

# **How Pilot Schools Authentically Assess Student Mastery**

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# How Pilot Schools Authentically Assess Student Mastery

## EXECUTIVE SUMMARY

This study documents how member schools of the Boston Pilot Schools Network use authentic assessments to understand what their students know and can do. The Boston Pilot Schools were created in 1994 in response to charter school legislation to increase choice options within the Boston Public Schools (BPS). The Network currently encompasses nineteen schools and almost 10% of the district's total 61,000 students in 130 schools. Most Pilot Schools are small, and all are vision driven, and autonomous. Compared with other district schools, Pilot Schools have among the highest attendance rates, longest wait lists, lowest numbers of transfers, and lowest suspension rates in BPS, all indicators of high student engagement (CCE, 2001). On performance indicators, Pilot Schools reported low grade retention rates and higher rates of graduation and college-going as compared to BPS (CCE, 2001), and rank among the top Boston schools on standardized tests.

Staff in Pilot Schools believe that understanding what their students know and can do is best achieved through authentic assessments. Authentic assessments involve the making of meaning, guided inquiry, and value beyond school (Newmann, 1995). Against a backdrop of state-mandated standardized tests at more grade levels and in more subjects, and federal legislation in the form of No Child Left Behind, Pilot Schools use performance-based tasks in which students ask questions that they have formulated on their own and use habits of mind to reflect on their work and thinking.

Our research on Pilot Schools revealed three major modes of authentic assessments--evaluations, presentations and celebrations—each used for different contexts and purposes. We found that:

- Pilot Schools rely on authentic assessment to make serious decisions about student progress.
- Pilot Schools are at different stages in their development of authentic assessment systems.
- Authentic assessment can improve professional development and increase collegiality.
- Authentic assessment engages the community in the school.

Such complex and comprehensive systems of assessment inevitably encounter challenges in implementation. The rationale for sharing common challenges in the Pilot Schools' implementation of authentic assessment is the same as for sharing the successes—1) to assist the Network schools in reflecting about their practices; 2) to provide information which can be useful to practitioners, within the Network, within the district, and beyond. These challenges include:

- Assessment of content knowledge needs to be improved.
- Concerns about reliability and standardization of scoring need to be addressed.
- Authentic assessments must balance the use of students' strengths and weaknesses.
- Not all performance-based assessments in Pilot Schools are *authentic* assessments.
- Outside evaluators need more support and training.

When a network of schools commits to using multiple means of assessing their students' knowledge and skills, both students and educators benefit. While difficult to develop and implement, especially with the current reliance on standardized test scores for district, school, teacher, and student evaluation, authentic assessments have positive implications for all stakeholders:

- *Authentic assessments raise the stakes of learning for students.* **Students** in Pilot Schools have opportunities to present publicly to adults and students, both familiar and not, throughout their careers. They complete work that is relevant to their daily lives and contexts. They can demonstrate what they know and can do in a variety of ways, rather than just through a paper and pencil test.
- *Authentic assessments improve curriculum and instruction.* **Teachers** have opportunities to refine their curriculum and assessments collaboratively, often across subjects and grade levels. They make their practice more open by sharing their assignments and assessments publicly.
- *Authentic assessments make public the work of schools in accountable ways.* **Community members**, including parents, business, and community leaders, become more educated about public schools, curriculum, and assessment. Their participation lends credibility to the authentic assessments and add a sense of seriousness and purpose.

# How Pilot Schools Authentically Assess Student Mastery

## RATIONALE

The purpose of this study is to document how member schools of the Boston Pilot Schools Network use authentic assessments to understand what their students know and can do. Two of the Network's guiding principles directly address what assessments of student learning should look like:

- Learning should be purposeful, authentic, challenging, and creative, and build students' capacity to take responsibility for their own learning;
- Authentic forms of assessment, such as portfolios and exhibitions, are key to improving learning and teaching.

These principles not only reflect the belief that a student's learning must be measured in multiple, authentic ways, they also reflect the Network's focus on equitable practices—schools should take responsibility to encourage students from different contexts and cultures to show in diverse ways what they know and how they learn.

Our study provides documentation of a new generation of schools that have come of age after most of the foundational research on authentic assessment was produced. We offer a snapshot of the use of authentic assessment in the Pilot Schools and identify the challenges the schools face as they try to advance this work. This study contributes to the field by documenting performance assessment schools as they struggle to continue the work in a difficult political context. We hope to inform those working with authentic assessment or evaluating its impact. Ideally, our work will also be of use to practitioners as they implement personalized assessments in an increasingly standardized environment.

## THE BOSTON PILOT SCHOOLS NETWORK

The Boston Pilot Schools were created in 1994 in response to charter school legislation to increase choice options within the Boston Public Schools (BPS). The Network currently encompasses nineteen schools<sup>1</sup> and 6100 students in the district, which serves a total of about 61,000 students in 130 schools. Most Pilot Schools are small, and all are vision driven, and autonomous. Through an agreement with the Boston Teachers' Union, the Boston School Committee, and BPS, the Pilot Schools have unusual, charter-like freedom (autonomy) over crucial aspects of their school design and implementation—budget, staffing, scheduling, governance, and curriculum. In exchange for these freedoms, they have increased accountability for serving their students through a rigorous School Quality Review process in which each school's Pilot status is renewed by the Boston School Committee every four years. The Center for Collaborative Education (CCE), a nonprofit

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<sup>1</sup> See <http://www.ccebos.org/pilotschools/schools.html> for descriptions of Pilot Schools

organization dedicated to working with networks of urban public schools engaged in reform, supports the Pilot Schools by providing them with significant school-based coaching and professional development, networking opportunities, advocacy with the district, and research and evaluation studies.

Pilot School students are representative of the district by gender, race, income, and mainstream special education status, although they serve a lower percentage of English language learners than the district average (CCE, 2001). At the high school level, Pilot Schools enroll a higher percentage of African American students than the district average. Compared with other district schools, Pilot Schools have among the highest attendance rates, longest wait lists, lowest numbers of transfers, and lowest suspension rates in BPS, all indicators of high student engagement (CCE, 2001). On performance indicators, Pilot Schools reported low grade retention rates and higher rates of graduation and college-going as compared to BPS (CCE, 2001). Pilot Schools also rank among the top Boston schools on standardized tests. These findings corroborate the research that says low-income students and students of color achieve at higher levels in small, personalized schools (Raywid, 1998; Cotton, 2001).

Acknowledging Pilots' success with students, CCE seeks to understand more fully the pragmatic aspects of Pilot School autonomy over curriculum and assessment. Specifically, in this study, researchers studied the development of authentic assessments to measure the skills and competencies of Pilot School students.

## **THE CONTEXT OF AUTHENTIC ASSESSMENTS IN THE UNITED STATES**

### *Definitions of Authentic Assessment*

A shared definition of 'Authentic Assessment' has proven elusive. Initially, criticism of traditional testing formed the basis of a quest for better assessments, with authentic assessment being defined mostly by what it was not. However, a literature review reveals some dominant themes that describe authentic assessment. In *Beyond Standardized Testing* (1988), Archbald and Newmann wrote:

Most traditional assessment indicators communicate very little about the quality and substance of students' specific accomplishments. The type of learning actually measured is often considered trivial, meaningless, and contrived by students and adult authorities. A valid assessment system provides information about the particular tasks on which students succeed or fail, but more important, it also presents tasks that are worthwhile, significant, and meaningful—in short, *authentic*.

Grant Wiggins, the most prolific advocate of new kinds of assessments, wrote that "assessment is authentic when we directly examine student performance on worthy intellectual tasks" (Wiggins, 1990). Such tasks, he argues, should require students to construct complex responses to assignments that mirror real-world contexts and challenges, rather than merely asking students to choose an answer as in traditional exams. These assessments should be deliberately open-ended and student work should be judged publicly and held to clear and rigorous performance standards. Most importantly,

assessments should engender thoughtful reflection by students about their work, as well as by the faculty, upon the learning process. This reflection should demonstrate a degree of awareness and meta-cognition not valued or instilled by traditional assessments (Wiggins, 1989, 1993).

Newmann (1995) has developed a definition of authentic assessment with three elements: construction of knowledge, the use of disciplined inquiry, and value beyond school. Construction of knowledge means that students write, build, or perform rather than simply identify and reproduce knowledge. Disciplined inquiry means that from a base of knowledge, students endeavor to understand a problem deeply and communicate that new knowledge. Value beyond school means that the product of authentic work has the potential to impact others in some way. Work that is authentic by these criteria improves student engagement and problem solving skills beyond the classroom.

The definitions of ‘authentic assessment’ by other authors tend to reflect these core themes. While terms such as ‘performance assessment’ and ‘alternative assessment’ are often used synonymously (Darling-Hammond, Ancess & Falk, 1995; Baron & Foshee, 1995; Herman, Aschbacher & Winters, 1992), not all performance assessments are authentic, as in the case of students being asked to produce writing on demand in a contrived context (Meyer, 1993). Authenticity, according to most definitions, is best achieved when the context is germane to real life in all its complexity, ruling out performance-based tasks in more controlled environments. Interestingly, the Office of Technology Assessment of the U.S. Congress has defined performance assessment as “testing that requires a student to create an answer or a product that demonstrates his or her knowledge or skills,” reflecting the extent to which new assessment ideas have passed into public discourse at the highest levels (Rudner & Boston, 1994). However, proponents of authentic assessment might criticize this definition as enabling better standardized testing, not better assessment systems.

The ideas of these authors have been influential in developing CCE’s working definition of authentic assessment, which guides this study. Adopted in 2002, it represents a synthesis of major ideas as well as a platform for research. It is presented here in full:

Authentic assessment allows students to demonstrate their competence in multiple ways. Students work on performance-based tasks, using, applying, and expressing habits of mind and the knowledge that they have created. Throughout, students are asked to reflect on their work and thinking in order to develop their capacity to assess and redirect their learning.

Assessment is authentic when it includes the making of meaning. This occurs through a process of inquiry that is informed by prior knowledge and making connections to new understanding. Students demonstrate meaning making in original ways that have value beyond school, and include the possibility of contributions to the field of study (Newmann 1995). Authentic assessments are embedded in ongoing curriculum work, as well as in culminating performances. Typical authentic assessments include projects, exhibitions, portfolios, and demonstrations (CCE, 2002).

## *History of Authentic Assessments in US Education*

Authentic assessment started out as the localized work of a few schools, was enhanced by the theories of academics, and slowly became popularized by researchers. In the 1970's, Walden III, a public alternative school in Racine, Wisconsin, developed a widely admired portfolio assessment system (Meier, 1995). Drawing upon the work of John Dewey, the school sought to foster student learning by experiencing and doing. At the same time, the Prospect School in Vermont, led by Pat Carini, was developing ways of looking at student work over time and using it as a glimpse into the learning process (Engel, 1980). Two major books furthered thinking about authentic assessment. Howard Gardner's *Frames of Mind: The Theory of Multiple Intelligences* (1983) suggested that varied kinds of assessments would better serve children who learned in different ways; *Horace's Compromise* by Ted Sizer (1984) advanced the idea that students should study a small group of topics in depth, and that they should be required to exhibit mastery of skills and content in order to graduate. Other schools began to take notice, one of which was Central Park East Secondary School (CPESS) in New York City, led by Deborah Meier, which developed a graduation-by-portfolio system that became a model of authentic assessment. Several studies about CPESS and its sister elementary schools bred interest in and acceptance of new kinds of assessments. (Bensman, 1994; Darling-Hammond, Anech & Falk, 1995).

With the formation of the Coalition of Essential Schools (CES) in 1984, authentic assessment became a more widely researched and disseminated idea. A significant number of the Coalition's member schools began to use authentic assessments in their classrooms and, in some cases, for their graduation requirements.

In the late 1980s and early 1990s there was a proliferation of articles in leading educational journals on authentic assessment, including notable contributions by Grant Wiggins, the former research director at CES, and researchers at the National Center for Restructuring Education, Schools and Teaching (NCREST) at Teachers College in New York. These articles promoted authentic assessment as an alternative to, and in some cases a replacement for, traditional testing. Professional development materials became widely available and the federal Department of Education made changes in the National Assessment of Educational Progress (NAEP) to reflect more authentic approaches (Haertel & Mullis, 1996). States began to include portfolios and other performance-based components in their assessments, with Vermont and Kentucky going so far as to make portfolios the centerpiece of their graduation requirements. At the peak of the movement in the mid-90s, at least a dozen states were experimenting with some sort of authentic or performance-based assessment (Baron & Wolf, 1996).

By the late 1990s the discussions around authentic assessment had shifted. While portfolios had become popular in individual classrooms, the use of authentic assessment on a larger scale was met with skepticism. Researchers found flaws in the reliability of scoring on the portfolio assessment systems of both Vermont and Kentucky, and there were concerns about inadequate training and excessive costs for both systems (Koretz, et. al., 1994; Gong & Reidy, 1996). Research on authentic assessment shifted away from

advocacy and case studies to more quantitative examinations of its performance as a system. The personalized, open-ended, and contextual nature of authentic assessment appeared to be in conflict with the efficiency and reliability needs of large-scale assessment programs. With the coming of the curricular standards movement and high stakes testing, the federal government and states sought to standardize their assessment systems, mostly in favor of traditional forms of testing, leaving authentic assessment accepted as a pedagogical classroom tool but not as an assessment system (Koretz, 1998).

### *Current Context of Authentic Assessments in the US and in Boston's Pilot Schools*

As traditional forms of assessment have regained popularity and assumed high stakes, authentic assessment has become somewhat symbolic of resistance to that trend. In New York, 35 schools have banded together as the New York Performance Standards Consortium to create a performance-based alternative to the state's traditional Regents exams (Davidson, 2002). In Massachusetts and other states, schools that have authentic assessments in place have had large percentages of parents and students boycott state exams and assert a need for multiple measures of student performance. They do so because they believe that the broad requirements of state content standards are antithetical to their belief in a more in-depth curriculum (a "less is more" culture, as Sizer might describe it).

Some who sympathize with the goals of authentic assessment have concerns about the capacity of most schools to implement it effectively. Research has suggested that authentic assessment is educationally worthwhile but time consuming and vulnerable to misuse if adequate professional development is not provided (Stecher, 1998). Some of the most successful examples of these new assessments occur in either new schools or those with a sustained professional development and support program. Like most reform ideas in education, successful authentic assessment programs seem to need support, time, and commitment in order to realize their promise.

In Boston, authentic assessment has been a foundation of the Pilot Schools Network since its creation in 1994. The Network has developed a "Statement on Accountability" which guides the curriculum and assessment work of the schools (Appendix A). This statement outlines the Network's views against standardization and promoting equitable opportunities for students. It also shares ten principles that guide teachers in their instruction, curriculum, and assessment practices. The Network schools have built shared culture based on authentic assessment and also exhibit success on many levels such as increased college acceptance rates, higher attendance, less violence, and better test scores compared to other Boston public schools (CCE, 2001). In the current political context, the debate over what constitutes sustainable quality assessment and the impact of testing on instruction has become extremely relevant to the life of every Pilot School.

## **RESEARCH QUESTIONS & METHODOLOGY**

This study focused on two major questions:

- What does authentic assessment in the Boston Pilot Schools look like?
- How has the implementation of authentic assessments strengthened the Pilot Schools?
- What challenges do the Pilot Schools face as they further develop their use of authentic assessment?

Data for this study were collected through observations, interviews, and document collection over two academic school years (2000-2002). Members of the research team visited nine of the then eleven Pilot Schools, serving as either observers or evaluators during authentic assessments of student work, for a total of twenty-six visits. Researchers documented the assessment a representative sample of students by race, gender, age, socioeconomic background, special education status, and academic achievement. Seven of the nine schools were observed three or more times, the others once apiece. Key documents were collected from each school, including rubrics, student handbooks, training guides, memos, student work, and explanations of the assessment system. Additionally, administrators and teachers at the highlighted schools were interviewed about each school's assessment philosophy, process, accomplishments, and challenges.

### **AUTHENTIC ASSESSMENTS IN THE BOSTON PILOT SCHOOLS NETWORK**

Authentic assessments are used in both ongoing curricula as well as culminating performances. In this study, we focus mostly on culminating authentic assessments in the Pilot Schools. While the formative assessment that happens daily in the classroom commands significant attention in Pilot Schools, we begin our documentation of Pilot School authentic assessment with the summative, concrete products observed in the culminating assessments at these schools. This portrait of culminating authentic assessments in the Pilot Schools Network covers school years 2000-01 and 2001-02. Below we articulate a series of observations about Pilot Schools' use of authentic assessments.

*Pilot Schools share common values in their development and use of authentic assessments*

While they have different formats and are used for different purposes, authentic assessments across the Pilot schools demonstrate many values in common. In the words of Newmann (1995), they exhibit construction of knowledge, disciplined inquiry, and value beyond school. Students present work from topics that allow for choice and self direction, so that the work reflects student interest and motivation. Students also demonstrate how they have acquired in-depth knowledge of the subject matter through formulating their own questions.

Theme-based learning, in which a teacher offers multiple activities, honors the kids' interests and where they are in their learning. Instead of trying to achieve a number [on a traditional test], students are figuring things out, finding answers to their questions [about the theme].

Portfolio coordinator

One of the accountability principles in the Network is that assessment should “be embedded in curriculum and instruction that engages students in work that has a public purpose, that inspires students to become producers and contributors, and that assists them to become active participants in our democratic communities.” Teachers fashion their curriculum so that students reflect on the value of academic work to their learning and lives outside of school.

Our thinking is to link the curriculum as much as we can with real life--so the projects and assessments... [are] something that a student might be expected to do in real life, so their performance is linked to being able to not only reflect on questions ahead of a presentation but be able to speak extemporaneously about something.

Administrator

Through rubrics and questions, teachers' expectations should be made clear both to the students and to those evaluating the students' work. In addition, all assessments involve the public and community beyond the school in some way. All of these shared values contribute to assessments that are authentic, that include reflection, the making of meaning, and relevance beyond school.

*Pilot Schools practice authentic assessment in multiple ways*

Our research revealed three major modes of authentic assessments, used differently depending on context and purpose – evaluations, presentations, and celebrations. All three of these modes of assessment can be called “authentic” because they are committed to asking students to engage in work that is “worthwhile, significant, and meaningful.” (Archbald & Newmann, 1988).

### **Evaluations**

Evaluations are the most well known type of authentic assessment. All nine Pilot Schools studied use this mode of authentic assessment in some form. As practiced in Pilot Schools, evaluations are typically embedded in the curriculum and involve a student

presenting an aspect of academic work in order to exhibit mastery of content and skills. Most often, the work is compiled into a portfolio, or collection of the student's best efforts over time and subject areas. During the presentation, the student speaks for an extended period of time, usually at a significant point in the academic calendar, to a panel of assessors, some of whom are drawn from beyond the school community. The assessors use a rubric to grade the student. The rubric clearly and publicly embodies the standards the student is held to, both in terms of presentation skills and in content knowledge. Often, important stakes are attached to student performance on evaluations, such as major grades, promotion, graduation, or honors. The student must reach a predetermined basic level of proficiency in order to advance.

Comments from students support the effectiveness of the portfolio process in preparing them for college. This graduate of a Pilot high school describes how the high school evaluation process gave her practice for future college work.

Academically, [the evaluation process] helped a lot, through portfolio reviews and presentations, because a lot of colleges ask you to do individual presentations, group presentations, or papers. So I had practice with all three [in high school]. I know [that when] a lot of students [at this college]...hear a professor ask them to do a 15 minute presentation, they panic...Thirty minute presentations are nothing to me because of [my Pilot School's] high standards. I feel kind of overprepared.

Pilot high school graduate

**Greater Egleston Community High School Graduation Portfolio Presentation.**

Graduating seniors choose three pieces of work to present from their portfolio, a collection of work spanning eight academic disciplines. For 40 minutes, they speak about their work and answer questions from a teacher, two outside evaluators such as community members or educators from other schools, and a recent Egleston graduate. Examples of work might be an autobiographical Powerpoint project from technology class, a portfolio of photographs taken and developed for a class, and a business plan for a restaurant from Economics. The panel spends 10 minutes scoring the presentation on their rubrics, and then discusses their marks with the student. Students meet the graduation requirements of the school by successfully passing the presentation, in combination with other work approved by classroom teachers.

**Mission Hill School Graduation Portfolio Review.** To graduate, all 7th and 8th graders must present a collection of past and present work in six domains. They must also present and orally defend a finished piece of current work. Two teachers, an external evaluator, and a family member assess the work and the student's competence in the presentation. For example, in a science review, a student presents a science experiment subjecting plants to cigarette smoke. A history review includes an essay and a rap on child labor (a topic chosen by the student). In every field students must show how to weigh conflicting evidence, take into account various viewpoints, make connections, and see how the work might matter to others.

## Presentations

Presentations are, in many ways, the precursors to evaluations. They are authentic assessments typically used in classes or school-wide throughout the year to assess ongoing performance rather than mastery and to provide students with feedback. All nine Pilot Schools studied use this mode of authentic assessment. They give a student experience in an authentic assessment environment while building a school culture of competent responses to authentic tasks. A student may present to his or her peers and be judged by a teacher or a small panel using a rubric. However, the presentation is less of a culminating event than a snapshot of continuing progress.

I have ways to gauge their daily understanding [of the novel they are reading]. For instance, I use storytelling. Rather than giving them a quiz, kids get up and [speak in the voice of one of the characters]...I know that whatever they say, notice, and remember about the book is a reflection of what the theme is in their own life. I'm not preparing them just for college, I'm telling them it's life skills, as well as skills that will serve them well in college or any learning situation. I build in the assessment pieces accordingly. In the culminating experience, I'm looking for pieces that force them to a level of self-reflection and insight to help them make some connections, because as we know, there are some adults who have never reflected on anything in their life. Teacher

**Fenway High School Math Exhibitions.** In front of their peers, a teacher, and three outside evaluators from industry and the community, students present their solutions to open-ended math research questions. One student discusses the mathematical formula behind a card trick, another outlines the geometric progression of the rat population in Boston as it breeds, and a third student talks about the Cartesian coordinate system and its impact on the world. Students and adults ask questions and fill out rubrics, which will ultimately affect the quarterly grades of all who present.

**New Mission High School Independent Learning Project (ILP) Presentation.** A student stands before an audience of teachers, family members, fellow students, and administrators to explain a topic she chose to research: How do blind people cope with living in a seeing world? She queries the audience, challenging their assumptions about the blind, and offers alternative ways of serving the disabled from around the world. Her presentation encompasses an investigation of literature and science related to blindness. After fifty minutes, the audience fills out feedback forms that will help guide the student's future work at New Mission.

## Celebrations

Celebrations are common at many schools. In Pilot Schools, the rigor and dedication necessary to successfully prepare for and complete them makes their performance a genuine form of authentic assessment. In fact, teachers noticing the high level of student engagement in dance recitals, science fairs, and sports events sought to replicate that kind of "authenticity" as a classroom experience, leading to the more structured modes of authentic assessment that are familiar today in these schools. While all nine Pilot schools

sponsor these kinds of events, at least three of the schools present them officially as authentic assessments, because they are public demonstrations of student work.

**Boston Arts Academy Student Choreography.** Senior dance majors performed their own choreography based on research into an aspect of dance history; this performance is an exit requirement for dance majors. Twelve pieces, mostly solos, were performed in the school’s Black Box Theater. Dancers and other arts professionals were present to ask questions and validate the work of the students, who had been cleared to present by their teachers.

**Boston Evening Academy End of Year Expo and Celebration.** Students present autobiographical projects and meaningful academic work as a celebration of their accomplishments. Seniors discuss their future plans with outsiders. Teachers display interesting ideas from their classes and offer activities and projects.

The following table summarizes the shared values and differentiating features of evaluations, presentations, and celebrations in the Pilot Schools.

<i><b>Shared Values:</b> Authentic tasks, public presentation, personalized assessment, clear and visible expectations, community involvement, and student reflection.</i>		
Evaluations	Presentations	Celebrations
<ul style="list-style-type: none"> <li>● Assess both content knowledge and presentation skills</li> <li>● Given at significant moments (end of unit, class or year)</li> <li>● Have stakes attached (grades, promotion, graduation, honors)</li> <li>● Require mastery of authentic tasks</li> </ul>	<ul style="list-style-type: none"> <li>● Primarily used for giving feedback or lesser grades</li> <li>● Emphasize social/presentation skills</li> <li>● Serve as early building blocks of authentic assessment culture</li> <li>● Assess student performance of authentic tasks</li> </ul>	<ul style="list-style-type: none"> <li>● Have no stakes attached</li> <li>● Only participation is assessed</li> <li>● Mark major moments in a school year</li> <li>● Serve as community building event, not academic assessment</li> <li>● Present student responses to authentic assignments</li> </ul>

*Schools rely on authentic assessment to make serious decisions*

Of the nine schools studied, five use authentic assessments to help determine their students’ promotion or graduation. Three others use these assessments to provide feedback to students about the quality of their work or to assign honors or other distinctions. The final school is in the process of revamping its assessment structures. While other forms of traditional assessments are used in Pilot Schools, portfolios and other authentic assessments have become an equal or more dominant practice. Many schools count portfolios and exhibitions as significant portions of final course grades and most schools include authentic assessment results on report cards or transcripts. Overall,

authentic assessments are being used as a reliable and significant tool to set expectations and assess student achievement.

It's a real challenge for kids. It's intense. And it feels like a huge accomplishment. So there's this tone around getting work done that ideally, as we get better at it, is going to reduce in anxiety and increase in this sense of accomplishment and knowing what you're doing and then having a great product. The public-ness of it contributes to the school culture, because people are presenting...this complicated work that has a lot of different facets, and people are trying to understand what [the students] understand. It makes the dialogue between kids and kids, and kids and teachers, much richer. If there isn't the evaluation...if it's not about assessment, some of that tension is not there, and you don't get as far in that discussion.

Administrator (K-8)

### *Schools are at different stages in their development of authentic assessment systems*

Some schools have had more time than others to develop a comprehensive system of authentic assessment. One Pilot School is 20 years old, while several have opened since 1997. In addition, some school directors have had more experience with authentic assessment than others. As a result, schools are at different stages in their implementation of authentic assessments, which range from emerging experiments to mature systems. Schools just starting to work with authentic assessment tend to use it for presentations in only a few subjects, have not adopted a school-wide system of performance-based requirements or evaluations, and have less developed rubrics and/or community involvement. Schools that are more experienced tend to add evaluations to their presentations, have developed school-wide systems of assessment with clear standards and stakes, and have oriented their curriculum around authentic assessment. They have moved from using authentic assessment as a small-scale pedagogical tool implemented by a few teachers to making it the cornerstone of a school-wide system. At least six schools increased their use of authentic assessment in the last year. Many have expanded the number of subjects or grade levels that use portfolios and exhibitions.

A crucial element of authentic assessment systems is the rubric, which communicates to students what is expected and guides evaluators as they review work. Constructing good rubrics is difficult and takes time. At its core, a rubric embodies the values and mission of a school and reflects the clarity (or lack thereof) with which it pursues its purpose. A rubric telegraphs the priorities to students and judges. It conveys clear standards and expectations of a presentation to students and judges alike. It spells out what is expected in each category of presentation at every performance level. A good rubric leaves very little to interpretation. Quality rubrics can act as a scaffold for the entire class as they prepare for presentations.

The rubrics we observed that were used in the Pilot Schools were at different stages of development. While we saw excellent examples of rubrics, different schools (and even departments or classes within schools) have constructed rubrics of varying quality. Some schools use standard rubrics for subject areas, while others develop rubrics for each project or topic. There is still work to do develop rubrics.

### *Authentic assessment can improve professional development and increase collegiality*

Several schools that have recently expanded their authentic assessment work indicated that it served as a catalyst for improved faculty collaboration and school-wide academic focus. Curriculum, rubrics, student support, and scheduling all had to be done collaboratively, resulting in the reorientation of faculty meetings, common planning time, and professional development. Schools with more mature assessment systems viewed such work as a centerpiece of their school's identity, with authentic assessment permeating the school's culture for both staff and students.

People here have de-privatized their practice. [There is] a real awareness that the work is not easy and when you create it on your own, you don't always hit the mark. They're...in a trusting adult community enough to explore why and get some better answers and do it better the next time, so it's helped in de-privatizing practice. That's one key difference that authentic assessment has made to this community. It's also pushed our desire for interdisciplinary curriculum...teachers are talking more with teachers of other disciplines so [teachers are] broadening their own perspectives and deepening their thinking...That comes out of the work of trying to arrive at authentic assessments.

Administrator (High School)

### *Authentic assessment engages the community in the school*

All nine Pilot Schools using authentic assessment invite members of the outside community to participate as judges at exhibitions, portfolio defenses, and other assessment events. These external judges have included professionals, government officials, parents, and community leaders. The purpose of having external judges is both to inform the public about the school's work and to firmly ground assessments in the expectations of the community. For instance, at Fenway High School's Science Fair, the audience included many scientists and academics whose daily practice was on topics students studied, in addition to adults from non-profit organizations and businesses who had high standards for presentations.

At Greater Egleston Community High School's portfolio presentations, the panels are made up of student alumni, community members, and professionals who all bring unique and high standards to the exercise. Students know this and respond with elevated levels of commitment and performance, a feat difficult to reproduce in a regular classroom setting. The presence of the "real world" in the school setting creates authenticity that students can both recognize and respond to.

### *Summary*

We find that Pilot Schools have developed authentic assessments that address all three criteria developed by Newmann (1995): construction of knowledge, the use of disciplined inquiry, and value beyond school. Students construct knowledge in their presentations and portfolios, through teaching judges about early childhood education or researching paper topics in history or choreographing dance selections. They use disciplined inquiry when they discuss, elaborate, and defend their arguments and conclusions based on background knowledge and in depth understanding of concepts they have learned. The work that these assessments entail has value beyond school, as

evident in the involvement of community members in the reviews, and the community relevance of an environmental health project focused on the high incidence of asthma in the school's neighborhood. Their varying stages of development and challenges in implementation attest to the complexity of this practice.

Pilot Schools staff are not only able to embed authentic work through their curriculum, they are also able to successfully engage students such that they perform at high levels on a range of indicators (CCE, 2003). Authentic teaching and learning and high student performance go hand in hand in the Pilot schools.

## CHALLENGES TO AUTHENTIC ASSESSMENTS IN THE PILOT SCHOOLS NETWORK

Pilot Schools are committed to using authentic assessments as a way to understand what their students know and are able to do. They use such assessments to make important decisions about students' promotion and graduation and to guide curriculum planning. Such comprehensive systems of assessment inevitably encounter challenges in implementation. We think that it is useful to share what we have learned about Pilot Schools' implementation of authentic assessments for the following reasons—1) to assist the Network schools in reflecting about their practices; and 2) to provide information about implementation which can be useful to practitioners, within the Network, within the district, and beyond.

Not only are assessment systems difficult to implement, teachers and administrators in schools are usually working on improving many other aspects of practice simultaneously. Such work takes vision and commitment. School staff can sustain such a commitment when they are less isolated and know that others are also engaged in similar challenging work. They will also encounter fewer roadblocks if resources help them predict the turns the work will take.

While Pilot Schools staff members engage in ongoing reflection about their teaching and learning within their schools and as a Network, sharing such challenges publicly takes courage. No one likes to have his/her practices criticized. But we should keep in mind that the original intent of Pilot Schools was to serve as laboratories of innovation for the district and beyond. It is also important to note that not all Pilot Schools have experienced the challenges to authentic assessments to the same degree. Below, we present our perspectives on the main challenges to authentic assessments

### *Assessment of content knowledge needs to be improved*

One common element among the diversity of modes for authentic assessments shared above was their public-ness. All rubrics reviewed gave prominence and weight to the student's skill and comfort in communicating his/her learning. One aspect of the authentic assessments that challenged some, but not all, schools was assessing the content knowledge of students. Teachers talked about the challenge of matching the assessment vehicle to the concept being taught:

Content-wise there's a tension around breadth vs. depth. Did [the teacher] design a great project? If so, is [the product] really evidence of what the kids have learned or is it more superficial? We try to design these projects and experiences, and what sometimes can happen is you create this really well-connected, involved, challenging bit of work that's real, and because it has different elements, sometimes the concept is achieved but the content skills [such as statistics in math] don't advance...It's a real balance providing them the knowledge they need to understand the real world context, and still being able to spend enough time on the skill work.

Administrator

Teachers faced challenges in how to assess students whose work contains spelling or grammar errors or who fail to adequately respond to probing questions about content.

We found that rubrics often give more weight to presentation skills or process explanation than to demonstration of content knowledge or mastery. Even if evaluators have questions about content knowledge, the rubric might not give it much proportional weight, so that students with strong presentation skills might not be alerted to a potential area of improvement. Also, rubrics sometimes do not include clear criteria for assessing content knowledge, habits of mind, and understanding.

*Authentic assessments must balance the use of students' strengths and weaknesses*

Performance-based assessments allows for students to make use of their favored learning styles in a way that traditional assessments do not. One challenge that several interviewees cited was the balance between allowing students to choose favored modes of expression and pushing them to develop modes in which they are less developed.

One of our goals is to help our students understand where their strengths and weaknesses are. Some of our students are very good orally, some of our students are not. Some of our students respond better when things are read to them, and some of them respond better when they can see them. So we work a lot on learning styles, so that all the authentic assessments that we do are based on helping students improve in areas they may be weaker in, but also to enhance their strengths.

Administrator

We observed a number of presentations where students gave excellent oral presentations that exceeded the quality of their writing. Panelists reviewing essays about the difference between lynching and terrorism or the political nature of the Olympics found that when students were asked about what they wrote, they were able to more clearly articulate their rationale and subtle nuances of meaning than was apparent in their writing. These observations underscore the Pilot principle of accountability that schools should “provide multiple ways of assessing student competency in meaningful ways, rather than relying on one single method.” For students whose verbal skills surpass their writing skills, the sharing of work through portfolio reviews or exhibitions may demonstrate to adults understandings not conveyed through writing. On the other hand, evaluations of student writing should meet the school’s expectations and standards in that area.

*Not all performance-based assessments in Pilot Schools are authentic assessments*

As Meier (1993) notes, not all performance-based tasks are authentic. Students at some of our observations presented work that was drawn from textbooks or MCAS-preparation exercises, in addition to presenting work that lacked a real world or authentic context. Examples included science fair projects based on or adapted from tasks described on web sites or in science workbooks. Asking students to construct knowledge and demonstrate their understanding is important and valuable. However, bringing students as far into the complexity of real life as possible is essential if students are to be highly engaged and authentic assessment is to be truly effective. Schools should aspire to as much authenticity as possible when constructing both their assignments and their assessments.

### *Outside evaluators need more support*

When Pilot Schools open their assessments to judges from the community, they add a crucial element of authenticity to their work by exposing students to the standards of the outside world. Because Pilot Schools want to prepare their graduates to thrive beyond the school walls, the community plays a vital role in determining the readiness of graduates to meet the standards of both the school and of life beyond school. The commitment of all nine schools we observed to these ideals was visible in all participants, who were very aware of the positive presence of outsiders in the assessment process, lending weight and importance to the event for all involved.

Because outside evaluators are so important to the authentic assessment process, they need to be provided as much training and support as possible in order to best perform their duties. Most schools sent letters to outsiders that included information about the school and often a copy of the rubric that would be used by the panel. Some schools offered meals and receptions to make guests feel welcome. These schools also sent home surveys for feedback or thank you notes to their guests. Most importantly, several schools had training sessions for evaluators to review rubrics, rules, and the background of the school.

Outside evaluators with the most complete information about the process and schools' expectations of them are better able to assess students. Schools must assume that external evaluators are not familiar with their processes and contexts, especially when assessments are revised yearly. The more energy that is put into educating and supporting outside evaluators, the more power, benefit, and authenticity the assessment process will have. The use of outside evaluators should be accompanied by the following considerations:

- Outside evaluators, or even school staff who teach different subjects, are not always knowledgeable in the areas they are judging. In atypical subjects, like technology or the arts, lack of content knowledge among evaluators results in less probing questions and acceptance of student responses without substantial fact checking.
- At some schools, there are either too many subjects being presented at one time or not enough time given to adequately investigate the quality of a piece. Evaluators unfamiliar with the school and seeing several students at once may find it difficult to accurately or fairly judge the content being presented.
- When some evaluators know the student and others do not it can create an imbalance on the panel that can affect assessment. We observed a number of situations in which a panel would defer to a teacher who knew the student, especially when the panel had concerns about a student's level of content knowledge. The differing familiarity with the student among examiners should not compromise the important objectivity that those from the outside bring to this process, which is central to the "authenticity" of the assessment.

Rubrics, for the most part, gave clear and helpful guidance on how an individual should score a presentation. All schools should spell out their grading procedures for authentic assessments in as much detail as possible. Such clarity and consistency will optimize the involvement of community members in the process. However, at several schools, staff told guest evaluators that their scores would be “taken into account,” but the weight of their scores was unclear. In some instances, a policy for combining the marks of school staff, external evaluators, or, in some cases, students was not in place. Some schools explicitly used group consensus as their model, allowing time for groups to discuss and arrive at a shared understanding about a student’s work. However, some schools had allotted little time for that kind of in-depth discussion and had no formal guidelines for what to do when discrepancies in grading occurred.

*Concerns about reliability and standardization of scoring need to be addressed*

Researchers have expressed concern about the reliability of authentic assessments (Koretz, 1998; Stecher, 1998), and this issue is also important at the school level. Schools could collect data that could illuminate trends or issues in regards to scores. This data could include a comparison of student performance on authentic assessments with more traditional teacher-designed test scores or with standardized test scores. Additionally, schools could keep track of how scores of authentic assessments vary by year or subject or teacher, as well as by gender, age, or race, to provide useful information for targeting the improvement efforts.

## **IMPLICATIONS FOR SCHOOLS IMPLEMENTING AUTHENTIC ASSESSMENTS**

Pilot Schools are committed to developing authentic assessments to collect evidence as to how their students meet the expectations of teachers, families, and the community at large. Because they are small, vision-driven, and autonomous, these schools may develop curriculum and assessments with their own students and standards in mind, rather than responding to district curriculum mandates or professional development initiatives. As these schools believe in “less is more” and “depth over breadth” in teaching and learning, authentic assessments meet their needs more readily than high-stakes, standardized tests.

Our findings have positive implications for all stakeholders:

- *Authentic assessments raise the stakes of learning for students.* Students in Pilot Schools have opportunities to present publicly to adults and students, both familiar and not, throughout their school careers. They complete work that is relevant to their daily lives and contexts. They can demonstrate what they know and can do in multiple ways, rather than just through a paper and pencil test.

Authentic assessment gives me a better idea of my kids, because everyone has to meet the same requirement. In a regular school, that does not always happen. In a regular school, if there’s a science fair, maybe everyone doesn’t have to present. In a regular school, if I

give a test and 10% fail, they just get a failing grade. If a child fails a portfolio, they have to go back and redo it. It is a more equitable system. Teacher

- *Authentic assessments improve curriculum and instruction.* Teachers have opportunities to refine their curriculum and assessments collaboratively, often across subjects and grade levels. They de-privatize their practice by sharing their assignments and assessments publicly.

Authentic assessments affect teacher planning. When we talk about authentic assessments and exhibitions, it's really important to be clear on what teachers want students to do, and that's affected our time together because those conversations have to take place...For example, our teams work together. What is it that we want students to go out into the world with? What is the mission statement for the department? What are the essential skills we want them to have? It's played a major role in curriculum and experiences for students...It's planning backwards. Administrator (High School)

- *Authentic assessments make public the work of schools.* Community members become more educated about public schools, curriculum, and assessment. They lend credibility to the authentic assessments and lend them a sense of seriousness and purpose.

The Pilot Schools Network is strengthened as member schools share their progress on authentic assessments through school visits, serving on each others' review panels, conference presentations, and leadership meetings. In this way, authentic assessments may provide the foundation for a system of assessments as a viable alternative to standardized testing. The Network allows for increased communication among schools, and this increased communication strengthens the knowledge and commitment within the Network to designing and implementing solid authentic assessment systems.

The Boston Public Schools and other districts may learn from the Pilot Schools' use of curriculum and assessment autonomy. These schools serve as models for other schools and districts interested in developing authentic assessments. Shared knowledge can reduce the need for schools to reinvent the details of their assessment systems. Schools can pursue such sharing through visits to other buildings, staff participation in judging at other sites, and the exchange of rubrics, examples of student work, and documentation of the assessment, promotion, and graduation requirements at each school.

Future studies by CCE will describe the more formative authentic assessments used in Pilot Schools, the impact of authentic assessments on instructional practice and curriculum development, and the perspectives of teachers and students on authentic assessments as practiced in Pilot Schools.

## **APPENDIX A: PILOT SCHOOLS NETWORK STATEMENT ON ACCOUNTABILITY**

The Pilot Schools believe that having in place a strong system of assessing student progress is vital to creating excellent schools in which all students learn and achieve at high levels. We believe in standards that lead to excellent schools, not standardization. We support the development of network-wide competencies and assessments that, while providing common information on how schools are doing, also allow for and encourage uniqueness in approaches to instruction and assessment among schools. Ultimately, good assessment systems should open doors for all students rather than shut them, and help students graduate with a range of options. The Pilot Schools Network assessment system is built upon the following principles. Assessment should encompass the following:

- Provide multiple ways of assessing student competency in meaningful ways, rather than relying on one single method
- Eliminate secrecy, so that all students, families, and the public understand the knowledge, skills, and habits of mind that students are expected to know and be able to do, how they will be expected to demonstrate this knowledge, and what constitutes high quality work
- Be developed and used by those working most closely with students, while also involving families and the community
- Provide information to students, families, and the community on how students are progressing toward meeting goals
- Be embedded in curriculum and instruction that engages students in work that has a public purpose, that inspires students to become producers and contributors, and that assists them to become active participants in our democratic communities
- Help students become independent, self-reliant, and thoughtful learners, and gain a sense that they are able to affect and improve the world around them
- Provide opportunities for students to be successful, to learn from mistakes and challenges, and to build persistence and resiliency as learners
- Help students become reflective learners and self-assessors who monitor their own growth, build on their strengths, and develop their skills
- Promote reflective practice in teachers, leading to improved instruction
- Reflect the best research on instruction and assessment

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