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Using common formative assessments as a source of professional development in an urban American elementary school

Nancy Frey^{a,b}, Douglas Fisher^{a,b,*}^a San Diego State University, School of Teacher Education, San Diego, CA, USA^b 3910 University Avenue, San Diego, CA 92105, USA

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ABSTRACT

By implementing a system of common formative assessments, the teachers at an American urban elementary school improved student achievement and facilitated their own professional development. By aligning content standards with assessments and purposeful instruction, the teachers at this school developed a depth of knowledge about their content standards, improved their ability to design assessments, learned to better link assessments with instruction, and planned for intervention for students who continued to struggle with reading and writing.

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“How is it that we’re going to meet these increased accountability pressures and demands? I mean we’re doing everything we can. How can we get any better?” These questions were asked during a faculty meeting at an American urban elementary school that educates over 1200 students, grades kindergarten through five (ages 5–11). Of these students, nearly all of them (99%) qualify for free lunch (a widely accepted measure of poverty in the USA) and 76% of them are English language learners who speak 39 different languages. The student achievement at this school was passable, but not exemplary. The school had met the state accountability targets for several years, but large numbers of students still performed below grade level. Teachers agreed that their students did well on the state standards assessments but were concerned about their ability to keep meeting the achievement targets established by the state in response to the federal law (No Child Left Behind Act). They knew that their failure to meet state and federal accountability demands would result in the introduction of mandated, scripted reading programs in all classrooms.

The faculty at this elementary school had experienced a great deal of professional development. Some of this was sustained professional development linked with peer coaching and some of it was “sit and get,” mandatory meetings. Teachers who requested help in implementing the content of the professional development were generally provided that assistance, but no requirements

* Corresponding author. 3910 University Ave., San Diego, CA 92105, USA. Tel.: +1 619 528 9070; fax: +1 619 688 1775.

E-mail address: dfisher@mail.sdsu.edu (D. Fisher).

existed for teachers to implement the professional development. This scenario is not unlike the experiences of hundreds of schools and thousands of teachers around the world. This article, part of a larger ethnographic study of school improvement, is based on the authors’ regular work at this elementary school as providers of professional development and evaluation. Together we have coordinated preservice and inservice teacher development with the site administrator. During the four years of this study, data were collected during teacher meetings, professional development sessions, semi-structured interviews with teachers and peer coaches, and classroom observations. Hundreds of pages of data have been collected as part of the larger ethnography. For this manuscript, we focus on the use of common formative assessments and the data collected during teachers’ discussions about student performance.

1. Using assessment data – an idea is born

During a staff development session in 2001, teachers were asked by the principal to bring a writing sample for each of their students. During a presentation on developing writers by a consultant hired by the principal, teachers were asked to review the student work that they had brought to the meeting and to note examples as the presenter talked. Of course, looking at student work is not revolutionary; it’s just not done very often as a professional development activity.

During the course of the meeting, teachers began sharing examples from their classrooms with other teachers at the school.

They began talking about student writing and what it might take to improve writing as a school. As one of the fourth grade teachers commented (names used in this article are fictitious), “Look, just about all of my students do that [start their paper by restating the prompt]. Yours don’t do that. Your students have much more interesting ways of writing their introductions. How did you teach them that?”

Another teacher, second grade, asked the presenter if he had developed a writing curriculum. As she noted, “we all seem to be doing it differently. We’re all teaching different things. Well not totally different, but different enough. It would be great to figure out what our students needed and then share curriculum, materials, and instructional ideas.”

From this simple conversation, based on looking at student work, a writing curriculum was developed. The development of a writing curriculum for this elementary school required hours of focused time, collaboration, and consensus building. Importantly, the teachers at this school decided to invest time and create their own writing curriculum – one that they would own and really implement – rather than use a commercially produced program that may or may not be implemented and may or may not meet the needs of their students. But more importantly, the idea that looking at student work as a helpful process was born.

Building on their success in looking at student writing, a group of teachers met with the reading specialist and discussed the idea of creating common prompts and formative assessments so that teachers at each grade level could examine student performance data, talk about what was working, develop plans for areas needing improvement, and write curriculum that would impact their students.

Over four years, the teachers at this school developed and implemented a system for writing, scoring, evaluating, and using common assessments to inform their instruction. The system has resulted in significant changes in student achievement. The remainder of this article will: provide a rationale for considering common formative assessments, review the system that was developed, provide a glimpse into the teacher discussion, note the achievement changes for students in the school, and discuss why common formative assessments are an excellent model of teacher professional development and is consistent with the idea that professional development be based on teachers’ needs (Lee, 2004–2005).

2. A rationale for common formative assessments

For several decades, literacy researchers and wise practitioners have advocated for the use of assessment data to guide instruction (Fisher, 2005; McKenna & Walpole, 2005; Safer & Fleischman, 2005; Strang, 1969). In general, the evidence collected thus far on the use of literacy assessment has focused on individual classroom teachers using assessment information to guide their instruction and often focuses on students who struggle to read and write (Li, 2004; Ross, 2004). When teachers collaboratively analyse student work, they often do so on a voluntary basis (Langer, Colton, & Goff, 2003). Far less widespread is the use of common formative assessments which are used to guide curriculum development, reteaching, student-level intervention, and professional development. However, as Fullan, Hill, and Crevola (2006) note, it is exactly this level of precision that we need if we are going to achieve “breakthrough” results.

In addition to the evidence on linking assessment and instruction, research suggests that professional development for teachers provide opportunities for professionals to collaborate with one another (Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004). The professional literature is filled with examples and evidence of successes when teachers engage in professional conversations with

one other, whether they be in learning communities or communities of practice (DeFour, Eaker, & DeFour, 2005; Wenger, McDermott, & Snyder, 2002).

3. Common formative assessments as part of the instructional cycle

At this school, grade-level meetings occur every other Wednesday. Students are dismissed 90 min early using time banked during the two-week period. This provides teachers with over 4 h of professional development time per month. The school has organised the system of common formative assessments into a six-week cycle that occurs in three parts. At each meeting, the grade-level chairperson takes notes using the form provided in Fig. 1. In addition to the three major parts, teachers often meet to focus on strategy implementation and for peer coaching, which is also indicated on the note form in Fig. 1.

3.1. Part 1: pacing

As part of the cycle, teachers meet with their grade-level peers to agree on pacing or curriculum guides. These pacing guides allow teachers to focus on specific content standards, agree on core vocabulary, discuss instructional materials to be used, and to discuss instructional strategies and routines that they have found useful in the past. They are developed based on a backward design in which teachers plan curriculum and instruction based on the outcomes they are looking for (e.g., Wiggins & McTighe, 1998).

3.2. Part 2: common assessment development

At another of their grade-level meetings, teachers develop common assessment items based on the standards they have been focusing according to the pacing guide. Typically, the common formative assessment has 10–12 questions and a writing task. These common assessment items are standards-aligned and are administered to every student in the specific grade level. They also resemble the range of types of assessment items students will face on the state accountability test (which provides students with test format practice as discussed by Langer, 2001) as well as more authentic tasks such as writing and performing.

3.3. Part 3: item analysis and implications

The final meeting in the cycle, at the sixth week, focuses on the performance of students and the implications for teachers. During this meeting, teachers discuss the results of the assessments and specifically note items on which students do well and items on which students failed to show mastery. The teachers discuss their hypotheses for the incorrect responses and plan future instruction and focused intervention plans. Again, they share instructional strategies and materials they use with one another during these meetings.

4. Listening in on fifth grade teachers discussing writing conventions

To start the school year one year, the fifth grade teachers decided to re-double their efforts on the strand of English language arts concerning writing strategies. Of the five strands of language arts, the fifth grade students from the previous year did the worst on this strand. During their initial meeting, the fifth grade teachers talked about this particular strand of standards, how to teach those standards, and how those standards might be assessed.

As one of the fifth grade teachers, Ms. Phillips, said, “I need to see the released items. I have no idea how they’re going to

Grade-Level Meeting	
Grade:	Date:
Lead teacher or facilitator:	
Teachers in attendance:	
Focus: (indicate one) <input type="checkbox"/> Curriculum Pacing Guide <input type="checkbox"/> Strategy Implementation and Peer Coaching <input type="checkbox"/> Common Assessment Development <input type="checkbox"/> Item Analysis (<i>See reverse side. Do not complete remainder of this page.</i>)	
Discussion Points:	Questions Raised:
Objective for the coming week:	Resources Needed:
Implementation Steps:	

Fig. 1. Discuss guide and record.

determine if students can write a formal introduction, provide supporting evidence, and then develop a conclusion. This isn't fourth grade when they do an actual writing test. How does the state know if they do this in fifth grade?"

As part of the conversation, the teachers shared ideas and materials that they had used in the past to focus on writing strategies. One of the newest teachers at the school, Ms. Javier, commented, "I'm not even sure what writing strategies are. I can help my students write better, but what are the writing strategies they want to see?" A more senior member of the school explained the state definition for writing strategies and shared instructional materials he had used.

As a group, the teachers agreed on their pacing guide for the first two months of school and focused their attention to writing strategies and how they would develop this strand with their students. As Ms. James commented at the end of the meeting, "Yeah, we have to get better with writing strategies, but let's not forget how good we've become with literary analysis and reading comprehension – we will need to pay attention to that as well."

During their subsequent meetings, this group of fifth grade teachers designed a common assessment and met to discuss the results. Taking heed of Ms. James's comment, the common assessment included items other than writing strategies, as the teachers knew that they were responsible for all of the strands of the language arts. However, there were a disproportionate number of questions focused on writing strategies. Fig. 2 contains sample questions from this common assessment. Remember from the opening section of this article that they also regularly used writing prompts and analysed student writing. However, the fifth grade students were not performing as well as they could on the writing strategies section of the standards assessment, which in California is assessed as multiple-choice items.

During their item analysis, conversation focused on questions 9 through 12 (see Fig. 3), the teachers hypothesised about the success of their students and the instructional interventions that might be required.

While discussing question 9, Ms. James noted that the fifth graders did relatively well on this question. They seemed to understand purpose of the paragraph. They noted that about 11% of the students

Item Analysis Summary
Assessment Tool:
Student Work: Areas of Strength
Student Work: Areas of Weakness
Teacher Practice: What should be preserved?
Teacher Practice: Identify gaps between existing & desired practice
Teacher Practice: What aspects of existing practice pose a barrier to implementing desired practice?
Teacher Practice: Suggested interventions or unit modifications
Unanswered Questions:

Fig. 1. (continued).

(about 24 students) chose answer B. Ms. Javier noted that this group of students identified a detail, but not the main idea. Mr. Greene indicated that he thought that the classroom teachers could address this in their shared reading lessons. As he said, “Most of our students got this. We need to keep at it. When we’re doing our shared readings, we need to pause every so often and talk about the main idea and compare that with the interesting details that the author provides.”

Question 10, identifying the topic sentence, was more difficult for this group of fifth graders. While the majority of students answered correctly, significant numbers of students did not. Ms. Phillips suggested that the group that chose answer B, “the almost right answer,” meet as part of the after school reading intervention program. Ms. Phillips offered to focus her after school class on reading for information and identifying the topic of a piece of text. Mr. Green agreed, saying, “We didn’t hit this one as well. There are a bunch of kids who need help on this. This group needs

intervention if they’re going to catch on to this.” The conversation continued with the group offering Ms. Phillips advice for this new intervention class, including instructional materials and strategies she might find helpful as she attempted to focus on this content standard with students who did not understand this information.

Eventually, the group began talking about questions 11 and 12. Finally, Ms. Nguyen voiced what the group seemed to be thinking, “What happened? They totally missed this. I can’t believe it. It’s like we didn’t even teach this stuff. Less than a third of our students can answer these questions right. I’m so frustrated right now.”

Ms. James suggested that they “take apart the questions and figure out what they’re missing.” In the ensuing conversation, this group of fifth grade teachers noticed that their students might need help on some test taking skills. As Ms. Phillips noted, “they just picked a correct answer on number 12 – they missed the ‘not’.” Ms. Nguyen sighed and said, “I’m feeling better. I thought that my

ORGANIZATION AND FOCUS

Directions: Read the paragraph in the box. Then read each question and the answers carefully. Choose the best answer and mark it. Use the paragraph to answer questions 9 – 10.

Fire Fighters and Your Safety

Although you may have a smoke detector in your home, fire fighters can help make sure your house is a safe place to live. Fire fighters can make sure your home has escape routes in case a fire occurs. Fire fighters can check for gas leaks in the kitchen. Fire fighters can also install rope ladders in case you need to climb out of a high window.

9. What is the purpose of this paragraph?

- A. to tell us many of the things fire fighters can do for you and your safety
- B. to explain how fire fighters look for escapes in your house
- C. to tell us about the training fire fighters receive
- D. to tell how fire fighters check for gas leaks

10. Which is the best topic sentence for this paragraph?

- A. Fire fighters can install rope ladders in case you need to climb out of a high window.
- B. Fire fighters can make sure your home has escape routes in case a fire occurs.
- C. Although you may have a smoke detector in your home, fire fighters can help make sure your house is a safe place to live.
- D. Fire fighters can check for gas leaks in the kitchen.

RESEARCH AND TECHNOLOGY

Directions: Read each question carefully. Find the correct answer and mark it.

11. The title page of a book gives all but one of the following. Which one does it not give?

- A. the name(s) of the author(s)
- B. where the publisher's offices are
- C. the name of the publisher
- D. the copyright date

12. Which one is not true for the index of a book?

- A. It may list many pages for the same word or entry.
- B. It is found at the beginning of the book.
- C. It lists entries (words, etc.) in alphabetical order.
- D. It gives page, section, or chapter numbers for entries.

STOP

End of Assessment

Fig. 2. Sample common assessment items.

students really understood the parts of a book. We've been through this. They know so many of the text features and how to use those features when they are reading for information. I just couldn't imagine what was going on."

Ms. Javier added, "Maybe we should write a couple more 'research and technology' questions and try this again. I think that I'm going to work on test prep like Ms. Phillips said, but I also want to make sure that they understand the parts of a book and how to use those parts. I guess I think we should do both – review this content and some test taking strategies."

Ms. James and Mr. Green offered to create some overhead transparencies with sample questions that they could use for teaching test taking strategies and Ms. Phillips offered to meet after

the all staff meeting on Monday to review the text features that were identified in the state standards.

5. Student achievement – the outcomes

Between 2001 (the baseline year) and 2005, the percentage of students who read at grade level increased significantly (see Fig. 4). In addition, the Academic Performance Index (API, an accountability score based on student test scores calculated by the state Department of Education that ranges from 200 to 1000, with 800 being the goal), in this school increased from a score of 573 in 2001 to a score of 746 in 2005. This is an impressive growth of 173 API points given that the yearly target for this school has been 13

Percentage of students who selected each answer
(shaded cell indicates correct response)

Question	Standard	Total students	A	B	C	D	Blank
9	Strategies 1.0	214	79.91%	10.75%	5.14%	3.74%	.47%
10	Strategies 1.2a	214	9.81%	21.50%	62.62%	4.67%	1.40%
11	Strategies 1.3	214	21.96%	42.52%	10.75%	22.43%	2.34%
12	Strategies 1.3	214	22.90%	31.31%	32.24%	12.15%	1.40%

Fig. 3. Common assessment results.

points. Importantly, meeting the API targets requires that the school meet the growth targets for all “significant subgroups” as well. For this school, the subgroups include English learners, poverty, Latino, African-American, and Asian/Asian-American.

While there is still a significant way to go to ensure that each and every student reads at increasingly sophisticated levels, it’s hard to ignore the changes in achievement posted in a school that continues to educate over 1200 students who live in poverty, in the poorest area of San Diego, California and who speak languages from all over the world.

Beyond test scores, teachers at this school regularly discuss the fact that students now learn better and deeper and more powerfully. For example, during a walk-through by district administrators, a third grade teacher commented, “my students this year came to me already able to write several paragraphs, staying on topic.” A fifth grade teacher noted, “because my students already have sophisticated reading levels, I’m able to spend more time on science and social studies education which builds their background knowledge and experience so that they learn even more next year.” A conversation with the middle school principal summed up the difference when he reported, “The students from your school outperform students from other feeder elementary schools. They know more and have much better habits of mind. They really are prepared for secondary education.”

While the initial motivation at this school was based on fear—fear of sanctions from the government—the teachers at this school understood that their students were not performing at reasonable levels to be competitive on the world stage. And while the context for this change might be in the testing-obsessed United States, the implications that common formative assessments can impact teaching and learning cannot be ignored. Raising student achievement is a goal that all teachers share, whether or not they live and work in a place that spends millions on testing.

6. A professional development model

As the teachers at this school developed and implemented their system of common formative assessments, they engaged in authentic professional development (e.g., Joyce & Showers, 2002). Their work was guided by student performance data and they had opportunities to work with their peers over a sustained period of time. Importantly, their formative assessment work supported

Grade	2001 (% at grade level on California Standards Test)	2005 (% at grade level on California Standards Test)	Change
2	9	32	+23%
3	12	18	+6%
4	15	36	+21%
5	10	36	+26%

Fig. 4. Changes in student achievement.

their personal and professional development, which could not have happened by simply implementing a scripted reading program.

This process of using teacher-created, standards-aligned common formative assessments has at least four benefits that can be realized by teachers all over the world, irrespective of whether or not they face testing and accountability demands and sanctions. First, it develops teachers’ knowledge of grade-level content (Ainsworth & Viegut, 2006). Unlike a “chalk and talk” professional development sessions in which teachers are told about content standards, creating pacing guides, writing common assessment items, discussing the results, and planning future instructional interventions with peers ensures that teachers depth of knowledge about the standards is facilitated. As Ms. James noted, “I thought I knew the standards until I had to write an assessment item. At that point, I realized that my knowledge of the content was limited. I could get by ‘teaching reading’ but I wasn’t really focused on the specific content that my students needed.”

Second, over time teachers who write common assessment items become better at developing assessments in general. As Mr. Greene commented, “These tests [common formative assessments] aren’t everything. In fact, I don’t even use them on my grading. I use them to plan instruction. But, I’m better at checking for understanding now. I’ve learned a ton about good versus bad items. It’s amazing to me. I can read a question now and say to myself, ‘they’ll never get this, the distracters don’t work’ or something. Yeah, I’m better at assessment because I’ve learned how to pay attention to it.” Nearly every teacher involved in the process of creating and analyzing common assessments echoed this sentiment – they simply developed their skills at assessing students.

Third, this model provides teachers with practice and practical applications for linking assessment with instruction (Fisher, 2005). During the item analysis conversations, teachers focused on the instructional implications of the data. They considered various instructional plans, shared plans with one another, and reported on their own successes and failures. As Ms. Javier said during one of the last meetings during her first year of teaching, “I learned so much from all of you. I’m not sure what I would have done without our conversations. Wow, I’m sitting here thinking about how I plan my lessons now. I always think about what I know about my students. I was taught to do this during my student teaching program, but you all really helped me really do it.”

Finally, by analyzing student performance data, teachers are able to identify students in need of intervention (Fisher, 2005). They are also able to process these intervention needs with their peers and plan interventions designed to specifically address identified needs. While a one-size-fits-all inservice may highlight the need to do this, working with real students in real situations ensures that teachers experience the “theory to practice” link so often missing in professional development initiatives.

7. Conclusions

Evidence from this school suggests that the answers for increasing student achievement are not state testing or commercial programs. As demonstrated by this school, the answer can be found locally, with teachers who understand and implement common formative assessments and link instruction with those assessments. This is consistent with the message forwarded in Schmoker’s (2006) work *Results Now* – what’s needed is not a silver bullet or magic solution. Instead, hard work by a group of dedicated educators who know how to look at student data and plan instruction will result in improved outcomes for students. Teachers need time to be able to talk with one another about their curriculum, instruction, and assessments. They need to trust one another to share their successes and challenges. They need to care enough to help one another. And they need a system for doing all of this.

It is important to note that the teachers at this school discussed their change in thinking about the content standards during the course of this experience. While many of them initially complained about the state content standards and others confessed to “ignoring the standards and teaching what I really want to teach,” over time they developed an appreciation for pacing guides that focused their instructional efforts. While they remained skeptical about the importance of state assessments and scripted programs, they reported that using common formative assessments helped them plan instruction “that mattered.” As one of the second grade teachers said, “yes, we do teach a bit to the test, but the test is the standards. It’s what we asked for. Not standardized tests, but tests based on the standards we’re teaching. It’s going to be this way for a while. I still do a number of projects and give kids and their parents’ feedback on more authentic assessments, but I don’t think this has hurt them. I think it’s helped me, and everyone else here, maintain our freedom and improve our students’ lives. It’s pretty great knowing that you’re really helping kids to read and that they’re starting to read like their peers in more affluent schools.”

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