1 No Longer Business as Usual

"It is not so very important for a person to learn facts. For that he does not really need school. He can learn them from books. The value of an education is . . . not the learning of many facts but the training of the mind to think things that cannot be learned from textbooks."

—Albert Einstein

For American education, the past few decades have promised one reform after another. But until 2010, these recommendations have been long on philosophy and short on actually changing what happens between teachers and students. With the advent of the Common Core State Standards in Math and English Language Arts (ELA), the new state Science and Social Studies standards, and the 21st century skills, an unprecedented transformation in American classrooms is underway.

The new standards, combined with the 21st century skills, will force a complete redesign of the PK–12 curriculum and instructional programs in 46 of the 50 states. Students are expected to see interrelationships, to think at deeper levels, to construct meaning for themselves, and to process information independently. This is a radical shift from the current focus on textbook-based and teacher-centered instruction, on providing students as much information as possible, and a reliance on repetition and memorization. In addition, because the new standards are internationally benchmarked, American students who master the new curriculum will be equipped to achieve respectable scores on such world-class tests as TIMSS, PISA, ACT, and SAT. This too, will represent a positive turnabout, since the United States is

currently 32nd among nations of the world in student achievement (Hanushek & Peterson, 2011). As *Good to Great* icon Jim Collins (2001) said of blue-ribbon businesses that brought themselves back from failure, quality organizations (and we feel education is certainly one of these!) must honestly confront the brutal facts about their performance and be willing to transform themselves.

To accomplish and sustain this new curriculum and its instructional requirements, the entire district—teachers, principals, central office, and the Board of Education—must assume a portion of accountability.

- Teachers will need a new skill set, including (a) how to develop effective course tools to deliver and assess the new curriculum—including strategies for *differentiation;* (b) how to replace traditional teaching methods with "best-practice" techniques that are equal to the *cognitive demands* of the new standards; and (c) how to provide intervention as needed—both remediation and enrichment. Course tools include a curriculum map or pacing guide, unit plans that specify what is to be taught and how, as well as unit tests and authentic assessments to measure student mastery of the standards.
- Principals must facilitate the classroom implementation of the new curriculum and continuously monitor its instructional delivery. They will need to (a) identify teacher behaviors that yield more and less effective student responses and (b) prescribe corrective action plans as needed—including specific suggestion for best practices that are aligned with the new standards. With the appropriate training and involvement, principals will share with their teachers the responsibility for implementing the new curriculum. Within each school, the faculty and administrative team will forge a strategic partnership to help students master these more rigorous standards. The importance of the principal's responsibility for the new curriculum cannot be overstated. In fact, the principal's job description should set forth specific duties in the areas of curriculum, classroom instruction, and student assessment. Moreover, each principal's annual performance review should reflect his and her level of success in these important new duties.
- School leaders and Boards of Education must provide structured opportunities for staff training, allocate the time and resources needed, and enact policies and procedures that will provide ongoing support. They must have the courage and commitment to hold themselves and the entire school staff accountable for each of their respective roles and responsibilities to move the quality of the curriculum and classroom instruction to that next level of rigor essential to student success in the 21st century.

MAJOR DIFFERENCES BETWEEN THE FORMER STANDARDS AND THE NEW CORE

. . . From those who REALLY know . . . .

*All students need strong fiction and nonfiction skills to achieve general knowledge required for career and college. In fact, the Common Core suggests that by the time students graduate, 70% of what they read—and understand—should be quality nonfiction. The new emphasis on robust nonfiction skills across the content areas of ELA, mathematics, science, and social studies is a critical lynch pin for students to successfully interpret the information they will encounter every day. In real life, there will be no teacher and no textbook to guide their thinking. So while we still have them, we must equip them to be independent and savvy consumers of what they read, see, and hear.—**Sue Long, PhD, retired assistant superintendent of Curriculum and Instruction, Akron Public Schools***

With the former standards, most curriculum skills and concepts could be taught and assessed one standard at a time. Many were designed to allow for mastery from memorization and algorithmic, formulistic thinking directed by the teacher and texts. In contrast, the new standards combine skills and concepts into holistic, integrated webs of ideas. Mastery of the new standards requires students to think at deeper levels about integrated concepts and to make *independent* connections among concepts and ideas. See the following examples:

English Language Arts, Grade 6	
Former State Standards	**Common Core**
R.6.2. Identify the features of setting, and explain their importance in literary text.	**RL 6.5.** Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
R.6.3. Identify the main and minor events of the plot, and explain how each incident gives rise to the next.	
R.6.5. Identify recurring themes, patterns, and symbols found in literature from different eras and cultures.	

Math, Grade 2	
Former State Standards	**Common Core**
NS.2.6 Model, represent, and explain subtraction as comparison, take-away and part-to-whole; e.g., solve missing addend problems by counting up or subtracting, such as "I had six baseball cards, my sister gave me more, and I now have ten. How many did she give me?" can be represented as 6 + ? = 10 or 10 – 6 = ?	**2. OA.1** Use addition and **subtraction** with 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Social Studies, Grade 9	
Former State Standards	**New State Standards**
H.9.14 Explain causes/consequences of fall of Soviet Union and end of Cold War.	**WH.23** The break-up of the Soviet Union ended the Cold War and created challenges for its former allies, the former Soviet republics, Europe, the United States and the nonaligned world.

Science, Grade 5	
Former State Standards	**New State Standards (Note: The new standards for Grade 5 reflect what was previously in Grade 8 standards.)**
ES.5.1 Describe how night and day are caused by Earth's rotation.	**ESS. 5.3** Most of the cycles and patterns of motion between the Earth and sun are predictable: a. Earth's revolution around the sun takes approximately 365 days. b. Earth completes one rotation on its axis in a 24-hour period, producing day and night. This rotation makes the sun, stars, and moon appear to change position in the sky. c. Earth's axis is tilted at an angle of 23.5°. This tilt, along with Earth's revolution around the sun, affects the amount of direct sunlight that the Earth receives in a single day and throughout the year. d. Average daily temperature is related to the amount of direct sunlight received. Changes in average temperature throughout the year are identified as seasons.

As these examples show, making the conversion from the former to the new standards is not a simple matter of inserting the new content into the existing documents. Several steps are required, and the effort must be a strategic one. In and of themselves, the standards are not the curriculum, and they must be (a) examined and discussed by grade level or course work teams to determine the specific skills and concepts contained in each. From there, the teams decide (b) how student mastery will be measured, (c) what classroom delivery strategies will be appropriate, (d) which print and nonprint materials will be needed, (e) how technology fits in, and (f) whether there are readiness or lead-up skills and concepts to be included. Combined, these elements become the curriculum—an umbrella label often used by districts to subsume the course content, classroom instruction, materials and technology, and student assessment.

These steps must be completed by grade level and course writing teams whose members include not only the general education teachers but also teachers of special needs, gifted, and English as a second language students who work at each grade level and in each course. Moreover, to ensure administrative involvement with and accountability for the new curriculum, members

of the central office staff, principals, and academic coaches should each be appointed to at least one writing team in each subject. This will provide the opportunity for that important partnership among teachers, support staff, and administrators to share the accountability for transforming the curriculum.

As they complete these steps, the work teams will produce teaching documents or course tools (curriculum maps, unit plans, and unit assessments) that will be used to implement the new curriculum in school classrooms. Once a work team has "unpacked" the standards for its grade-level and/or course, the team decides how best to cluster the standards into meaningful units of instruction. With previous standards, a Math unit might contain only Number Sense, or a Language Arts unit might be confined to Writing Conventions. But the Common Core in Math and ELA directs districts to use an *integrated approach* to provide a more authentic and broad-based context for student learning. So a Math unit might now contain Measurement and Data, Geometry, and Operations and Algebraic Thinking; and a Language Arts unit might include Reading for Information, Writing, Speaking, and Language.

The writing team then determines how to sequence these units across the school year for the most effective developmental flow. This is captured in a year-long curriculum map, which guides the pacing, sequence, cross-strand integration, and strategic repetition of the new standards. It is also during this step that the work teams should examine the standards required of students in the previous and subsequent grade levels. This will guarantee articulation across grade levels to ensure that the degree of sophistication builds each year to culminate in college and career readiness.

From the curriculum maps, the teacher work teams then devise unit plans to actually guide the delivery and assessment of the standards in each classroom. Currently, most elementary instruction is guided by the teacher's manual, and secondary teachers rely on the textbook's table of contents. But the precise interpretation of these manuals and textbooks is left to each teacher, jeopardizing the consistency of instruction and eliminating any quality control within a grade level or subject. Given the huge content and cognitive difference in the new standards, the major shift required in teaching methods, and the uncomfortable (but undeniable) fact that the present system of "academic freedom" has failed to yield the desired results, a more definitive and structured approach is called for.

In contrast to the current approach to classroom delivery, the unit plans proposed in this book:

- are anchored by the cluster of standards,
- specify valid teaching strategies and student responses that actively engage students in processing their learning and constructing new meaning,
- include traditional assessments to monitor selective mastery; and
- include authentic or performance assessments to determine independent mastery.

However, they are not scripted units that attempt to make teachers clones of each other with prescribed dates and page numbers. Each unit follows a

consistent format that sets forth teaching-learning activities derived from the research on best practices and constructivist learning. Teacher work teams who develop the units include several options from which their colleagues may choose to allow for personal style. Each unit plan also designates print and nonprint materials to be used, technology needed, and techniques for differentiation. Also included are paper-pencil assessments and authentic assessments with scoring rubrics, based on the unit standards. In their study of high-achieving schools from across the country, Harvey Daniels and Marilyn Bizar (2005) discovered that one common feature was the use of thematic, integrated units that included constructive and authentic learning activities. We have carefully researched each of these components (March & Peters, 2007) and used them with numerous school districts.

Combined, these curriculum maps and unit plans should be approved by the Board of Education as the district's new curriculum, and they thus become the course tools by which the new curriculum is implemented in every classroom. The inclusion and alignment of all these necessary components are what Larry Ainsworth (2010) calls a "rigorous curriculum" (pp. 4, 24). Following this, teacher-developed but standard-based curriculum becomes the expectation for every teacher to teach, every principal to monitor, and every central office administrator to facilitate.

IMPLICATIONS FOR CLASSROOM INSTRUCTION AND ASSESSMENT

While the writing teams work to transform the curriculum, they will also discover that most of the traditional classroom teaching and learning strategies are no longer appropriate or adequate. With the Common Core, the new Science and Social Studies standards, and the 21st century skills as the basis of WHAT students learn, the instructional methods for HOW they learn will need to change accordingly. Teachers will need to actually teach students how to think—and how to think differently and more deeply than was previously required. Art Costa and Bena Kallick (2010) refer to a shift from transmitting meaning to constructing meaning, saying it's not the content that students store but the memory of constructing it (p. 224). As shown in the sample standards (Table 1.1), teachers will need to create opportunities for students to see how skills are combined to solve a problem or how multiple ideas are integrated to create a new concept. Students will experience a new level of learning that is more about relationships, comparisons, cause and effect, and what-ifs than the memorization of information. Virtually none of the new standards is a matter of rote recall of facts or a mechanical application of naked algorithms and rules. Instead of mimicking what they see in class or textbooks to show mastery, students must construct new meaning on their own. Table 1.1 illustrates this shift in detail. Grant Wiggins and Jay McTighe (2008) see this process of making meaning and then transferring it to life as the core mission of school reform. Larry Ainsworth (2010) calls this "raising the level of teaching" (p. 5).

Table 1.1 A Comparison of Previous Classroom Strategies With Those Needed for the New Standards

With Previous Standards . . .	**With the New Common Core and 21st Century Standards . . .**
Teachers have focused most of their planning on their behaviors and what they would provide to students.	Teachers will need to focus on what students will do to show mastery and from that decide what teaching strategies will be most likely to yield those results.
Teachers have typically provided the single best way to perform a task or solve a problem. Alternative methods have not been a priority.	Teachers will need to show students multiple ways to approach tasks and to solve problems, and it will be essential that students can explain which approach they used and how it worked for them.
Students have been passive learners; they have been given information and directed how to apply it. With sufficient, controlled repetition and directed practice, students could appear to have mastery, when it may be only mimicry of what they've seen.	Students will need to become active learners; they will need to be shown how to: ✓ discover and interpret information independently, and ✓ apply skills and concepts independently and in unfamiliar contexts to solve problems and complete tasks. Because they are required to construct their own meaning—and in varied contexts—it is less likely that students can mimic mastery.
Practice has been limited to "controlled" examples that were identical with or parallel to those used in class (i.e., text passages, experiments, math problems, and various social studies events and scenarios). Contexts have been limited to the familiar, and students have not been led to stretch. Correct answers were largely predetermined.	Practice will need to begin with controlled examples but quickly move to unfamiliar examples that require students to construct meaning for themselves in unfamiliar contexts. This more authentic problem solving will prepare students to deal with problems they encounter in real life—many of which cannot be anticipated by the classroom teacher. Several correct answers will be possible, providing they are aligned with the criteria set forth in the standards—both in terms of content and cognitive demand. Students will be expected to explain and justify their answers.
Students have taken in information by observing teacher demonstrations, listening to teacher lectures, reading assigned texts, or viewing various media.	Students will take in information from various sources and from a diverse and greatly expanded array of electronic sources and media. In addition, students must show they can (a) gather the appropriate information and (b) distinguish relevant from irrelevant information and authentic from invalid evidence.
Students have processed information by taking notes, doing seat-work, and filling in blanks—all using language and numbers mimicked or paraphrased from the text or teacher.	Students will still take notes but not fill in controlled blanks; they will interpret details of what they see and hear through such constructive techniques as paraphrasing; summarizing; formulating questions or problems; sketching or diagramming; or completing

(Continued)

Table 1.1 (Continued)

With Previous Standards . . .	With the New Common Core and 21st Century Standards . . .
	"if-then" statements. Most of the new standards require students to cite evidence for their observations, inferences, and conclusions.
Mastery has been determined by filling in blanks or selecting from among multiple choices—using language mimicked or paraphrased from the text or teacher.	Mastery will be determined on several levels. To prepare students for high-stakes tests, some multiple-choice and short-answer items are essential. But reflecting the cognitive demand of the new standards, students must also perform authentic or performance tasks that certify they can apply what they have learned to solve real-world problems; analyze concepts and ideas to identify determinant relationships; synthesize information to create original products; and critically but objectively evaluate ideas, products, and information using valid criteria.

To be fair, this current generation of classroom teachers has not been trained to provide such instruction, and simply telling them they must begin to do so is not only unfair, it's naïve. But the development of the new curriculum with its accompanying course tools to deliver provides the perfect opportunity to embed the needed training into the context of teachers' daily work and regular team meetings. The writing teams can be trained as they work with the new standards to transform the curriculum and as they develop the course tools for classroom implementation.

In some districts, all teachers at each grade level and every teacher assigned to specific courses will be involved in one or more work teams and thus will participate in this first level of training. For larger districts, the work teams will be representative. But as these additional teachers join their work team colleagues in using the course tools, they too will develop the new teaching behaviors and skills. Whatever the size of the district, as the course tools are piloted, all teachers will be involved. They will participate in the continuous monitoring of student performance and bring the results to the regularly scheduled team meetings. In addition, they will offer edits and suggestions to the writing teams to improve the quality and usefulness of the course tools for the following school year. In our experience, no external "professional development"—no matter how famous the presenter—can ever replace this embedded, contextual growth training. They shift from what Bruce Joyce and Beverly Showers (2002) called passive users of someone else's material to active developers of their own tools.

This book will highlight the necessary adjustments in classroom instruction and the new teaching practices and skills using examples from all four core subjects. It is especially important that principals and academic coaches fully understand these changes as well and can help teachers transition to the new practices. Involving administrators on the writing teams will ensure that they too become fluent in these best practices. As Larry Ainsworth (2010) puts it,

transforming education "makes us jugglers, attempting to keep 100 balls in the air simultaneously . . . including the many new practices we expect our teachers and administrators to be learning rapidly and implementing immediately in their daily work" (p. 17).

A Word About Special Needs

In the prefatory remarks, the Common Core acknowledges that the standards themselves do not provide for students with special needs, students who are gifted, or students who are English language learners. Each district is tasked with providing for such needs locally in the form of differentiated instruction.

For special needs or ESL students, they too are expected to work toward on-level standards and have access to on-level reading material, math problems, social studies scenarios, and science activities. Any differentiation or accommodation is to involve adjustments in teaching-learning techniques (including materials) and should not be a reduction to below-level standards or diminished performance expectations. This approach differs considerably from current practices in many districts, which are to provide these students with below-level instruction and reduced learning expectations to ensure student success.

In terms of response to intervention, Tier I and Tier II students remain in the classroom as part of the learning community, but they are provided in-class support services by auxiliary or special needs staff. Again, they are provided differentiated instruction but are expected to master on-level standards. Tier III students are the 1–5% of all students who have the most severe academic, behavior, or emotional problems. They are typically assigned to self-contained classes to receive individualized interventions with very frequent progress monitoring.

In the case of gifted students, they should be offered more challenging materials or assignments and may be required to read above-level material. Whether these students remain in the classroom as part of the learning community or are taken out for special services is up to the district. But the Common Core makes it clear that districts are expected to make provisions both for remediation and enrichment.

To these ends, each of the unit plans will include strategies and materials for differentiation—both for remediation and enrichment. The dual blunders of "one-size-fits-all" and "tracking for less and more successful students" are—thankfully—finally being corrected.

. . . And from those who REALLY know. . . .

*As a self-contained teacher of children with special needs, I know that my students must function in the same 21st century society as their general education classmates. The speech therapist and I developed units similar to the units in general education but containing standards at multiple grade levels. We are intentional about setting high expectations for learning, applying learned skills, and maximizing the potential of all students. I can't imagine doing it any other way!—**Denny Devine, special needs teacher, Maryland School, Bexley City Schools***

A corollary to the issue of student tracking is teacher tracking. On a blog posting, Linda Darling-Hammond (2011) is still worried that the most expert teachers teach the most advantaged and capable students and that the lower track students are still assigned the least experienced and least capable teachers. Worse, she fears, lower track students are still given less demanding material and not expected to perform at grade level—even with supplemental assistance.

The Impact of the 21st Century Skills

If students are to be successful citizens of the 21st century, mastery of the new content standards is only part of their preparation. The other part is mastery of the 21st century skills—workplace and communication competencies that enable students to successfully apply their academic knowledge and skills to function as productive adults. Because they must begin at the primary level and progress developmentally through high school, the 21st century skills should be fully integrated into the course tools at each grade level. The connection between the new content standards and the 21st century patterns of thinking is solid and reciprocal, and the continuous flux of world events underscores the urgency to incorporate the 21st century skills into the redesign of classroom instruction.

Throughout this book, reference will be made to integrating the 21st century skills into the Common Core skills as well as the new content standards in Science and Social Studies. The following categories have been used as reference points:

(a) General References in the New Standards to the 21st Century Skills

(b) Global Awareness

(c) The Literacies (financial and economic, civic, health and environmental)

(d) Thinking and Reasoning for Effective Decision Making

(e) Communication and Collaboration

(f) Information Technology and Media Literacy

(g) Initiative, Flexibility, and Collaborative Skills

These have been drawn from the Partnership for 21st Century Skills at www.p21.org and published in print (Trilling & Fadel, 2009; Rotherham & Willingham, 2009).

Some of the specific connections between the standards and the 21st century skills details are described later. Note that the sources will be cited only once but are included in the References section.

(a) General References in the New Standards to the 21st Century Skills

English Language Arts. The developers of the ELA standards see part of their mission as helping schools prepare students to be "a literate person in the 21st century" (Common Core State Standards Initiative, 2012a).

Math. While the documents setting forth the Common Core Math standards do not contain specific wording relative to the 21st century skills, the depth of the standards, their stress on modeling, and requirement for real-world application are synchronous with the requirements of the 21st century skills. The Science and Mathematics Education Policy Advisory Council (SMEPAC), headed by Thomas Friedman, author of *The World Is Flat,* has made specific suggestions to teachers of Math and Science content standards to the 21st century skills. They underscore the importance of mastering the Common Core Math and the 2010 Science standards as requisite to college and career readiness.

Social Studies. In Ohio (which is indicative of other states), the new Social Studies standards are designed to "allow teachers to elicit a greater depth of understanding on the part of students" [and] "to meet the needs of students in the 21st century." This 21st century connection has been based on the *Framework for 21st Century Learning* from the Partnership for 21st Century Skills. Included are skills in historical thinking, spatial thinking, civic literacy and participation, financial and economic literacy, and decision making and global awareness (Ohio Department of Education, 2012). Links to other 21st century skills such as problem solving, communication, media literacy, and leadership are also included in the content standards.

Science. In the "Introduction" to the Ohio Revised Science Education Standards and Model Curriculum" (Ohio Department of Education, 2011), the developers insist that 21st century skills are integral to the science standards and the curriculum revision documents. They are an essential part of the model curriculum through the integration of scientific inquiry, science skills and processes, and technological and engineering design. As enumerated in Ohio Amended Substitute H.B. 1, these skills include creativity and innovation; critical thinking, problem-solving, and communication; information, media, and technological literacy; personal management, productivity, accountability, leadership, and responsibility; and interdisciplinary, project-based, real-world learning opportunities.

(b) Global Awareness

Global awareness is defined as understanding and respect for the growing diversity of religions, cultures, and world views. Among the chief proponents of expanding both the curriculum and instructional practices to embrace global thinking is Hayes Jacobs (2010).

English Language Arts. Students who are college and career ready "actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews" (Common Core State Standards Initiative, 2012a, Introduction). The ELA standards are internationally benchmarked to prepare American students to compete successfully in a "globally competitive society" (Common Core State Standards Initiative, 2012a, Introduction). In addition, college- and career-ready students realize that the 21st century workplaces are settings that

include people from widely divergent cultures with diverse experiences and perspectives who must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different from their own (Common Core State Standards Initiative, 2012a). In the Reading for Literacy strand, students in a majority of grade levels are required to read authors from different cultures or authors from outside the United States (Common Core State Standards Initiative, 2012a).

Math. SMEPAC, headed by Thomas Friedman, author of *The World Is Flat,* has emphasized the importance of providing instructional activities that will prepare every student to succeed in the global economy and a worldwide society.

Social Studies. In strategic grade levels, the Social Studies standards require students to (1) "analyze and interpret significant events, patterns, and themes in the history of the state, the United States, and the world"; (2) "use knowledge of geographic patterns, locations, and processes to show the interrelationship between the physical environment and human activity," particularly the "practices, products, and perspectives of cultural and ethnic groups within local, regional, and global settings"; and (3) use economic reasoning skills and knowledge of major economic concepts, issues, and systems to make informed choices . . . as citizens of an interdependent world" (Ohio Department of Education, 2012, Overview).

Science. The centerpiece of the Ohio Science standards is the "Science Eye of Integration," displayed at each grade level, K–8, in the Ohio Revised Science Education Standards and Model Curriculum. One of the giant sections surrounding the "eye" is Global Connections. In the Grade 3 "eye," for example, is specified (1) investigations of soil erosion problems in other countries (e.g., China, Central America, and South America) and (2) studies of the desertification process because of soil erosion in Southern Mexico. Each grade level includes one or more activities to promote global understanding.

(c) The Literacies

As defined in the 21st century skills documents, the literacies will help students realize the reciprocal impact of human behavior on the economic, civic, health, and environmental conditions in which they will live:

- Financial and Economic Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

English Language Arts. There are no specific ELA standards that speak to Financial or Economic Literacy, nor to Civic, Health, or Environmental Literacy.

But throughout the ELA standards—including the Literacy standards for Math, Science, and Social Studies—is the expectation that students will become literate in every content area. That is, they will be able to distinguish objective from biased information and legitimate from questionable sources of evidence.

Math. Throughout the K–8 Common Core Math, the standards require students to solve and construct problems involving money, measurement, and data in real-world applications and situations. This provides an important mathematical foundation for Financial, Economic, and Civic Literacy. In Grades 9–12, all of the Literacies are integrated into the contextual problem solving where math skills are to be applied.

Social Studies. At K–8, the Government strand includes the topic of Civic Participation and related skills. These include the principles of government and the students' role as citizens. The Geography strand includes the understanding of humans' interdependency on the physical environment. The Economics strand specifies Economic Decision-Making and related skills and Financial Literacy, including wants, needs, resources, production, and consumption (Ohio Department of Education, 2012, K–5). In Grades 9–12, the recommended courses include "Government" (containing the topic of civics) and "Economics and Financial Literacy" (Ohio Department of Education, 2012, High School Syllabi).

Science. The centerpiece of the Ohio Science standards is the "Science Eye of Integration," displayed at each grade level, K–8, in the Ohio Revised Science Education Standards and Model Curriculum. One of the giant sections surrounding the "eye" is Environmental Literacy.

(d) Thinking and Reasoning for Effective Decision Making

- Creative and Innovative Thinking
- Working Creatively With Others
- Effective Reasoning
- Systems of Thinking (e.g., whole to part)
- Effective Judgments and Decision Making
- Solving Unfamiliar Problems
- Asking Appropriate Questions to Clarify Alternate Points of View

All Subjects. As they construct their course tools (the curriculum maps and unit plans), the writing teams will receive embedded professional development in the best practices and constructivist teaching-learning techniques shown in Table 1.1. Among the 21st century skills, several are particularly associated with the new classroom delivery and assessment techniques. They include the following:

(1) *Creative and innovative thinking* (i.e., student responses to each teaching strategy will require them to process the information on their own and to construct meaning for themselves. As part of the authentic or performance

assessments for each unit, students will be required to create or construct an original product, activity, solution, or set of problems that show independent mastery of designated standards).

(2) *Effective reasoning* (i.e., among the teaching-learning and assessment activities in the unit plans will be those requiring students to evaluate a set of problems, a document, or a product to determine if there are errors. They then analyze those errors to discover the reasoning used, the type of errors made, what should have been done instead, and what can be done now to make corrections).

(3) *Systems of thinking* (i.e., teachers will be shown how to help students analyze the structure of text or arguments to discover the organizational pattern or "system" used by the author to communicate his or her message. These patterns include chronological sequence, cause-effect, problem-solution, compare-contrast, and so on. From this analysis, students learn to construct accurate graphic organizers that display the author's thinking, to write valid summaries, and to take effective notes).

(4) *Solving unfamiliar problems* (i.e., the foundation of constructivist learning is that students construct their own meaning for a concept, skill, or idea by applying it to an unfamiliar situation. In math, they would solve a new problem; in science, they would encounter a quandary they'd not seen before. In social studies, they would examine a document for the first time, and in language arts, they would respond to unknown text. Twenty-first century citizens must be able to apply what they have learned to solve all sorts of unfamiliar problems—many of which have not yet even been identified).

(5) *Asking appropriate questions* (i.e., one of the most popular best practices is levels of questioning, and each unit plan will contain leveled questions to model for students how to formulate and then answer them. Level I questions are literal, asking students to identify stated detail; Level II are inferential, asking students to read between the lines or see implications; and Level III are hypothetical or extensions beyond the material, asking students to apply the material to another situation or make higher-order connections).

English Language Arts. At Grades K–5, students are expected to read a broad range of high-quality, increasingly challenging literary and informational texts, and history and science content texts to give them the background they need to be better readers in every subject (Common Core State Standards Initiative, 2012a, K–5). The specific standards at each grade level require them to understand the author's reasoning and patterns of thinking. Students are expected to see connections and interconnections from multiple perspectives and to document their analyses with text detail.

> In the Reading strand, students are to identify the reasons an author gives to support his or her points.
>
> In Writing, students are to analyze text and write arguments using valid reasoning and sufficient evidence, conduct research projects based on focused questions, gather relevant information, and assess the credibility and accuracy of each source.

> In Speaking/Listening, students are to evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric and present information, findings, and supporting evidence to reflect valid reasoning.
>
> In Language, students use context to make reasoned predictions of the meaning of unfamiliar and multi-meaning words, figurative language, and connotations.

In Grades 6–12, students are to "grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing" (Common Core State Standards Initiative, 2012a). Students must read high-quality contemporary works, including seminal U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. "Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts" (Common Core State Standards Initiative, 2012a, 6–12).

> In Reading, students must determine the meanings of unknown technical, connotative, figurative words; analyze text structures and their impact on the whole piece; delineate and evaluate the arguments and specific claims in a text—including the validity of the reasoning involved as well as the relevance and sufficiency of the evidence.
>
> In Writing, students are expected to write arguments to support their analysis of text, using valid reasoning and sufficient evidence; conduct research projects based on focused questions; gather relevant information; and assess the credibility and accuracy of each source.
>
> In Speaking/Listening, the standards ask students to hold a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own ideas clearly and persuasively. Students are to evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric; they are to present information, findings, and supporting evidence to reflect viable reasoning.
>
> In Language, like Reading, students are to determine the meaning of unfamiliar and multi-meaning words, figurative language, and connotations—all from context.

Math. The Common Core Math Standards specify a set of eight Math Practices, K–12 (Common Core State Standards Initiative, 2012b). These are to be integrated into the unit plans throughout the school year in each grade level and course. They are to (a) make sense of problems and persevere in solving them; (b) reason abstractly and quantitatively; (c) construct viable arguments and critique the reasoning of others; (d) model with mathematics; (e) use appropriate tools strategically; (f) attend to precision; (g) look for and make use of structure; and (h) look for and express regularity in repeated reasoning.

Social Studies. Throughout K–12, the standards require students to examine primary and secondary sources to consider the multiple perspectives from which historic and contemporary decisions have been made.

At K–8, each grade level from Grade 1 forward includes Geography standards dealing with collaboration and group problem solving. From Grade 2 forward, these standards include interactions among cultures to promote sharing and mutual gain. From Grade 3 forward, the Government strand includes standards about compromise and the common good, and the Economics strand features critical decision making among choices. From Grade 7 forward, the Government strand includes standards that require students to understand individual and group perspectives as essential to analyzing historic and contemporary issues. From Grade 8 forward, the Government strand involves students in decision making that has present and future consequences (Ohio Department of Education, 2012, K–5).

In Grades 9–12, the recommendations for service learning involve students in creative and innovative problem solving, systems thinking, solving unfamiliar problems, and asking appropriate questions to clarify points of view. The "Contemporary World Issues" course includes the dynamics of competing beliefs and goals, methods of engagement, and conflict versus cooperation versus collaboration in solving global problems (Ohio Department of Education, 2012, High School Syllabi).

Science. Key to the Science standards is the "Scientific Inquiry/Learning Cycle" (Ohio Department of Education, 2011, Introduction). This cycle includes "Use evidence and scientific knowledge to develop explanations" and stresses the importance of (1) knowing, using, and interpreting scientific explanations of the natural world; (2) generating and evaluating scientific evidence and explanations, distinguishing science from pseudoscience; (3) and understanding the nature and development of scientific knowledge.

(e) Communication and Collaboration

- Oral, Written, and Non-Verbal Communication for Various Purposes
- Effective Listening
- Working Effectively With Others to Reach Common Goals

English Language Arts. The ELA standards have an entire strand on Speaking and Listening, K–12. Students are required to actively participate in a variety of rich, structured conversations as part of a whole class, in small groups, and with a partner—built around important content in various domains. Each student must contribute appropriately to the conversations, make comparisons and contrasts, and analyze and synthesize ideas in accordance with standards of evidence for a particular discipline. In addition, students are required to listen to others and respond to what they say (Common Core State Standards Initiative, 2012a, K–5).

Math. The eight Math Practices specified in the Common Core Math Standards (listed in category [d] earlier) are relevant to the three Communication and

Collaboration skills. In addition, students are expected to talk about the mathematical reasoning they used and the processes they applied and evaluate the quality of their and others' work.

Social Studies and Science. For the Communication portion of this category, the K–5 Social Studies and Science standards have embedded various Literacy activities, including group discussion, listening, verbal and nonverbal forms of communication, and evaluating media (Ohio Department of Education, 2011, K–5; Ohio Department of Education, 2012, K–5).

In Grades 6–12, the Social Studies and Science curricula are expected to include specific Reading and Writing Literacy skills. These are set forth in the ELA Common Core standards, Grades 6–12 (Common Core State Standards Initiative, 2012a).

The Reading Literacy skills include the analysis and evaluation of printed, oral, or media text to:

- identify explicit detail and supportable inferences;
- determine central ideas or themes, summarizing key details and ideas;
- interpret language, including figurative, technical, and connotative meanings;
- discern point of view or purposes of the text; and
- determine the validity of reasoning and legitimacy of the thesis idea.

The Writing Literacy skills include writing arguments to support claims in an analysis of topics, text, speeches, or media. In addition, students are to write informative or explanatory texts to examine and convey complex ideas, drawing on viable evidence and research. Finally, students in Grades 6–12 are expected to write routinely over extended time frames in both Social Studies and Science classes.

Science. In addition to the Literacy Skills listed previously, the "Scientific Inquiry/Learning Cycle" (Ohio Department of Education, 2011, Introduction) includes participating productively in scientific practices and scientific discourse and "communicating the results [of scientific investigations] with graphs, charts, and tables."

(f) Information Technology and Media Literacy

- Access, Manage, and Evaluate Information
- Analyze Media for Purpose and Bias
- Create Effective Media to Communicate a Message
- Use of Digital Technology to Access, Manage, and Create Information

English Language Arts. The Writing standards, K–12, require the use of technology, including the Internet, to produce and publish writing and to interact and collaborate with others. Students are to "make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations" (Common Core State Standards Initiative, 2012a, K–5, 6–12).

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio (Common Core State Standards Initiative, 2012a, 6–12).

The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change (Common Core State Standards Initiative, 2012a, K–5, K–6).

Math. In the Mathematics Common Core Standards Initiative (2012b, Appendix A), the following is specified: "Strategic use of technology is expected in all work. This may include employing technological tools to assist students in forming and testing conjectures, creating graphs and data displays, and determining and assessing lines of fit for data. Geometric constructions may also be performed using geometric software as well as classical tools and technology may aid three-dimensional visualization. Testing with and without technological tools is recommended."

Social Studies. Most of the references to Informational Technology and Media Literacy are in the Geography strand as part of Geospatial Technologies.

In Grades K–2, the following representational skills are included: pictures, symbols, and signs that communicate and create associations and photographs, artifacts, and letters to document events across time (Ohio Department of Education, 2012, K–5).

In Grades 3–5, students are required to (1) interpret timelines or multitier timelines and regional maps to display interrelationships among events and diffusion of ideas and people, (2) understand systems of communication and transportation, (3) describe how technological innovations from the early 1800s benefitted the United States, and (4) interpret data organized into tables and charts to expedite communication (Ohio Department of Education, 2012, K–5).

For Grades 6–8, the standards expect students to realize that visual displays, maps, and tables show information from the perspective of the "developer" and thus may contain bias to shape agendas and influence attitudes. Students are to trace information flow and determine the objectivity of information. Moreover, students are required to understand how media and information condition human behavior, impact trade routes, and affect the movement of humans in the United States and all parts of the world. In addition, students need to realize how goods and services foster the spread of technology to new sections of the world (Ohio Department of Education, 2012, K–5).

At the high school level (Grades 9–12), the standards include most of what is listed in K–8, plus requires media literacy in each course (Ohio Department of Education, 2012, High School Syllabi).

Science. The K–12 Science standards include a focus on technological design and engineering or "a problem-based way of applying creativity, science,

engineering, and mathematics to meet a human needs or wants" in the 21st century. Moreover, the standards presume that "technology modifies the natural world through innovative processes, systems, structures, and devices to extend human abilities." Coupled with technology, the knowledge and methods derived from science "profoundly influence the quality of life" (Ohio Department of Education, 2011).

(g) Initiative, Flexibility, and Collaborative Skills

- Adaptability to Change and Diversity
- Effective Use of Positive and Corrective Feedback
- Effective Goal Setting and Resource Management
- Commitment to Self-Direction and Advanced Skill Levels
- Work Effectively With Others and Leverage Diversity to Achieve Innovation
- Demonstrate Integrity, Professional Etiquette, and Responsibility for the Greater Good

All Subjects. This cluster of 21st century skills is more about each student's personal development as a learner and citizen-to-be than about specific content standards. While the writing teams develop their course tools, they will also be learning how to use the best practices and constructivist teaching-learning techniques shown in Table 1.1, many of which include the 21st century skills in this category. By design, the course tools will include the following: "Initiative, Flexibility, and Collaborative Skills" to help every student prepare him and herself to function successfully in the 21st Century. Costa and Kallick (2012) have published a Web page interpreting these and a few additional habits such as persistence, managing impulsivity, metacognition, finding humor, and posing problems.

(1) ***Adaptability to Change and Diversity:*** Ironically, most 21st century students will have been subjected to far more change and diversity than most of their teachers. With advances in technology, the proliferation of social networking, and the ever-expanding globalization in every aspect of their lives, students experience change daily.

Schools must help students develop work habits and self-discipline sufficient to take control of their lives—despite continuous and unanticipated change. Teachers will establish clear and efficient classroom routines and specific procedures to complete learning activities and out-of-class assignments. The point isn't to punish students or to stifle their creativity; it is to help them learn to follow directions, manage time and resources well, and complete assigned tasks successfully.

At the core of this self-discipline and the power to stay focused is the ability to adapt to change quickly and efficiently. Confident, self-directed students are not shaken up when facing surprises and not rendered helpless when the rules suddenly change. To teach students this sort of flexibility, classroom activities must occasionally "throw them a curve" by introducing new details. Further, students need to depart from their customary, typically homogeneous

circumstances and learn to function equally well with diversity in cultures, values, and interpretations.

(2) ***Effective Use of Positive and Corrective Feedback:*** In each unit plan, teachers will be prompted to provide affirmative feedback to students for correct answers, including *why* the response was correct to provide students an "anchor" they can use again. When students provide an incomplete or incorrect answer, teachers will provide corrective but encouraging feedback. Again, it is important that the feedback be substantive; rather than a simplistic, unhelpful "no," the teacher will indicate why the response was not correct and prompt the student toward the correct one. The entire point is to help students know the *why* of their responses and that an incorrect answer is not so much a mistake as an opportunity to rethink and reconsider the information to arrive at the correct answer.

Equally important is modeling for students. If this type of feedback is the norm in each classroom from kindergarten on, by the intermediate grades, students are expected to respond to each other in similar fashion. This two-step process of "teacher models-students apply" will help students internalize these behaviors for use in their own lives.

Positive and corrective feedback is included in most of the best-practices lists currently circulated among school reformers (Marzano, 2003a, 2011).

(3) ***Effective Goal-Setting and Resource Management:*** Goal-setting is certainly not a new practice for most teachers. But the typical practice has been to set class goals and for an entire quarter or semester. In our experience, these goals are more rhetorical than substantive. But when teachers help students set individual goals related to an individual unit plan—connected to the requirements of that unit—the goals are taken more seriously. The key is to allow students to give themselves credit for making progress toward their goals and counting that credit toward the letter grade. Of course, the criteria for this credit are established at the outset of the unit, and students must document their progress. But experience has shown that students become more invested in this type of goal-setting and take it more seriously.

Consistent with the 21st century skills requirement, each student's goals must include "resource management." This may involve the improved stewardship of time, supplies, materials, technology, and any other resources necessary to master the standards of the unit. As with other 21st century skills, as students become accustomed to and successful at "goal-setting and resource management" in *school,* they will transfer those skills to their work and college Marzano, 2003a, 2011).

(4) ***Commitment to Self-Direction and Advanced Skill Levels:*** This particular 21st century skill set undergirds most of the others. It is also closely related to all of the new content standards in that mastery and retention of these more rigorous expectations will require students to attain advanced skill levels. And because only a portion of what students will need to know can be learned in 13 years of schooling, they will need serious self-direction to continue to learn beyond their public school years. With the previous standards,

teachers attempted to guide students through the entire curriculum. By contrast, the new standards drive a curriculum in which teachers prepare students to think and reason and critically analyze, and then the students will be expected to discover the rest by themselves. Every unit plan will include activities to reinforce independent learning, self-direction, and higher-order thinking. These are also core tenets of *Understanding by Design* by Jay McTighe, Eliot Seif, and Grant Wiggins (2004).

(5) ***Work Effectively With Others and Leverage Diversity to Achieve Innovation:*** A common thread running through most of the 21st century skills is the expectation that students work collaboratively with others and take their full share of responsibility for completing the task. In many districts, cooperative learning has long been a frequent practice, but in others, isolation or even competition is more the trend. Each unit plan will include some activities that students complete in collaboration with others. In districts with a highly diverse cultural population, students are accustomed to diversity, and this portion of the 21st century skill will not be new to them. But in more homogeneous districts—be they urban or rural—students may need to consider alternate points of view and diverse perspectives from sources other than their peers. But with the enormous variety of information available instantly from across the globe, the new curriculum and its classroom experiences will show students how to leverage diversity to accomplish innovative solutions to any number of problems.

(6) ***Demonstrate Integrity, Professional Etiquette, and Responsibility for the Greater Good:*** This set of 21st century skills is indeed a very personal one—and difficult to teach as well as to measure. These skills are—or are not—part of an individual's value system and actually most noticeable by their absence.

Integrity isn't so much a skill as an attribute that distinguishes someone who can be trusted from one who cannot. But schools can help students see the importance of integrity by making sure they see the positive consequences when it is *present* and the negative consequences when it is *missing.* The outward manifestations of integrity include the willingness to admit mistakes or errors, to respect another person's work and property, and to be scrupulous about the truth. School staffs need to (a) make it easier for students to admit mistakes; (b) create situations where students and their property are treated with respect, and in turn, they extend respect to others; (c) reinforce students for being truthful and honest; and (d) consistently model.

Professional etiquette is the observance of accepted rules in attitude and decorum when dealing with others. In boxing, it's like following the *Marquis of Queensbury* rules, or in playing cards, one does it according to *Hoyle.* In school—both in and out of the classroom—it means that students are polite, mannerly, and observe restraint. They respect alternate opinions, even ones that differ widely from their own, and they work at giving others the benefit of the doubt. School administrators need to model it with teachers, teachers with each other, and teachers with students. Again, students must see the benefits of behaving this way as well as the disadvantages of not doing so.

Responsibility for the greater good is one's personal conviction that he or she has a duty to others and to society as a whole—not just to him or herself. The intent is not to foster socialism or any other political belief but to develop a

legitimate and healthy commitment to the welfare of others, to be "our brother's keeper," and to make decisions that will benefit the common good. School personnel need not only to consistently model this behavior but also to create opportunities for students to demonstrate concern for others and for society as a whole.

. . . And from those who REALLY know. . . .

*Our school serves students with disabilities, so, as we worked with the new standards, we deliberately incorporated 21st century skills into the unit plans and our daily routines and procedures for each class. There was a time when we left it to each teacher to include these skills, but it's become clear to me that if we are not deliberate and strategic about helping students develop these skills, they'll never be ready to perform them on their own. We don't want our students suffering from "learned helplessness" by having them leave our school with the impression that just because they face challenges, everything will be DONE FOR them. We want them to use these skills to successfully navigate through their education, careers and everyday lives.—**Lydia Brown-Payton, school director, Mollie Kessler School***

International Benchmarking for Global Competition

When the National Governor's Association and the Council of Chief State School Officers commissioned the development of the Common Core standards in Math and ELA, they intended to raise the level of academic rigor in America's schools to that of competing nations. Not only were they hopeful for better results on the National Assessment of Educational Progress, this international benchmarking would permit students of the United States to earn respectable scores on the PISA, PIRLS, TIMSS tests, and other worldwide assessments.

The urgency of this need for rigor and accountability in American education came to the world's attention with Exxon-Mobil's sponsorship of the 2012 Masters Tournament in Augusta. Viewers and sponsors from all over the world were reminded on television that the United States ranked 25th among the competing nations.

Even more important than test scores and bragging rights is the anticipation that American ingenuity, technical expertise, economic savvy, and academic competence will once again be sufficient to compete globally. It has been difficult for America's corporate leaders, politicians, and most of its citizens to imagine the United States lagging behind smaller, less endowed nations in anything. True to America's indomitable spirit, no one wants to give up on finding a solution, and so the "solution wars" continue. The Common Core and new state content standards are the next best hope to return the nation's schools—and the quality of education they provide—to their former world prominence.

IMPLICATIONS FOR LEADERSHIP

The current generation of district superintendents and building principals were mostly trained during the last decade when the previous standards were still in

place. Without training to do otherwise, they will attempt to use their current understanding of curriculum and classroom instruction to implement the new standards.

Principals need to know how to facilitate and monitor the classroom implementation of the new curriculum. They will be expected to identify teacher behaviors that yield more and less effective student responses and how to prescribe corrective action plans as needed—including specific suggestions for best practices that are aligned with the new standards. With the appropriate training and involvement, principals can regain the respect of their teachers and become viable partners in the implementation of the new curriculum. Each principal's annual performance review should reflect his and her level of success in these important new duties.

The implications for leadership are focused at three levels: First is the Board of Education, followed by central office, and then building administrators. Michael Fullan (2002a, 2002b) stresses the need for solid leadership at all levels in the district as the primary strategy for sustainable school reform. If curriculum and instruction are to be a part of central office and building administrators' job expectations, the Board of Education must include the specifics of what is expected in the administrative job description, and then hold the administrators accountable for completing the tasks outlined in that document. It is not enough to put the expectations in a job description and expect people to perform a series of tasks not previously expected. In collaboration with the National Association of Secondary School Principals, Doug Reeves (2004b, 2005) insists that the principal's job description must include the role of continuously monitoring classroom instruction. The board must provide principals with the professional development and ongoing support needed to perform their roles in the implementation of the new standards. Michael Fullan, Al Bertani, and Joanne Quinn (2004) contend that boards must mandate the structure and align finances and human resources necessary for principals to closely monitor instruction. Further, M. Hayes Mizell (2004) calls for boards to avoid wasting dollars on professional development for any activity that *will not be applied* in the classroom.

Once the Board of Education has established the policies for performance, then central office and building administrators must work to determine how this can happen. If there are curriculum experts in the district—content supervisors, coordinators, or content coaches—they should be a part of the plan to provide support for the building principals. The central office team should regularly discuss content standards, how to interpret them, and where they are placed in the curriculum map. Moreover, the central office staff should pay close attention to the delivery of instruction and how quality assessments are being used to determine student learning. Otherwise, they remain disconnected from what is actually taking place in the district classrooms. We suggest that central office staff be assigned to buildings and content areas, maintaining visibility and providing support to teachers as well as the building administrators.

Finally, it is the building administrators—principals and assistant principals—who shoulder the primary responsibility for seeing that the curriculum is implemented in all subjects in every classroom of their buildings. Wow! It even sounds daunting to say it! But it can be done. Terrance Quinn

(2002), former principal, emphasizes the need for principals to reorder their priorities to be visible throughout the school and spend the majority of time in classrooms. James Bernauer (2002) insists that obtaining feedback about student performance and teaching practices is the "glue" that holds the process of continuous improvement together. Without timely information to assess progress, teachers and administrators are unable to evaluate the effectiveness of instructional methods and therefore, not able to make mid-course corrections. Michael Fullan (2002a, 2002b) urges principals to exercise leadership and guide staff members through the work.

. . . And from those who REALLY know. . . .

*Since the beginning, we've worked hard to make sure that our curriculum maps capture a developmental flow across the grade levels. Our teachers have done most of their best practices professional development (PD) in cross-grade level teams to hear from each other and to understand the "before and after" of their work. That's also helped replace less effective practices like "telling" and "worksheets" with drawing students out and having them construct their own meaning. I attend the PD sessions as an active participant, and the teams appreciate that I see instruction as a priority. My conferences with teachers are professional conversations about which teaching behaviors yield the most effective student results.—**Jon Hood, principal, Maryland Elementary School, Bexley City Schools***

Building administrators rightly insist that they cannot be expert in all content areas, and while that is true, there are strategies that can be employed to assist them in learning about those content areas where they may lack sufficient background knowledge. It is critical that each administrator be a member of at least one curriculum writing team in the district as the curriculum is being developed. Michael Mills (2001) sees it as the building administrator's duty to work with teachers in devising the curriculum and using data to know if they are making the difference needed. This does not mean show up at curriculum or standards meetings and do other work while the teachers write the curriculum. It is about being part of the discussions and listening to the issues raised by teachers who will have to implement the standards in their classrooms. By being legitimately involved in these discussions, and being part of the solutions for how "we" will approach these issues in this district, everyone gets on the same page. Without helping to decide what will each new standard look like when students demonstrate it, how the new standards differ from the current curriculum, how the standards flow developmentally across grade levels, a building administrator cannot appreciate what teachers face in the delivery of the new curriculum.

Without this knowledge, how can an administrator possibly know if a teacher is doing what is required for a group of students? Hayes Mizell (2003) insists that when teachers and principals collaborate to understand the content standards and to determine the best means for organizing their schools to help students meet them, amazing things happen for students. Michael Fullan

(2002a) describes the principal's leadership as the "core feature of sustainability" in the transformation of schools. Further, Victoria Bernhardt (2002), executive director of Education for the Future Initiative, speaks to the notion of leading by modeling instructional excellence.

It is not about being expert in all content areas, but about being willing to *learn with the teachers* what is needed to get students to master these new expectations set for in the standards. And once the curriculum is established, the major burden for overseeing the implementation in the classrooms of the district falls squarely on the shoulders of the building administrators. So what skill set is needed to accomplish this awesome task? For this to happen, Virginia Hurley (high school assistant principal), Ruth Greenblatt (educational consultant), and Fordham University professor Bruce Cooper (2003) teamed up to stress the need for administrators to replace traditional approaches (i.e., top-down behaviors with interrogation-like tones) with "professional conversations" that are focused on effective practice. These conversations include open-ended, probing questions that feature use of paraphrasing, summations, and clarification to gain common understanding of what is needed to be successful with students.

. . . And from those who REALLY know. . . .

*When we began working with the Core Standards, we found a need to build capacity in our principals to become active participants in the process of designing curriculum maps and units of instruction. Each principal determined areas where she or he would work with teachers—some choosing areas of greatest strength in content knowledge and others choosing areas where she or he wanted to become stronger in the content knowledge. Knowing the curriculum and the discussions that went into the development of the units allowed principals to work as a team with their teachers for the delivery of instruction to students as well as monitor what was happening in classrooms.—**Cherie Mourlam, assistant superintendent, Washington Local Schools***

For building administrators to monitor the new curriculum, they need to spend time in classrooms. They should script the teachers' behaviors and their impact on students. In addition, they should notice what is happening relative to the standards, paying particular attention to each teacher's fidelity to the curriculum maps and unit plans. In particular, the building administrator must be trained to be familiar with the following:

(a) Understanding the content and cognitive demand of the standards.

(b) Knowing what is in the curriculum maps and what teachers are to be focused on for a given point in time. This might mean keeping a wall chart or clipboard chart in the office to know what should be being taught and where teachers should be in their units during walk-throughs).

(c) Understanding instructional practices that are in the unit plans and what is in the research about these practices and alternatives; the unit plan becomes the lesson plans for teachers.

(d) Understanding differentiation—knowing how to discuss response to intervention and examine practices with teachers to accomplish this without "tracking" students.

(e) Being able to ask questions about instruction and engage in a conversation with teachers about specific practices that are used and how these impact students.

(f) Reviewing unit assessments for validity to be sure they are well constructed and the questions assess the designated standards; offering feedback on how to improve the quality of the assessment.

(g) Reviewing the results of unit or common formative assessments and knowing the data in terms of the instructional implications.

(h) Offering specific prescriptions to teachers to upgrade their instruction and/or to address specific student weaknesses.

(i) Attending regular departmental or grade level meetings to listen to and be part of the discussions on the course tools—unit plans and maps.

Complete detail about the logistics and protocols for these tasks will be included in Chapter 7.