

Linkage between SBM and Learning Improvement: Classroom-based Assessment

Chorng-Jee Guo

President

National Taitung University

Taiwan, R.O.C.

Abstract

Changing perspectives and practices of assessment have received considerable attention at school and classroom levels in recent years. In view of recent calls for educational reform and progress in the theories of learning, instruction and curriculum, it is important that factors such as school contexts, local resources and students' individual learning needs should be taken into account in all teaching and learning activities. In this sense, classroom-based assessment plays important roles in the linkage between school-based management and improved learning. The main purpose of this article is to summarize results available from existing literature on topics such as principles of classroom-based assessment, procedures and strategies for the implementation of classroom-based assessment and some related issues. Sets of classroom-based assessment method that can be used to assess students' learning outcomes and key factors facilitating or inhibiting teachers to implement effective classroom assessment are also discussed.

Key words: classroom-based assessment, school-based management,
improved learning

Introduction

The main purpose of the Third International Forum on Education Reform is to explore the notion and sustainable practice of School-based Management (SBM) in contributing to learning improvement. In this conference, the main idea of SBM directly refers to "an education decentralization of authority to education institution to improve its performance". While the performance of an educational institution can be assessed in several dimensions, the focus of this paper is concerned with the question regarding to whether SBM contributes to learning improvement. In contrast to the use of large-scale standardized tests, our discussions will be dealing primarily with classroom-based assessment. The reasons why are explained in the first section where the role of classroom-based assessment is discussed. Since curriculum, instruction, learning and assessment are integral parts of educational practice, it is important to note recent advances in the theories of curriculum, learning and instruction, and to consider their possible impacts on the theoretical foundations and practical applications of educational assessment. Summarizing recent works in the existing literature, especially by keeping the learner-centered approach of learning in mind, the principles of classroom-based assessment are presented in the second section. In the third section, suggestions for the implementation of classroom-based assessment are given. Dilemmas and issues of classroom-based assessment are discussed next. Finally, some concluding remarks are made at the end of this paper.

Following definitions given in *Assessment Handbook* available online (<http://www.marymount.edu/irap/Handbook.htm>), assessment is considered as the systematic collection and analysis of information to improve student learning, while classroom-based assessment refers to methods of assessing student learning within the classroom environment using course goals, objectives, and content to gauge the extent of the learning that is taking place.

The Roles of Classroom-based Assessment

The definition of assessment has been expanded in two important ways, as noted by Sheila W. Valencia in 1997 (<http://www.eduplace.com/rdg/res/litass/>). First, assessment is acknowledged to have many different purposes and audiences. In addition to evaluating program effectiveness, assessments are used to qualify students for special services; to report to school boards, states, and parents; to monitor student learning and adjust teaching strategies; to evaluate students' growth over time; to engage students in self-evaluation; and to understand students' strengths and needs. Each of these different purposes and audiences may require different kinds of assessment and different types of information. By understanding different purposes and choosing different assessments to fit these purposes, we are more likely to discover information that will enhance teaching and learning. Second, the importance of classroom-based assessment has been recognized, giving it a central position in all assessment discussions. Classroom-based assessment is closest to actual learning and to children; therefore, it is most likely to influence instructional decisions and to engage children in evaluation of their own work. It is more specific to individual children and to instruction, and it occurs more frequently than formal norm-referenced testing. When assessment and instruction are melded, both teachers and students become learners. Teachers become more focused on what and how to teach, and students become more self-directed, motivated, and focused on learning (Sheila W. Valencia, <http://www.eduplace.com/rdg/res/litass/>).

Assessment of students' learning outcomes is crucial in evaluating the usefulness and effectiveness of SBM. To do this, educational researchers would typically develop experimental or correlational studies using large-scale standardized tests to test samples of students. Statistical analyses of the data collected then yield quantitative results which are to be interpreted based on the level of significance and so on. The main purpose behind such large-scale, high stakes standardized tests is to gather information about how an "average" student performs under certain circumstances. So that, policy makers would have the necessary information regarding how students perform on the national, state, district or school levels. As a matter of fact, far-reaching educational policies are often based on the results of such standardized testing programs. However, the use of standardized tests has been subjected to debates and criticisms, especially in view of recent reform movement toward decentralization, which advocates a balance between national and local curricula with emphasis on learning in the learner-center approach. In order to find out how individual students develop and learn in their idiosyncratic ways, with their special needs and in different contexts, classroom-based assessment using strategies such as teacher observations, student journals, student performances and portfolios, have been offered by researchers as having greater usefulness for evaluating students and informing classroom instruction (<http://www.enc.org/topics/assessment/classroom/>).

It is worthwhile noting that every assessment, regardless of its purpose, rests on three pillars: a model of how students represent knowledge and develop

competence in the subject domain, tasks or situations that allow one to observe students' performance, and an interpretation method for drawing inferences from the performance evidence thus obtained (Knowing What Students Know: The Science and Design of Educational Assessment, National Academy Press, available online, <http://www.nap.edu/books/0309072727/html/>). In the context of large-scale assessment, the interpretation method is usually a statistical model that characterizes expected data patterns, given varying levels of student competence. In less formal classroom assessment, the interpretation is often made by the teacher using an intuitive or qualitative rather than formal statistical model. It is also worthwhile noting that assessment, whether reflected in a standardized test score or in any other form of classroom-based assessment is based on subjective human value (<http://www.enc.org/topics/assessment/classroom/>). Deciding what the desired students' learning outcomes would be is certainly a value-laden judgment. For instance, in the field of science education, what would be the most important learning outcomes? Would it be science process skills, science concepts or a good understanding of the nature of science? Parents, teachers, educators and policy makers have different values regarding to such questions. These differing values often lead to different instructional goals, teaching strategies, evaluation criteria and different results in assessment. It should be pointed out also that the interpretation of the collected data depends on the underlying reference model. Lack of understanding of which model is being used in interpreting the collected data often confuses the debate over the merits of various assessment strategies and curricular reforms. There are three prominent models used in education (<http://www.enc.org/topics/assessment/classroom/>):

- The norm-referenced model, in which individual student performance is compared with a norm group;
- The criterion-referenced model, in which individual student performance is compared to a standard or criterion; and
- The growth model, in which individual student performance is assessed by examining student growth on a concept, knowledge base, or skill between two points in time.

Although the main theme of this paper is to discuss the linkage between SBM and learning improvement through the use of classroom-based assessment, this does not mean that one should go to the extreme as to stop using large-scale standardized tests at all. In fact, it is suggested that multiple methods and perspectives must go into the assessment of students by classroom teachers. Use of all assessment tools available, including standardized test scores, is imperative. The results of any form of valid and reliable assessment can provide useful feedbacks to students, teachers, school administrators, curriculum developers and policy makers. Therefore, teachers, researchers and educators have the responsibility to use a variety of assessment tools to build reliable portraits of achievement and performance of individual student and of different student groups, and to use that information to shape instruction, curriculum, other educational practices and educational policies. In summary, as suggested in *Assessment Handbook*, which is available online (<http://www.marymount.edu/irap/Handbook.htm>), effectively classroom-based assessment is expected to:

- Help faculty clarify teaching goals and what they want their students to learn
- Give students a better understanding of instructor expectations for work in the course and of how that work will be evaluated

- Facilitate communication and feedback between faculty and students
- Encourage students to engage in their own learning
- Offer increased information about the teaching-learning process

The Principles of Classroom-based Assessment

In the current thrust of education reform in Thailand, and many other countries around the world, curriculum contents are developed with an emphasis on the learner-centered approach. It goes without saying that the underlying principles of classroom-based assessment should be in alignment with the learner-centered approach. Although there are philosophical, psychological as well as educational reasons for adopting this approach, it seems instructive to briefly summarize what is meant by the learner-centered approach. This is nicely done by a Work Group of the American Psychological Association's Board of Educational Affairs (BEA) in an article that is available on line (<http://www.apa.org/ed/lcp.html>) entitled: “**Learner-Centered Psychological Principles: A Framework for School Redesign and Reform**”. These principles emphasize the active and reflective nature of learning and learners. From this perspective, educational practice will be most likely to improve when the educational system is redesigned with the primary focus on the learner. The 14 principles are divided into those referring to *cognitive and metacognitive (1-6), motivational and affective (7-9), developmental and social (10-11), and individual difference (12-14)* factors influencing learners and learning.

1. **Nature of the learning process.** The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

2. **Goals of the learning process.** The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.

3. **Construction of knowledge.** The successful learner can link new information with existing knowledge in meaningful ways.

4. **Strategic thinking.** The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

5. **Thinking about thinking.** Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

6. **Context of learning.** Learning is influenced by environmental factors, including culture, technology, and instructional practices.

7. **Motivational and emotional influences on learning.** What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests and goals, and habits of thinking.

8. **Intrinsic motivation to learn.** The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.

9. **Effects of motivation on effort.** Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

10. **Developmental influences on learning.** As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and

social domains is taken into account.

11. **Social influences on learning.** Learning is influenced by social interactions, interpersonal relations, and communication with others.

12. **Individual differences in learning.** Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.

13. **Learning and diversity.** Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.

14. **Standards and assessment.** Setting appropriately high and challenging standards and assessing the learner as well as learning progress -- including diagnostic, process, and outcome assessment -- are integral parts of the learning process.

The principles of classroom assessment are developed in several recent studies. In a Center for the Study of Evaluation Technical Report 517, which is available online from CRESST website (<http://www.cse.ucla.edu/index4.htm>), Shepard developed a framework for understanding a reformed view of assessment, where assessment plays an integral role in teaching and learning. He noticed that if assessment is to be used in classrooms to help students learn, it must be transformed in two fundamental ways. First, the content and character of assessments must be significantly improved. Second, the gathering and use of assessment information and insights must become a part of the ongoing learning process. The model he proposed is consistent with current assessment reforms being advanced across many disciplines. It is also consistent with the general argument that assessment content and formats should more directly embody thinking and reasoning abilities that are the ultimate goals of learning.

Shepard (CSE Technical Report 517) considered directly how classroom assessment practices should be transformed to illuminate and enhance the learning process. The changes being proposed for assessment are profound. They are part of a larger set of changes in curriculum and theories of teaching and learning, which many have characterized as a paradigm change. Assessment reformers today emphasize the need for a closer substantive connection between assessment and meaningful instruction.

In order to develop a model of classroom assessment that supports teaching and learning according to a constructivist perspective, it is important to see how a reconceptualization of assessment follows from changes in learning theory and from concomitant changes in epistemology and what it means to know in the disciplines. According to constructivist theory, knowledge is neither passively received nor mechanically reinforced; instead learning occurs by an active process of sense making. The new paradigm is characterized as emergent because it is not fully developed theoretically and surely not adopted in practice. While there are some shared understandings among cognitivists and constructivists about how learning principles should lead to reform of curriculum and instruction, there are also competing versions of these theories and ideas. Shepard's ideas can be highlighted as follows:

Cognitive and Social-Constructivist Learning Theories

1. Intellectual abilities are socially and culturally developed.
2. Learners construct knowledge and understandings within a social context.
3. New learning is shaped by prior knowledge and cultural perspectives.
4. Intelligent thought involves "metacognition" or self-monitoring of learning and thinking.

5. Deep understanding is principled and supports transfer.
6. Cognitive performance depends on dispositions and personal identity.

Reformed Vision of Curriculum

1. All students can learn.
2. Challenging standards aimed at higher order thinking and problem solving.
3. Equal opportunity for diverse learners.
4. Socialization of students into the discourse and practices of academic disciplines.
5. Authenticity in the relationship between learning in and out of school.
6. Fostering of important dispositions and habits of mind.

Classroom Assessment

1. The substance of classroom assessments must be congruent with important learning goals.
2. The content of assessments must match challenging subject matter standards and be connected to contexts of application.
3. Assessments must mirror important thinking and learning processes, especially modes of inquiry and discourse, as they are valued and practiced in the classroom.
4. To help students learn and to improve instruction
5. Expectations and intermediate steps for improvement be made visible to students
6. Students be actively involved in evaluating their own work.
7. Used to evaluate teaching as well as student learning

Advances in the cognitive sciences have broadened the conception of those aspects of learning that are most important to assess. Summaries on the advances in the sciences of thinking and learning were given in a recent book entitled “Knowing What Students Know: The Science and Design of Educational Assessment”, published in 2001 by National Academy Press, which is available online (<http://www.nap.edu/books/0309072727/html/>) as follows:

1. Contemporary theories of learning and knowing emphasize the way knowledge is represented, organized, and processed in the mind. Emphasis is also given to social dimensions of learning, including social and participatory practices that support knowing and understanding.
2. Assessment practices need to move beyond a focus on component skills and discrete bits of knowledge to encompass the more complex aspects of student achievement. Much of what one knows is domain- and task-specific and organized into structures known as schemas. Assessments should evaluate what schemas an individual has and under what circumstances he or she regards the information as relevant. This evaluation should include how a person organizes acquired information, encompassing both strategies for problem solving and ways of chunking relevant information into manageable units.
3. Metacognition is crucial to effective thinking and problem solving and is one of the hallmarks of expertise in specific areas of knowledge and skill. Assessment should therefore attempt to determine whether an individual has good metacognitive skills.
4. Not all children learn in the same way and follow the same paths to competence. Children’s problem-solving strategies become more effective over time and with practice, but the growth process is not a simple, uniform progression, nor is there movement directly from erroneous to optimal solution strategies.

5. Children have rich intuitive knowledge of their world that undergoes significant change as they mature. Learning entails the transformation of naïve understanding into more complete and accurate comprehension, and assessment can be used as tool to facilitate this process. To this end, assessment, especially those conducted in the context of classroom instruction, should focus on making students' thinking visible to both their teachers and themselves so that instructional strategies can be selected to support an appropriate course for future learning.

6. Practice and feedback are critical aspects of the development of skill and expertise. One of the most important roles for assessment is the provision of timely and informative feedback to students during instruction and learning so that their practice of a skill and its subsequent acquisition will be effective and efficient.

7. As a function of context, knowledge frequently develops in a highly contextualized and inflexible form, and often does not transfer very effectively. Transfer depends on the development of an explicit understanding of when to apply what has been learned. Assessments of academic achievement need to consider carefully the knowledge and skills required to understand and answer a question or solve a problem, including the context in which it is presented, and whether an assessment task or situation is functioning as a test of near, far, or zero transfer.

8. Much of what humans learn is acquired through discourse and interaction with others. Thus, Knowledge is often embedded in particular social and cultural contexts, including the context of the classroom, and it encompasses understandings about the meaning of specific practices such as asking and answering questions. Assessments need to examine how well students engage in communicative practices appropriate to a domain of knowledge and skill, what they understand about those practices, and how well they use the tools appropriate to that domain.

9. Models of cognition and learning provide a basis for the design and implementation of theory-driven instructional and assessment practices. The vast majority of what is known has yet to be applied to the design of assessments for classroom or external evaluation purposes.

10. Many highly effective tools exist for probing and modeling a person's knowledge and for examining the contents and contexts of learning. The methods used in cognitive science to design tasks, observe and analyze cognition, and draw inferences about what a person knows are applicable to many of the challenges of designing effective educational assessments.

A more practical list of principles of assessment for classroom teachers is adapted from Manitoba Education and Training, *Kindergarten to Grade 4 English Language Arts: A Foundation for Implementation* (Winnipeg, MB: Manitoba Education and Training, 1998). These principles of assessment are expected to apply to all subject areas and grade levels, and they appear to cover most of the principles that were mentioned above.

1. An Integral Part of Instruction and Learning

Assessment...

- is meaningful to students
- leads to goal setting
- fosters transfer/integration with other curricular areas and application to daily life
- reflects instructional strategies used
- uses a wide variety of strategies and tools
- reflects a definite purpose

2. Continual and Ongoing

Assessment...

- occurs through all instructional activities
- occurs systematically over a period of time
- demonstrates progress toward achievement of learning outcomes

3. Authentic and Meaningful Mathematics Learning and Contexts

Assessment...

- focuses on connecting prior knowledge and new knowledge (integration of information)
- focuses on authentic problem solving contexts and tasks
- focuses on application of strategies for constructing meaning in new contexts

4. Collaborative and Reflective Process

Assessment...

- encourages meaningful student involvement and reflection
- involves parents as partners
- reaches out to the community
- focuses on collaborative review of products and processes to draw conclusions
- involves a team approach

5. Multi-dimensional—Incorporating a Variety of Tasks

Assessment...

- uses a variety of authentic strategies, tasks, and tools
- serves a variety of purposes and audiences
- reflects instructional tasks

6. Developmentally and Culturally Appropriate

Assessment...

- is suited to student's developmental levels
- is sensitive to diverse social, cultural, and linguistic backgrounds
- is unbiased

7. Focused on Students' Strengths

Assessment...

- identifies what students can do and are learning to do
- identifies competencies in the development of knowledge, skills and strategies, and attitudes
- considers preferred learning styles
- focuses on celebrations of progress and success
- provides for differentiation
- provides information to compare a student's performance with his or her other performances

8. Based on How Students Learn

Assessment...

- uses sound educational practice based on current learning theory and brain research
- fosters development of metacognition
- considers multiple intelligences and learning styles
- uses collaborative and cooperative strategies
- considers research on the role of memory in learning
- reflects current models of mathematics learning

9. Offer Clear Performance Targets

Assessment...

- encourages student involvement (setting criteria, measuring progress, working toward outcomes and standards)
- encourages application beyond the classroom
- provides a basis for goal setting
- provides students with a sense of achievement
- provides information that compares a student's performance to predetermined criteria or standards

Implementing Classroom-based Assessment

Briefly speaking, the implementation of classroom-based assessment may be considered as a three-part process: understanding why you want to assess, knowing what you want to assess, and determining what the results tell you and how you will use them (<http://www.marymount.edu/irap/Handbook.htm>):

Understanding why. The first part of the assessment process involves building a base of understanding about the benefits and tools of assessment and about what you want to learn from the process.

Knowing what and how you will assess. Effective assessment is based on clear, explicitly stated goals and objectives developed with a clear focus on when and why you will assess. Developing the methods to implement the assessment plan also comes in this part of the process, when you will decide to evaluate student learning at key points in the semester, or throughout the course.

Determining what the results tell you and what you will do once you know. Collecting assessment data is only the beginning. Understanding what the data tell you is key to using the results to enhance teaching and learning in your classroom. Your results should both document your accomplishments in the course and to guide curricular revisions and improvements.

The Early Science Learning program's process, the Documentation-Assessment Cycle, revolves around the collection of classroom-based data (<http://www.ets.org/pathwise/scidocument.html>). It identifies, over time, patterns and stages of learning for both individuals and groups. It consists of the following five stages:

Stage 1: Identify appropriate science-related goals and concepts, activities and experiences, classroom settings

Stage 2: Collect evidence of children's learning including records of children's language, children's work samples

Stage 3: Describe evidence of children's learning without judgment, with colleagues

Stage 4: Interpret evidence of individual and group understanding by connecting to learning goals, identifying patterns of learning

Stage 5: Apply new information and understanding to the improvement of instruction and curriculum, future assessment

A model process for implementing the use of classroom-based assessments in order to collect information regularly and use that information to make more informed instructional decisions was developed by EMSTAC (Elementary and Middle School Technology Assistance Center), using a different term "curriculum based assessment" (<http://www.emstac.org/registered/topics/cba/index.htm>). This model helps teachers focus on the primary goal of curriculum based assessment, which is to determine how

well the student is progressing in the current curriculum. Because students are at a variety of levels when they enter a classroom, a gap between the demands of the curriculum and student needs will always exist. Curriculum based assessment helps teachers shrink that gap with each student, regardless of whether or not he or she has been identified for special services of any kind. The following procedure synthesizes the steps involved in classroom-based assessment as suggested in several research-based models (<http://www.emstac.org/registered/topics/cba/index.htm>).

1. Analyze the curriculum:

Inappropriate or inadequate curricula are more often at the root of student academic failure than any psychological or cognitive problem on the part of the student. In an effort to prevent this failure for students, it is wise to begin the school year by conducting a critical evaluation of the curriculum. To conduct this evaluation of the curriculum, teachers should ask themselves the following questions:

- What is the body of knowledge and the skills addressed in the curriculum and when are they to be learned (scope and sequence)?
- Is the relationship between these skills and bodies of knowledge logical and legitimate?
- Will the instructional activities connected to the educational goals facilitate student learning effectively?
- Are the performance expectations for demonstrating knowledge and skill mastery logical and appropriate?

2. Determine current levels of student functioning:

This step involves looking at multiple forms of evidence of student performance and competency in the current curriculum. To determine student levels of functioning, teachers should ask themselves:

- What do these students already know? How do students perform currently?
- Is the student realistically in reach of the current goals of the curriculum?
- What are my own experiences and observations of this student?
- Does this student display any characteristics of students with learning difficulties (i.e., distractibility, passivity, difficulty generalizing material, etc.)?
- What behavior characterizes this individual student?

3. Select specific target behaviors:

This stage involves developing the criteria for acceptable performance. The designated behaviors should be sensitive to changes in achievement. They must be objectively observable and used to indicate where there are instructional mismatches. The conditions under which these behaviors take place are specified. The goals should be rigorous and realistic for each student. When designating these behaviors, teachers should ask themselves:

- What do students need to do to attain the academic goal?
- What behaviors demonstrate mastery?
- What behaviors demonstrate lack of mastery or frustration?
- What are behaviors that can be observed and measured?
- Are these defensible indicators of meaningful achievement? How do I know this?

4. Determine appropriate criteria for mastery:

There are many ways to approach this task, and many models with which to approach it. Teachers can also use students' target behaviors to assist with developing appropriate criteria. Some student behaviors are indicative of mastery and some are

indicative of failure to master concepts. When developing appropriate criteria for mastery, teachers should ask themselves:

- What is the mastery goal?
- What does it look like and how is it defined?
- How can it be measured, for both content and cognitive depth?
- To whom and in what way is the goal communicated?
- How is it modified?

5. Design assessment procedures:

The selection of target behaviors and assessments are linked inextricably. The content of the assessments should be tied directly to what is being taught during instruction, and a few probes should assess retention of what has been taught previously. It should also include probes to assess whether skills taught are being generalized to broader skills or other content areas. They must be prepared in advance, focused on skills and sub-skills taught directly in the curriculum, quick and easy to administer, long enough to give reliable and valid data, and integrated, perhaps assessing more than one sub-skill at a time. When developing the assessment procedures, teachers should ask themselves the following questions:

- Are the assessments multidimensional and flexible, able to be modified for various goals?
- Are they assessing skills and sub-skills taught in the curriculum (with a variety of instructional tools or practices)?
- Are they built logically into the scope and sequence of the curriculum?
- Can they be administered in a brief period, within the context of classroom instruction?
- Do they tell me if the student has mastered the skills in question?
- Can they be used or modified for multiple levels and stages of learning?

6. Collect and display data:

This step is important because it aids with the systematic and regular nature of the CBA process. When teachers collect and display data in a routine way that is predictable and understandable to students, the data and what it shows about student growth over time can be very powerful and motivating for all involved. When collecting and displaying data, teachers should ask themselves the following questions:

- Does the system involve student participation and responsibility?
- Can data be collected regularly? Is the process systematic? Define this process.
- Has the process been communicated to others, including students and parents?
- Is the process of displaying or sharing data done in a respectful and confidential way?
- Does the process motivate students to be more self-monitoring and aware of their learning progress?

7. Make educational decisions:

Once the information is collected and displayed, it only makes sense that teachers should use the information to make decisions about the effectiveness of

curriculum and instruction for each student, whether targeted for intervention or not. Teachers will use the data to justify changing the intervention, or not changing the intervention. When making educational decisions, teachers can ask themselves the following questions:

- Who is benefiting from the current environment and who is not?
- What can be done to change the intervention or environment to assist those who are not benefiting?
- What can be done to change the intervention to continue to benefit those who are progressing rapidly?

A number of assessment methods can be used for classroom-based assessment. Alternative assessment has evolved from recent educational reforms, which emphasize performance in authentic learning contexts and greater learner autonomy. Coombe and Hubley gave a few examples of alternative assessment in an article entitled [Creating Effective Classroom Tests](http://taesig.8m.com/createcon.html) (<http://taesig.8m.com/createcon.html>):

Self-assessment

Self-assessment plays a central role in student monitoring of progress in a language program. It refers to the student's evaluation of his or her own performance at various points in a course. An advantage of self-assessment is that student awareness of outcomes and progress is enhanced.

Portfolio Assessment

Portfolios are collections assembled by both teacher and student of representative samples of on-going work over a period of time. The best portfolios are more than a scrapbook; they contain a variety of work in various stages and utilize multiple media.

Student-designed Tests

A novel approach within alternative assessment is to have students write tests on course material. This process results in greater learner awareness of course content, test formats, and test strategies. Student-designed tests are good practice and review activities that encourage students to take responsibility for their own learning.

Learner-centered Assessment

Learner-centered assessment advocates using input from learners in many areas of testing. For example, students can select the themes, formats and marking schemes to be used. Involving learners in aspects of classroom testing results in reduced test anxiety and greater student motivation.

A collection of assessment strategies that can be used in classroom assessment is described in a report available online (Alaska Department of Education & Early Development). Samples showing how each type of strategy might be used at various grade levels are also given. These strategies include graphic organizers, interviews, observation, performance tasks, creative performances and exhibitions, self-and-peer-evaluations, journals and learning logs, contracts, tests, portfolios, and so on.

Sheila W. Valencia in 1997 (<http://www.eduplace.com/rdg/res/litass/>) pointed out that teachers can become more effective and efficient at classroom-based assessment if they:

- focus assessment on the most important outcomes in the curriculum.
- be clear about the goals of instruction and make them explicit to the students.
- make self-assessment a dependable, integral part of your classroom.

- help students understand what good reading and good writing look like by providing them with examples, examining work, reviewing portfolios, and discussing criteria.
- schedule portfolio visits with your students.
- use classroom assessments and portfolios to help with grading.
- begin classroom assessment slowly.

Dilemmas and Issues of Classroom-based Assessment

As mentioned previously, classroom-based assessment plays important roles in the movement toward school-based management. Results of carefully designed, ongoing classroom-based assessments provide important information for teachers, researchers and educators to make sure that educational practices in SBM lead to improved learning. It is therefore important to inquire into questions such as what are key factors to school administrators, teachers, and students to institutionalize effective classroom assessment? Focusing on teachers, it is important to consider issues such as: “What are the major impediments to teachers' use of classroom-based assessment as a tool in guiding teaching and learning? How can the effects of these impediments be minimized?”

Since SBM typically involves different curriculum, instruction and assessment in different school and classroom settings, and is generally expected to take students' individual needs into account, teachers are expected to face very tough challenges in preparing lesson plans, in carrying out classroom teaching and in creating quality classroom-based assessment. As most teachers were initially prepared and trained quite differently, they lack the knowledge, skills and experiences to develop instructional materials and assessments for their own classes, using local resources that are of individual interests and relevance to the students. Therefore, it is also important to consider issues such as: “What kinds of resources, supports and guidance teachers would need? What are effective ways to provide teachers with their needs in this respect?”

Apparently, it is very desirable to set up in-service training programs and/or school-based professional development programs in order to help teachers develop professionally. Regarding the latter, some of the author's research experiences in Taiwan described in the Second International Forum may be helpful. Additional lessons can be found from existing literature. In 1997, Shepard pointed out in CSE Technical Report 451 entitled *Insights Gained from a Classroom-Based Assessment Project* that current calls for assessment-driven reform acknowledge the need for staff development but tend to underestimate the extent and depth of what is needed. Well-intentioned efforts to help students get good at assessment tasks can be misdirected if teachers do not understand the philosophical and conceptual bases of the intended curricular goals. The original purpose of assessment tasks could be distorted. Shepard suggested that to make changes that are conceptually meaningful, teachers need support on an ongoing basis.

1. They need appropriate materials to try out and adapt.
2. They need *time* to reflect and to develop new instructional approaches.
3. They need support from experts to learn (and challenge) the conceptual basis behind intended reforms.

Shepard also pointed out that the need for materials poses several interesting dilemmas. Professional, autonomous teachers do not need canned curriculum packages or scripted lessons. However, if we want teachers to try significantly

different content and modes of instruction, teachers would argue that they have neither the time nor the know-how (initially) to invent their own materials. Having abundant supply of materials in the curriculum library may not help, because teachers do not have time to review them and they probably can not tell which is good and which is not. According to Shepard, what worked best in their project was for them to supply good examples in response to teacher-identified topics. Then teachers were excellent at extending the examples and inventing entire instructional units. Teachers learned the most by trying new, challenging content with their students and by being surprised by what their students could do. Just as constructivist pedagogy would allow students the opportunity to develop their own understandings, teachers need the opportunity to try new instructional strategies, observe what works and what doesn't, and then talk with colleagues about both logistics and underlying rationale.

Of course, strong support and leadership from school administrators are crucial in order for teachers to successfully implement classroom-based assessment. Also, parents need to be better informed of the purpose and practice involved, so that they can cooperate with the teachers by providing appropriate assistance and resources. Students are expected to take up certain responsibilities for their own learning and participate actively in all sorts of classroom activities.

Conclusions

Assessment has changed in purpose, format, and process in recent years. Assessments now include more authentic tasks, a balanced approach to using formal and informal assessments, greater emphasis on classroom-based evidence and growth over time, and more involvement of students in the evaluation of their own work. Classroom-based assessment plays important roles to make sure that SBM contribute to improved instruction and learning. Through authentic classroom-based assessment, teachers, students, and others can see the real learning and growth that is taking place, and, as a result, teachers and students are able to adjust and refocus teaching and learning. Finally, just as instruction and assessment should be designed and conducted to meet students with their individual needs, it is important to keep in mind that different teachers at different schools will need different supports to develop professionally. In this sense, establishing quality school-based professional development programs appears to have important roles to play in SBM.