



Student Progress Monitoring System® (SPMS®)

An Effective Formative Assessment System Supported by Research and Theory

Vantage Learning
Paul Hillard
August 2009

Student Progress Monitoring System® (SPMS)

An Effective Formative Assessment System Supported by Research and Theory

Introduction

The development and integration of effective, practical, adaptable, and useful assessments into daily classroom instruction is of vital importance to all educators. Every teacher must be able to provide high-quality assessments which determine what students know and do not know, with procedures for correcting any deficits in learning through future adaptations to instruction. Instructional time is limited, and there is often great variability among student ability in classrooms. Teachers must adopt appropriate assessment methods which take into consideration all of these factors, optimizing pedagogically sound methods in order to certify success for all students, not just those who are good test-takers. As a result, for many educators, assessing students properly can be a very daunting task.

With the establishment of the No Child Left Behind Act and its requirement of proficiency for all students on state-mandated high-stakes tests, the ability to provide students with every opportunity to demonstrate achievement of instructional material properly aligned to accepted state content standards is absolutely critical to ensuring the success of every school. With the results of these tests becoming more and more crucial to students, teachers, administrators, and the surrounding community, the advantage of knowing the current level of student achievement BEFORE any high stakes tests are taken is obvious. The benefits of knowing this information are multifold. Administrators are able to identify schools, grades, and groups of students who may need additional resources to satisfy achievement benchmarks. Teachers are able to adapt current and future instructional decisions in order to pinpoint and eliminate any deficits in student learning. Parents are notified of their children's learning and current achievement, using this information to reinforce the importance of learning at home. Lastly, students are able to self-assess their current progress, identifying any additional learning and knowledge necessary to reach proficiency with respect to the standards. All of these objectives can be best satisfied with a formative assessment system that allows for periodic district-wide benchmarking as well as more frequent, targeted classroom-level assessments.

This summary provides an overview of The Student Progress Monitoring System® (SPMS), developed by Vantage Learning. The summary will define formative assessment, explain why it is so crucial to student learning and list and elaborate on the characteristics of effective formative assessments. This overview will demonstrate that SPMS possesses the features and tools needed for educators to produce assessments that provide invaluable feedback with regards to student progress in acquisition of critical skills and knowledge.

Student Progress Monitoring System® (SPMS®)

To provide teachers with a valuable tool utilizing formative assessment to prepare students for high-stakes standardized tests, Vantage Learning has responded by creating the Student Progress Monitoring System® (SPMS®). This powerful suite of reading, math, and science assessment tools for teachers, students, and administrators is designed for ease of use, meeting the needs of K-12 schools and districts. SPMS® is an integrated solution for creating, administering, scoring, and reporting assessments that satisfies No Child Left Behind requirements and state standards, with the goal of improving students' core academic skills. SPMS® measures student progress and allows for prescriptive intervention and individualized learning strategies, extending accountability of achievement in a cost-effective way, targeting instructional practices that ensure success for all students.

Features include:

- **Comprehensive Item Bank** - 30,000+ tested and classroom-proven items aligned to national and selected state standards. This item bank has been developed over the past eight years and has been used by over 65,000 teachers to date.
- **Individualized Assessments** – Teachers choose which items to include when creating assessments to best serve the needs of specific groups of students. Administrators also have the ability to create assessments to be used throughout the school.
- **Immediate Scoring** - All online testing is scored instantly.
- **Reporting Tools** – A variety of unique reports is available, providing numerical and graphical evidence of progress towards goals. Reports are available at the student, class, school and district levels.
- **Item Authoring Tools** – Administrators can create and submit their own items to the assessment platform for online or offline delivery.
- **Item Types**-Item types include multiple choice, short answer, scored short answer, survey, open-ended, performance tasks and Intellimetric Scored writing prompts.
- **Browser-Based Applications** – No expensive hardware or software needed. Access anywhere, anytime students and teachers are at an Internet-connected computer.
- **eLibrary**-Use the eLibrary content module to manage curriculum/instruction and RtI(response to intervention) resources and automatically assign as pre and post-assessment materials based upon a performance range.
- **iSEEK**-Delivers individualized prescriptive resources(remedial and enrichment) based upon the standard and objective/skill assessed.

These features, combined with effective classroom instruction, provide educators with an appropriate solution that provides frequent, ongoing assessment of skills to certify the success of all students.

Defining Formative Assessment

There are many different types of assessment. The purpose of the assessment and the information that it will provide guides teachers to determine which type is most appropriate. A fundamental type of assessment, part of any successful classroom, is formative assessment. Formative assessment represents a variety of tools teachers can use to probe student understanding and inform instructional decisions. Bell and Cowie (2001) define formative assessment as “the process used by teachers and students to recognize and respond to student learning in order to enhance that learning, during the learning.” Formative assessment may consist of tests, quizzes, homework, extra practice, or a wide range of informal instructional tasks a teacher may perform during a lesson, such as questioning and probing for student understanding. These formative assessments serve the dual purpose of giving the teacher information on the effectiveness of the lesson and giving students information on the current state of their learning. This information guides future instructional decisions (Kaftan, Buck, & Haack 2006).

Why Use Formative Assessments?

Formative assessment is fundamental for effective teaching and learning. Whereas standardized, summative assessments are designed to provide information on the performance of districts and schools, formative assessments offer teachers evidence of current achievement on more targeted objectives along with remedies for correcting any learning difficulties. The information provided in summative assessments is often not useful to drive instruction. For example, the results might tell teachers which students in their classes have not mastered a reading comprehension objective, but they do not tell what kind of instruction those students need to master that objective or what errors in thinking led to the incorrect answers. To get this kind of information, teachers need the results provided by the consistent and proper use of formative assessments (Black and Wiliam 1998, Center for Comprehensive School Reform and Improvement 2006). Formative assessments provide the information necessary to remedy any student difficulties. As Reeves (2004) states, “It’s not about giving assessments; it’s about doing something about the results.”

Abundant evidence has shown that formative assessments are beneficial to learning. In their landmark study, Black and Wiliam (1998) completed an analysis of formative assessment, noting over 20 studies which indicated that formative assessment improved learning and raised standards. Over the course of a school year, the rate of learning in classrooms which correctly utilized formative assessments on a daily or weekly basis was approximately double the rate found in other classrooms (Wiliam et al. 2004). The most recent research suggests that formative assessment produces greater increases in student achievement than class-size reduction or increases in the content knowledge of teachers (Wiliam & Thompson 2007). Plus, the use of additional instructional and assessment resources is judged by students and teachers alike as beneficial (Stiggins 2004, Cassady et al. 2001). Finally, it has been found that improved

formative assessment helps low achievers even more than other students, reducing the range of achievement in classrooms while raising achievement overall. Every student, regardless of current ability, will benefit (Black & Wiliam 1998). As can clearly be seen, day-to-day classroom assessment can lead to remarkable gains in student achievement.

Not all assessments are created equal. In order to maximize effectiveness, research has shown that the most effective formative assessments are those that provide:

- 1) Immediate, high-quality feedback
- 2) Evidence of current achievement to teachers and administrators
- 3) High quality items
- 4) Flexibility, allowing for multiple opportunities and uses
- 5) Multiple methods of assessment
- 6) Motivation to students to monitor their own progress towards goals

This summary will demonstrate how the Student Progress Monitoring System® (SPMS®), developed by Vantage Learning, provides a formative assessment system which possess all six of these characteristics.

Effective Formative Assessments Provide Immediate, High-Quality Feedback to All Students

Many researchers believe that timely, useful feedback is the single most important feature to any formative assessment. High-quality feedback helps students to clearly recognize the desired goals, provides students with evidence about how well their current performance matches these goals, and explains ways to close the gap between the desired goals and current performance (Sadler 1989). To maximize its usefulness, feedback on performance should be provided immediately. If given too late, quite simply, students will not care about the feedback. They will have already moved onto something else (Cassady et al. 2001, Helgeson & Kumar 1993). One study found that immediate feedback resulted in a 20% gain in overall achievement. It appears that the greater the delay in the delivery of feedback, the less impact there is on achievement (Bangert-Drowns et al. 1991). Not only must feedback be immediate, but it must be useful and understandable, providing the guidance necessary for improvement. Effective formative assessments provide information on the current achievement of students while providing diagnostic feedback specific to the learning task at hand in order to remedy any learning deficits. Finally, these assessments must provide visible tracking of student progress on a frequent and regular basis (Reeves 2004). Students who receive timely, useful feedback are much more efficient, increasing student achievement at a much faster rate than students who do not receive feedback. Researchers agree that “the most powerful single modification that enhances achievement is feedback” (Hattie 1992, Bangert-Drowns et al. 1991).

The Student Progress Monitoring System® (SPMS®) provides immediate scoring of all online assessments. Since every item of every test is aligned to a specific learning objective, the feedback received demonstrates specific student achievement and current status on fulfilling

this goal, while providing information on the improvement needed. Formative assessments administered with SPMS® provide feedback while there is still time to improve, before high-stakes tests are administered. In addition, a variety of student reports provide records of all past assessments, demonstrating growth over time. In these ways, students receive feedback providing them with evidence about current achievement, growth, and guidance on meeting desired instructional goals.

Effective Formative Assessments Provide Evidence of Current Achievement to Teachers and Administrators

Teaching and learning are interactive. Teachers need to know about their students' current progress and difficulties with learning so that they can adapt their own work to meet their students' needs (Black & Wiliam 1998). Formative assessment is a tool teachers can use to probe student understanding, inform instructional decisions, and develop relationships, giving the teacher information to make necessary instructional adjustments, such as reteaching, trying alternative instructional approaches, or offering more opportunities for practice. All of these activities can lead to improved student success (Kaftan, Buck & Haack 2006, Boston 2002). It makes logical sense that evidence of student understanding must be demonstrated before any new concepts are introduced. To get this kind of information, teachers need the results provided by the consistent use of formative assessments (CCSRI 2006, Stiggins 2004). Administrators also need to know the current achievement status of students. In order to direct additional funding or support where necessary, administrators must be provided with information needed to make any educational decisions to maximize student performance before high-stakes tests are administered. Formative assessments provide this information.

The importance of common assessment practices cannot be overlooked. When the same assessment system is used district-wide, groups of teachers and administrators can agree on what constitutes proficiency. Doug Reeves, of the Center for Performance Assessment, noted that “you can walk into any school system, large or small, and ask to see sample of work that’s proficient from five different fourth-grade classrooms. You’ll get five radically different qualitative of work. The only antidote to that is common assessment. Standards [and] common curricula are all great ideas, but are impotent unless you have common assessments.” When teachers share guidelines which mesh with district and state standards, appropriate educational decisions can be made across students and classrooms.

SPMS® offers a common assessment system, providing multiple forms of evidence of current student achievement to teachers and administrators. Users can view data on individual students as well as overall classroom, school, and district performance. Teachers can view overall achievement across an entire class, while administrators can view and compare overall achievement from schools across the district. A variety of comprehensive reports of student data can be generated. Reports can show achievement based on specific standards. For example, teachers can determine the percentage of students who answered a science question on gravity correctly. Currently, SPMS® supports Georgia, Pennsylvania and California state standards, as well as National Math and Reading standards.

In addition, customized versions of SPMS® are aligned to other state standards. Moreover, reports can also be generated on the major domains of math, reading, and science regardless of state standard. The information provided through these reports gives the teacher the specific, detailed evidence needed to guide future learning.

Effective Formative Assessments Employ High Quality Items

In order to make accurate instructional decisions, every formative assessment program must have at its heart a robust bank of high quality items that are aligned to a specific skill or knowledge statement. The quality of the test items is paramount. If a test item is faulty, the ability to determine whether or not students actually mastered a concept is minimized. A student may answer a faulty question incorrectly due to a problem with the item, not due to the student's lack of knowledge or skill intended to be measured by the item (Boston 2002).

SPMS® provides a comprehensive item bank, containing over 30,000 items aligned to Georgia, PA and CA state content standards as well as major content domains. These items were developed by content and test development experts with the intended purpose for use in this item bank. Each item writer was trained in proper item development protocols and had to meet rigorous standards before submitting items for inclusion in the item bank. Each draft item was reviewed by editorial staff for content accuracy, concerns regarding bias, and general item development quality. Any concerns with the items were addressed and the modified items were routed through the review process once more.

As items are used in SPMS®, data is collected regarding the quality of the items. Due to the flexible nature of the SPMS® system, the item data must be considered cautiously as the data is not collected under standardized conditions and the variables affecting the item statistics are numerous. Even so, it is possible to locate potentially problematic items and include them in an additional advisory review process. In addition, users are able to provide feedback regarding items, which is carefully considered in determining if there are potential issues with the item. Any items warranting removal from the bank or modification are handled in a timely fashion.

Those items developed and used at the district or school level do not undergo the same review and maintenance process as those items provided in the SPMS® bank. Schools and districts that wish to incorporate their own content for use in the SPMS® system do so under their own self-regulation and review process. It is expected that those items would be reviewed, edited, and approved by curriculum and assessment staff prior to use on an assessment.

Effective Formative Assessments Offer Flexibility, Allowing for Multiple Opportunities and Uses

Effective formative assessments are useful for a variety of learning situations. With the increased focus on high-stakes testing, many assessment companies have created off-the-shelf tests that attempt to measure student performance. Many of these tests are administered every few months or so. These tests are limited in scope, varying little from year-end or end-of-

course tests aligned to NCLB considerations. As a result, these assessments are essentially summative. They are really “nothing more than autopsy reports: they tell you why the patient died at the end of the year and then marveled that the patient didn’t get any better” (Reeves 2004). While they may predict scores on high-stakes tests, summative tests do not provide guidance regarding the specific sorts of adjustments that teachers or students ought to be making to improve achievement (Popham 2006). Formative assessment must provide information that leads to short-term adjustments, targeted to specific learning goals (Black & Wiliam 1998). More frequent, shorter tests and additional practice are better methods for diagnosing learning difficulties (Boston 2002). Students need multiple chances to show improvement. Frequent assessments provide these opportunities (Reeves 2004). Optimally, the availability of large test item banks is most desirable. This makes possible several intermediate quizzes, with achievement gains resulting from this practice (Helgeson & Kumar 1993). The power of having the flexibility to create a wide range of formative assessments maximizes any student achievement gains.

SPMS® allows educators to create customized assessments. When creating assessments, users choose which items to include that best serve the needs of specific groups of students. Users simply select the standards they wish to assess and choose only the items they believe will be accurate measures of student achievement. Skills that students have not yet been exposed to will not become a part of the assessment. These assessments can be of any length and given at any time, as tests, informal quizzes, homework, or extra practice. Students using SPMS® Gold can access the tests through the online interface to quiz themselves and monitor their own progress. Although designed for formative assessment, the flexibility of SPMS® allows educators to use it for both summative and formative purposes. In addition to building informal assessments, its adaptability allows users to develop district benchmark tests, end-of-course tests, and other cumulative assessments designed to assess learning over a more extended period of time. The item bank, test building tools, and comprehensive reporting features allow it to be a useful tool, regardless of assessment purpose. For example, administrators can create a series of assessments to serve as benchmarks to provide evidence of current achievement on uniform tests across classes and schools. A level of proficiency can be determined, giving administrators additional evidence of learning in order to direct and take the action necessary to improve achievement. SPMS® allows for these multiple uses, allowing educators the flexibility needed to create assessments to guide future instructional decisions.

Effective Formative Assessments Offer Multiple Methods of Assessment

Effective formative assessments utilize multiple methods of assessment which closely mirror the instructional goals students are expected to satisfy. Often, assessments only test surface-level concepts when more open-ended assessments would be better judgments of true student achievement. As a result, many educators have great difficulty creating useful, relevant assessments which judge multiple levels of thinking. In order for teachers to develop a “bank” of appropriate formative assessments, they must start with the state standards, which are broken down into smaller units and subskills (Sharkey & Murnane 2006, CCSRI 2006). These assessments should provide students with a task similar in nature to the summative test. The

availability of a large item bank of tasks allows students multiple opportunities to demonstrate proficiency, resulting in achievement gains. (Helgeson & Kumar 1993, Cassady et al. 2001).

SPMS® provides educators with over 30,000 items aligned to content domains and selected state standards. These top-quality items have been carefully designed to assess explicit subskills necessary to demonstrate proficiency on state-mandated high-stakes tests. Items are created that test targeted learning objectives rather than general subject matter knowledge. Items use text, images, and layouts similar to what is seen in most standardized tests. Item banks mainly consist of multiple-choice and short answer questions, similar to most content in summative tests. To account for the more open-ended questions that many states are employing today, SPMS® also includes some performance tasks which include rubrics for scoring. The creation of items similar to those on high-stakes tests ensures students are given the best tools possible for demonstrating proficiency BEFORE any standardized testing takes place. In this way, SPMS® can be used as a component in a more complete assessment program for teachers and administrators. The information provided by SPMS® can be used in conjunction with informal teacher assessment, classwork, and other formative assessments to create a more detailed snapshot of student performance.

Effective Formative Assessments Provide Motivation to Students to Monitor Their Own Progress Towards Goals

Finally, formative assessments provide students with the motivation and confidence needed to succeed. Formative assessment is intended to help and encourage the learner, demonstrating the progress that the student has made over time, while at the same time providing diagnostic feedback specific to the learner to improve their achievement. It provides the philosophy that every student is capable of achieving mastery and counteracts the beliefs of students who attribute their poor performance to lack of ability. Since formative assessment occurs throughout the learning process, students are able to self-evaluate their progress and learning, making the necessary adjustments to achieve (Harlen & James 1996, Boston 2002). As Reeves noted (2004), students need to know why they are getting the results they are getting, because they believe that “If I don’t know why I’m losing the game, I won’t continue to play.” Teachers use classroom assessments to build confidence in all students as learners, laying a foundation of creating lifelong learners, who take responsibility for their own learning through self-assessment. “If we engage students in continuous self-assessment over time, we can keep them believing that success is within reach if they keep striving” (Stiggins 2002, 2004).

SPMS® provides educators with the ability to create unique assessments for many purposes and uses. Whether at the classroom or district-wide level, assessments can be constructed to cater to the individual needs of the students. After testing, students have access to all of their results. Teachers can provide them with their scores and progress, allowing them to document their growth and advancement towards learning goals. Students can take assessments at their own pace, accessing online practice tests, quizzes, and homework assignments designed to assess only the material selected by their teacher. These students can also examine online reports on current achievement and progress over time. Studies have shown that online

formative assessment programs such as SPMS® provide a higher level of student motivation and interest (Sharkey & Murnane 2006). Most students find formative quizzes and practice to be very beneficial in meeting learning goals. Furthermore, teachers report a greater engagement by students in learning (William et al. 2004, Cassady et al. 2001). SPMS® provides users with the tools and resources needed to demonstrate growth over time, ensuring success of all students.

Who Benefits from Using the Student Progress Monitoring System?

When a school chooses the Student Progress Monitoring System® (SPMS®), the entire organization and surrounding community will benefit.

First and foremost, students will benefit. As a result of extensive practice through formative assessment, students become confident learners, motivated by the evidence of growth over time. This assessment for learning provides students with the information to take charge of their own learning, enabling them to monitor their progress over time and to make decisions to bring greater success. Students can also take tests in a much less stressful situation. This low-stakes testing provides students with an environment where the level of test anxiety is lessened. Since results are used as a natural part of classroom instruction, this data is leveraged to induce growth and promote future performance (Cassady et al. 2001). Students will become accustomed to these forms of testing, and will likely be more confident of their ability when taking high-stakes tests. Researchers have demonstrated that the result of more formative assessment is greater achievement for all students, regardless of ability or initial achievement. SPMS® provides the unique tools and features to ensure academic success of ALL students.

Secondly, teachers will benefit from the use of SPMS® by being provided with a practical, useful tool to create frequent common assessments aligned to specific high-stakes criteria. The provision of thousands of items, created by expert item writers, aligned to selected state standards or general domains, across subject areas and grades, allows teachers to quickly and easily assemble relevant assessments to fit their needs. Teachers benefit from the savings in time that result from their ability to develop and use classroom assessments more efficiently. No longer is it necessary for a teacher to create their own test questions. Also, the multiple reporting features and the ability to receive instant feedback through immediate online scoring on the current achievement of every student provides teachers with the critical insight into how well students satisfy all learning objectives and offers teachers multiple opportunities to adjust instructional practices to maximize student achievement.

Finally, school administrators and the surrounding community will benefit from the reality of meeting the proficiency levels mandated by government guidelines. Administrators will be recognized as taking the action needed to promote the importance of education, contributing to the satisfaction of accountability standards. Schools that meet these standards or demonstrate adequate yearly progress receive full support through funding. Also, when schools are working effectively to produce students who are meeting or exceeding academic expectations, teacher morale and the level of community interest in education is increased. Parents will also benefit from seeing higher achievement and greater enthusiasm for learning in their children. The ability to access achievement data allows parents to remain informed in their child's learning, allowing them to reinforce the importance of education and promote a learning atmosphere at home.

SPMS® provides an integrated assessment solution that allows for effective formative assessments that provide immediate, high-quality feedback along with evidence of current achievement to students, teachers and administrators. Through the use of high quality items, the program is flexible, allowing for multiple applications and uses, resulting in motivation to students to monitor their own progress towards goals.

References

- Bangert-Drowns, R.L., Kulik, C.C., Kulik, J.A., & Morgan, M. (1991). *The instructional effects of feedback in test-like events*. *Review of Educational Research*, 61(2), 213-238.
- Bell, B., & Cowie, B. (2001). *The characteristics of formative assessment in science education*. Retrieved March 23, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/36/9f/67.pdf
- Black, P. & Wiliam, D. (1998). *Inside the black box: Raising standards through classroom assessment*. *Phi Delta Kappan*, 80(2), 139–144, 146–148. Retrieved March 23, 2007, from <http://www.pdkintl.org/kappan/kbla9810.htm>
- Boston, C. (2002). *The concept of formative assessment*. Retrieved March 26, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/2a/37/b8.pdf
- Cassady, J.C., Budenz-Anders, J., Pavlechko, G., & Mock, W. (2001). *The effects of internet-based formative and summative assessment on test-anxiety, perceptions of threat, and achievement*. Retrieved on March 26, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/25/ff/39.pdf
- Center for Comprehensive School Reform and Improvement. (2006). *Using classroom assessment to improve teaching*. Accessed on March 23, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/36/26/8d.pdf
- Harlen, W. & James, M. (1996). *Creating a positive impact of assessment on learning*. Retrieved on March 26, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/26/ed/0d.pdf
- Hattie, J.A. (1992). *Measuring the effects of schooling*. *Australian Journal of Education*, 36(1), 5-13.
- Helgeson, S., & Kumar, D. (1993). *Technological applications in science assessment*. Retrieved March 26, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/22/40/95.pdf

- Herman, J.L., Osmundson, E., Ayala, C., Schneider, S., & Timms, M. (2006). *The nature and impact of teachers' formative assessment practices*. Retrieved March 27, 2007 from <http://www.cse.ucla.edu/products/reports/R703.pdf>
- Kaftan, J., Buck, G., & Haack, A. (2006). *Using formative assessments to individualize instruction and promote learning*. Retrieved on March 23, 2007 from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/36/9f/67.pdf
- Marzano, R.J. (2003). *What works in schools: Translating research into action*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Popham, J. (2006). *The formative assessment flap*. Retrieved March 26, 2007 from <http://www.districtadministration.com/pulse/commentpost.aspx?news=no&postid=17222>
- Reeves, D. (2004). *Accountability in action: A blueprint for learning organizations*. Advanced Learning Press: 2nd edition.
- Reeves, D.B.(2002d). *Making Standards Work:How to implement standards-based performance assessments in the classroom, school, and district* (3rd ed). Denver, CO: Advanced Learning Press.
- Sadler, D. R. (1989). *Formative assessment and the design of instructional systems*. *Instructional Science*, 18, 119-144.
- Sharkey, N., & Murnane, R. (2006). *Tough choices in designing a formative assessment system*. Retrieved March 28, 2007 from <http://www.journals.uchicago.edu/AJE/journal/issues/v112n4/112406/112406.html>
- Stiggins, R. (2002). *Assessment crisis: The absence of assessment for learning*. Retrieved March 26, 2007 from <http://www.pdkintl.org/kappan/k0206sti.htm>
- Stiggins, R. (2004). *New assessment beliefs for a new school mission*. Retrieved March 23, 2007, from <http://www.assessmentinst.com/documents/NewBeliefs.pdf>
- Stiggins, R., & Chappuis, J. (2006). *What a difference a word makes: Assessment FOR learning rather than assessment OF learning*. Retrieved March 26, 2007 from <http://www.nsd.org/library/publications/jsd/stiggins271.cfm>
- William, D., Lee, C., Harrison, C., & Black, P. (2004). *Teachers developing assessment for learning: Impact on student achievement*. *Assessment in Education*:

Principles, Policy, and Practice 11, no. 1 (2004): 49–65.

Wiliam, D., & Thompson M. (2007). *Integrating assessment with instruction: What will it take to make it work?* The Future of Assessment: Shaping Teaching and Learning. Mahwah, N.J.: Lawrence Erlbaum Associates, 2007.