic Lights, Exit/Entry Cards/Descriptive Feedback in a Secondary Science Classroom

Is it possible to narrow the gap between student self-assessment and student performance using assessment for learning strategies? Prior to the beginning of the research, this teacher used and observed the positive effects of AFL strategies in a grade twelve science class, and she wondered if they would have the same impact with a grade nine science class. By comparing students' responses on entry and exit cards (performance) to self-assessments (traffic light) in response to learning goals the teacher established early on in the semester that the grade 9 students did not very accurately assess their own learning. The teacher modified her teaching and lessons in response to the feedback students provided (by reviewing, mini-lessons or re-teaching). Feedback to students was timely and the entry/exit cards provided students with examples of questions that modelled what they might expect on tests. Descriptive feedback on reports focused the students on improving their report writing. Results showed that entry cards provided students with the needed practice required to do well on the final assessment. The AFL strategies clearly made a difference. In final assessments, students generally outperformed the results they achieved on entry cards. In a

particular content area where the teacher had failed to provide entry card questions the student did poorly.

4. Learning Goals: The use of entry and exit cards to monitor student learning and inform next steps in a Secondary English Classroom

If learning goals are posted and addressed explicitly on a daily basis, will students understand the purpose for their learning, be able to articulate what they have learned, and see connections between descriptive feedback and the learning goals? Having found that students did not connect the entry and exit cards to the learning goals, this teacher decided to work on improving student understanding of learning goals. The teacher engaged in a series of teaching actions and strategies which required her to revisit the questions posed on entry and exit cards to ensure students were making the connections between the goals, the teaching and the assessment and to ensure improved understanding. Entry and exit card data were compared with performance on AFL tasks. Following the learning cycle, the teacher found that students' motivation and achievement improved, participation and trust increased, and students reported recognizing the links between the learning goals, feedback and their learning.

Key Learnings and Effects

The Changing Role of the Teacher

During this inquiry into assessment for learning, the demonstration teachers increasingly took on a recursive stance. The questions they initially posed transformed through the course of their research based on the responses they received from students through AFL strategies. Over the courses of 6-8 weeks, teachers worked toward increased student ownership in learning by providing students with avenues to reflect their own comfort with their learning (through

entry and exit cards), and by asking students to provide feedback on learning processes (conferences and self reflection). The linked these strategy to learning goals and classroom lessons. Teachers were motivated by the challenge of meeting the identified learning requests made by students. One teacher explained it this way:

Now, my lesson plans are continuously evolving to meet the needs of the students.

Through the course of this action research, teachers became more attuned to student learning needs as identified by students and as a result became more responsive in their teaching. They used the information gained from these assessment for learning processes to inform their teaching, revisiting concepts and lessons in order to improve student ratings, providing coaching, and opportunities for students to support each other in their learning. One of the teachers summed it up this way;

During the assessment for learning process, the teacher acts as a coach rather than a judge, providing continuous, detailed feedback to the student about how they can do better.

The changing the role of assessment

The teachers identified that sometimes the up-front work, to collect information about what students were learning and to make the appropriate adjustments in their teaching, for example reviewing or re-teaching, meant that they had to slow down and were not covering as much curriculum as they planned in their course outlines. They found, however, that because students developed better conceptual understandings early on in the course, the rate of concept attainment eventually picked up, resulting in completion of the course on time, with better student understanding, overall. They also found that the quality of the work changed, as students responded to the feedback provided they improved their work. The teachers found that they could use the assessment for learning

strategies such as the entry and exit cards as check-ins, providing teachers with a good understanding of what students were and were not learning which also reduced the amount of marking teachers needed to do.

Teachers spoke of the efficiency of these methods:

I used to spend numerous hours continuously marking (evaluating) student assignments. Now with the use of assessment for learning, the level of marking has decreased exponentially. Instead of marking every single worksheet or activity the students complete, I now focus on assessing and providing feedback on some of their work such as entry cards, which is far less time consuming.

Additionally, the feedback cards help to check learning without collecting volumes of homework nightly, which has reduced my “marking” substantially and increased the effective use of my time

On the increasing accuracy and precision of student work;

The assignments that I do mark have far less errors in them because the students have had numerous opportunities to practice their skills and to refine their knowledge prior to the evaluation.

These tools provide a quick snapshot of student learning. If the cards are specific and focused—directly related to the learning goal—the information that the cards provide is specific, rendering the teacher attention focused and precise, whether to the whole group, small groups, or an individual students.

Overall teachers felt the assessment for learning strategies were relatively easy to implement and provided good feedback on the teaching and learning process. They found that they needed to fine-tune their questions and the language they used when building criteria with students to ensure student understanding.

I now truly understand the importance of using the language of assessment in the classroom. By referring to learning goals, by telling students about the purpose of the entry cards, and by talking

to students about assessment as I would with my colleagues, a culture of success was created in the classroom.

A shifting classroom culture

Teachers acknowledged that using these strategies created a culture in their classroom where students felt increasingly comfortable expressing their lack of comfort with the material presented, their low level of understanding or misunderstandings. This was not the case initially.

The culture of the classroom gradually changed over time. It changed from a culture of isolation and fear of questioning to an accepting culture that promoted self-advocacy. By the end of the semester, all of the students could accurately assess their concept attainment, they could articulate their needs using very specific language and they took ownership of the assessment for learning strategies used in the classroom.

At the beginning of implementation, teachers reported discrepancies between what students thought they knew and actually knew (at times over-rating or under-rating their achievement of learning goals). Students initially were hesitant to admit not understanding the material presented in class. However, by the end of the course, students were able to identify common areas of weakness and began to ask specifically for assistance in particular areas from their teacher and look to their peers to support in their learning. One teacher described how typically, with exams looming, students would throw up their hands, expressing concern that they knew very little, hoping the teacher would review everything.

It (AFL) shifts the culture from one of teacher centred to one of a continuous student-teacher dialogue, which drives instruction and planning.

Changing image of the learner

Besides seeing the impact of their teaching on student learning, the teachers began to view of the student's increasing ability to monitor their own learning as students increasingly owned their learning goals and saw how to achieve improved results.

After using AFL strategies in relation to learning goals, students were able to communicate clearly which areas they were experiencing difficulty with.

Now with the use of assessment for learning strategies, the students ask for very specific and personalized assistance. Assessment for learning encourages students to take ownership of their learning and it enhances all of the learners' abilities regardless of initial level of understanding.

This new and evolving relationship between the teacher and the student focused on student learning was gratifying for teachers.

Besides the improvement in achievement, this was the most rewarding aspect of the project. Never before had I had developed a collaborative relationship with the students with respect to assessment. Student participation and trust increased, and students appreciated that they contributed to the direction of lessons. Also, students responded well to feedback and could see the direct links between their learning.

Next steps

Teachers identified changes in their own practice -- altered classroom practices that are more inclusive of student voice and language, student self-assessment, student ownership for their own learning, and teaching practices that are more responsive to student learning.

Teachers appreciated the exercise of collecting data on the effectiveness of assessment for learning strategies and were motivated to collect data on other strategies they have been using in their classes.

References:

Action Research at Queen's University (<http://educ.queensu.ca/ar.html>)

Black, P. and Williams, D. (1998) Inside the Black Box: Raising Standards Through Classroom Assessment. Phil Delta Kappa International.