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Accelerating Literacy Learning

ACADEMIC ACCOUNTABILITY

In the Dark Ages, when the authors started teaching, we were not held accountable for much of anything related to student growth and achievement. Dialogue with the principal went something like this:

Your students are sitting in their chairs and raising their hands. It is good that your lesson plans are ready for the substitute. Have you thought about the new deadline for getting your grades to the office?

Then we began to focus on the expectation that teachers would follow a process when instructing. Dialogue with the principal then went something like this:

Your wait time is good and the ideas for initially engaging students at the start of the lesson seem to be working. You may want to write out two or three questions ahead of time to check for understanding.

But the 1990s brought us standards-based education, and the focus for accountability became student learning. Dialogue with the principal in many schools now goes something like this:

If I walk through your classroom, will the students know what standard you are teaching? I like the performance assessment you created for that unit.

But, given the proper excuses about home life, disability, or language limitations, we still do not always mean the same level of accountability for all students. The twenty-first-century accountability challenge, however, says that we will not leave any student behind and, more significantly, that we will close the learning gap for all groups of students. Within the past decade, there has been an increase in the numbers of students who come to school speaking no English. Closing the learning gap for these students is critical to the success of schools and can be the biggest challenge of teaching in the twenty-first century.

CLOSING THE ACHIEVEMENT GAP

The first concept that many teaching texts provide about the achievement gap is to quit making excuses and get on with it. That is the goal of all teachers, but it is harder than it looks. Teachers are dedicated and innovative people who are restricted by local, state, and national standards. Teachers have access to research that tells about best practices and exciting new strategies. The trouble is in finding the time to evaluate the many available materials and in knowing when and how to start each strategy. Another issue is knowing which strategies work best with each student group and what tools are most useful. Teachers have research that tells us about powerful and exciting strategies that work.

This means that the teacher–principal dialogue needs to shift to a discussion of what incremental growth looks like for each group of students and to careful consideration of how we articulate the curriculum through the expected level of student work and performance. The principal may need to join a lesson study group or a group of teachers who are using student work for evaluation and lesson planning. That could provide a highly successful venue for effective dialogue that focuses on the academic growth of every student. These sessions should focus specifically on the needs of the English language learners in the school, including what languages are spoken and how they differ from each other.

So what does our retrospective look at the recent history of education have to do with this book? We believe that the key to closing the achievement gap for any individual student or group of students lies in the acquisition of skills and demonstrations of learning that clearly reflect a high degree of literacy. Students

cannot experience profound learning in any academic discipline without literacy skills that include a depth of thinking and expression of thought. Without a focus on literacy, it is hard to imagine the acceleration of learning needed to demonstrate increased scores on high-stakes tests, let alone other worthy accomplishments appropriate for success in the twenty-first century.

DIVERSE LEARNERS AND BUSY TEACHERS

In the United States as well as in many other countries, teachers are held accountable for closing the learning gap for all racial and ethnic groups, for students identified as disabled, for gender groups, for students living in poverty, for students for whom English is not the primary language, and, in some states, regions, or districts, for students who may be identified as gifted and talented. In this book, we want to highlight literacy strategies that are likely to be useful with students for whom English is not a primary language. But in addition to *useful*, we've added an additional criterion: we also want to focus on literacy strategies that show promise for *increasing student success* and, in some cases, increasing success *rapidly*.

Teachers, unlike doctors and lawyers, do not have the luxury of meeting with students in a one-on-one environment. There is no staff to keep up with paperwork or run diagnostic assessments. We are teachers in classrooms working with multiple and diverse students. Or we are specialists, administrators, and leaders working to support multiple and diverse teachers, and students in multiple and diverse classroom settings. When working with students learning English as a second language, special challenges arise due to the complexity of individual languages and the complexity of the English language.

We need practical strategies that address the realities of classroom conditions. Those realities include issues such as the following:

- What do I do with twenty-eight students while I meet the needs of five other students who are English language learners?
- I have five students from three foreign countries; three speak a little English, and the two who arrived last week speak no English.
- I have several English language learners who have strong social language, but who do not have academic language.
- There are no teachers or staff members on my campus who speak the language of three of my students. How do I teach them literacy skills in English?

We could add another twenty-five modifiers to describe many urban and rural classrooms in our schools today. Our goal must be to provide teachers with the right strategies for English language learners when time, resources, and support are limited.

SELECTING HIGH-PAYOFF INSTRUCTIONAL STRATEGIES

In this book we have used icons and descriptors to organize and differentiate learning and teaching strategies and to indicate their value or payoff. They are all great strategies for any teacher's repertoire, but our particular goal here is to help busy teachers meet diverse learner needs in every lesson and every unit.

We also need to think about how to frame the questions regarding the systematic and productive instruction of English language learners. Framing these questions will yield better strategy selections for teachers and a higher payoff for students. For example, instead of asking how to manage English language learners, we can be more specific and ask,

- How do we accommodate and advance the growth of students who have learning disabilities as well as linguistic difficulties?
- Which strategies are most useful for English language learners who struggle with narrative writing?
- How do we handle a learner who knows a little English but who does not speak fluently?

This book will help you to formulate your own questions and then provide you with some of the strategies that research has shown offer the most promise for student growth for the relevant individuals and learning subgroups. When discussing English language learners, it is not functional for a teacher to speak only of a student's language needs: he or she also needs to speak of any other learning needs, disabilities, or areas of giftedness. What if the same child is twice exceptional, perhaps gifted in a specific academic area but cannot speak English? In that case, identifying learner needs and selecting instructional strategies may become extraordinarily complex (see Figure 1.1).

The extraordinary variety within learner subgroups is why Marzano, Pickering, and Pollack's (2001) nine strategies and Gardner's (1983) multiple intelligences are so attractive to teachers. Teachers need to think about a small group of top-notch strategies rather than a hundred strategies of undetermined usefulness. But we would like to introduce another option as well: teachers can learn a repertoire of top-notch strategies that meet the needs or specific types of learner.

For example, we could choose to discuss buddy reading rather than round-robin reading. We know that buddy reading increases fluency, reduces risk for English language learners, and helps males, who tend to be reluctant readers. But we also know that buddy reading may not be the best strategy for a learner with linguistic processing difficulties, students who do not know any English, or readers who are already fluent.

Another example would be the use of graphic organizers rather than short pieces of expository writing. We know that using graphic organizers increases critical thinking, reduces risk factors for English language learners,

Figure I.1 Variation Within Student Subgroups*

Special Education	Linguistic disability	Content-area-specific processing difficulty	Physical	Emotional	Cognitive disability	Other: autism, multicategorical	
English Language Learner	No English	Survival personal and social English	Survival content-area English	Functional personal and social English	Functional content-area English	Competent personal and social English	Competent content-area English
Poverty	Homeless	Generational poverty	Temporary or situational poverty				
Gender	Male	Female					
Gifted	General giftedness	Specific-area giftedness	Specific-area talented				
Ethnic	Cultural influences	Racial influences	Geographic influences				

Source: Gregory & Kuzmich (2005b, p. 5).

and helps students who are reluctant writers. But we also know that graphic organizers may not be the best strategy for special education learners with visual or spatial processing difficulties, or for an advanced writer who is already proficient and does not need modification.

The bottom line in this book is that we will give you those indicators for the well-researched strategies we propose, identifying which types of learners may benefit from the strategy and which types of learners may not be as well served (see Figure 1.2).

Figure 1.2 Sample Strategy Format*

<p>Strategy: <i>Graphic Organizer Use at the Middle and High School Levels</i></p> <p>Literacy Competency: Content-area literacy and functional literacy extension</p> <p>Description: In graphic organizer use, students are given a graphic organizer that represents the type of thinking required to grasp specific content area problems or concepts.</p> <p>Advantages: Takes advantage of students' natural visual organization, requires less writing, and orients students to higher-level thinking about content-specific issues and ideas.</p> <p>How to Use: Choose a graphic organizer that matches the desired thinking level about an issue or concept, and orient students to why you chose it and how to fill it out. Adjust time for activity by course-level appropriateness. Students could work individually or in small groups of three or fewer.</p> <p>Research/Source: Marzano, Pickering, and Pollack (2001), <i>Classroom Instruction That Works</i></p> <p>Bottom-Line Examples:</p> <p>↑ This strategy works well for learners who need to increase their comprehension and use of content-specific concepts, reduces the risk factor for English language learners since they do not have to produce complete sentences or paragraphs, and helps males who are reluctant writers.</p> <p>↓ This strategy does not work as well for special education learners with visual/spatial processing difficulties or for an advanced science student and writer. However, it may work in these cases with additional modifications. Special education students could be oriented ahead of time to the graphic organizer and given models of completed organizers to follow. Advanced students could design their own organizer or choose from an appropriate selection that deepens or extends thinking.</p>

Source: Gregory & Kuzmich (2005b, p. 6).

STANDARDS-BASED CURRICULUM

What teachers should teach and what students should learn are critical questions. With a focus on standards-based instruction, time is limited, and we cannot be expected to do everything and do it well. When we are reading, writing, speaking, and listening, we still need to decide where to focus our attention and time. When working with English language learners, our time

can be spent reteaching literacy skills already accomplished in another language or teaching basic literacy skills to one student when all other students have progressed to the next level. Making these decisions can be difficult.

Not all standards and content-area benchmarks or indicators are created equal. Doug Reeves (2000), Larry Ainsworth (2003), and others talk about “power standards”—those standards that are the most critical and on which we should focus much of our time. For literacy, most state standards commonly look like this: “Students will read and write for a variety of purposes and audiences.” Entire courses and curricula across grade levels could be written to define that standard. So many different instructional materials and approaches could work that it is difficult to rule out those that might not fit.

It is challenging to decide what is important to teach, and what to teach for which learners. Often, state or county or district departments of education define discrete skills for each content area that must be mastered for the state assessment; although these definitions may help a teacher plan time, they do not help the students learn. States also are identifying specific English language learner proficiency standards, so we must add a framework that makes sense in diverse classrooms across all academic disciplines. We must plan ahead for students if they are to be literate lifelong learners in the twenty-first century.

FIVE LEVELS OF ENGLISH LANGUAGE PROFICIENCY

We cannot focus on teaching literacy without understanding the five levels of language proficiency. In the twenty-first-century school, literacy depends on the level of language acquisition as well as on other academic areas of strength and weakness. An increase of immigration students and multiple languages in the classroom creates another level of challenge for teachers. In this book, we look at five levels of English proficiency:

1. Preemergent level
2. Emergent level
3. Intermediate level
4. Advanced level
5. Fluent level

At each level, listening, speaking, reading, and writing skills are assessed for proficiency. Every standard of language proficiency provides an expectation for listening, speaking, reading, and writing skills in addition to identifying specific measurements of mastery. Figure 1.3 defines the levels of proficiency as they relate to each of the skills listed above. These five proficiencies fit with the four core competencies in literacy, discussed below.

Figure 1.3 Five Proficiency Levels

Level of Proficiency	Listening	Speaking	Reading	Writing
Preemergent	<ul style="list-style-type: none"> Student listens, but has little or no understanding; may follow one-step directions. 	<ul style="list-style-type: none"> Student has few isolated words or expressions of speech. Student makes syntactic or semantic errors, and uses simple statements. 	<ul style="list-style-type: none"> Student may construct meaning from text using nonprint materials. Student reads pictorial representations of content-area information. 	<ul style="list-style-type: none"> Student typically draws or copies, or responds using his or her native language.
Emergent	<ul style="list-style-type: none"> Student participates in classroom routines, showing understanding of phrases and short sentences. Student can follow multiple-step directions. 	<ul style="list-style-type: none"> Student typically has minimal expressive vocabulary, and may respond with single words, short phrases, or simple sentences. Student has minimal academic vocabulary. 	<ul style="list-style-type: none"> Student begins to locate predictable information in simple or environmental print. 	<ul style="list-style-type: none"> Student writes single words and short phrases using appropriate-level text with support. Student makes some syntactical or semantic errors.
Intermediate	<ul style="list-style-type: none"> Student understands speech and formal language that is more complex, with support and repetition. Student participates in class with decreasing hesitancy and difficulty. Student follows multiple-step directions. 	<ul style="list-style-type: none"> Student participates actively in social and classroom tasks using simple sentences. Student makes some grammatical errors and uses limited specialized content language. Student errors do not impede overall meaning of communication. 	<ul style="list-style-type: none"> With some support, student reads about various topics using different genres. Oral and written discourse can increase understanding of complex readings. 	<ul style="list-style-type: none"> Student writes using different genres for a variety of audiences; errors do not impede understanding. Student writes for personal and academic purposes.
Advanced	<ul style="list-style-type: none"> Student has developed proficiency in social and academic English language. Student can participate in all classroom tasks. 	<ul style="list-style-type: none"> Student participates actively in social and academic tasks and discussions. Student's speaking skills match English-proficient peers. 	<ul style="list-style-type: none"> Student has developed proficiency in English-language literacy skills. Student can read academic language in content areas. 	<ul style="list-style-type: none"> Student needs support when engaged in academic tasks that require academic language and sentences of varied length and complexity.
Fluent	<ul style="list-style-type: none"> Student participates in listening activities, functioning effectively in an environment with native-English-speaking peers. Student achieves competence required of all students. 	<ul style="list-style-type: none"> Student has English language fluency, functioning effectively in an environment with native-English-speaking peers. Student achieves competence in the expectation as required of all students. 	<ul style="list-style-type: none"> Student participates by using grade-level texts. Student functions effectively in an environment with native-English-speaking peers. Student achieves competence in the expectation as required of all students. 	<ul style="list-style-type: none"> Student writes classroom assignments, functioning effectively in an environment with native-English-speaking peers. Student achieves competence in the expectation as required of all students.

FOUR CORE COMPETENCIES IN LITERACY

We cannot focus our literacy efforts only on early reading skills. We do regard and define a level of functional literacy as essential. Foundational use of phonics, demonstration of fluency, oral language use, early writing, and initial meaning creation are critical aspects of functional literacy. But our twenty-first-century learners need more than a functional literacy basis to plan for a future that will include new careers and technologies we cannot even imagine today.

Complex international influences, changing and emerging employment situations, and interpersonal and social conditions all require us to read, write, speak, and listen for a variety of purposes, and then to take actions based on what we have understood. “Instruction in metacognitive strategies can improve reading comprehension. Good comprehenders read to purpose and actively monitor their own understanding of what they read” (RAND, 2002, p. 92).

In this book we look at four major competencies in literacy that help us weave student learning strategies into the future:

1. Functional literacy
2. Content-area literacy
3. Technological literacy
4. Innovative literacy

What do we need to know about these literacies, and how will they help us close the learning gap for diverse students? Figures 1.4 and 1.5 offer definitions and explanations of how these literacies can work together to help our students survive and thrive in the twenty-first century.

Figure 1.4 Four Types of Literacy Critical to the Future Success of Our Students*

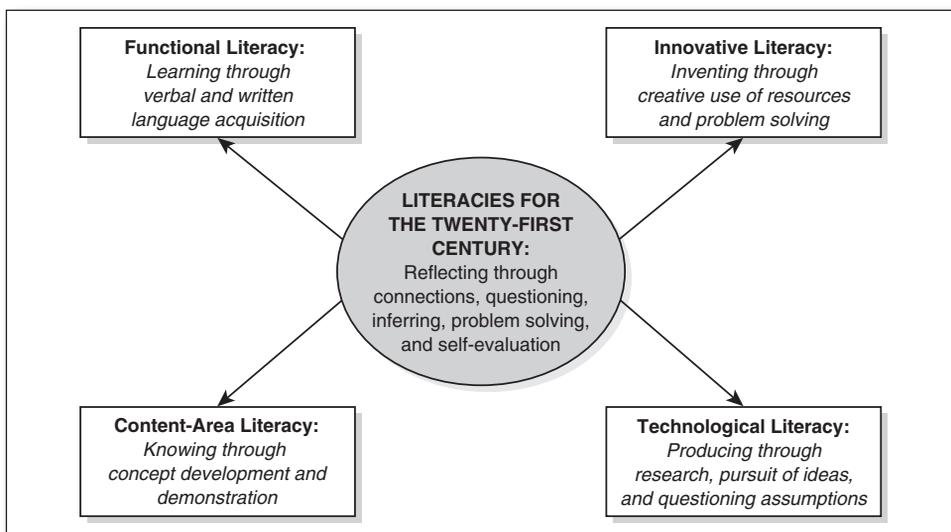


Figure 1.5 Factors Critical to Development of the Four Types of Literacy*

Type of Literacy	Critical Factors
1. Functional Literacy	
<p>Defined as: Learning to read, write, speak, and listen</p> <p>Purpose: To teach students how to read and write to a basic level of functioning by the end of third grade or, for those just learning English, by the third to fifth year of learning the language</p> <p>Sources: McEwan (2002); U.S. Department of Health and Human Services (2000)</p> <p><i>They will need to acquire an intimate knowledge of the code: the conventionally accepted way in which letters or groups of letters correspond to spoken sounds in our language (McEwan, 2002, p. 32).</i></p>	<ul style="list-style-type: none"> • Oral Language Development: Including speaking and listening • Phonological Awareness: Sounds and their differences • Phonemics: Translating sounds into symbols, learning the symbols • Spelling/early writing: Translating symbols into and words in writing to convey meaning • Fluency: Rate of reading, flow of sounds, without the interference of errors • Creating meaning: Constructing what the written words are about, main ideas, literal information; details noted from words, pictures, speech, and other sources; easily getting the “gist” of a passage of print or graphic • Narrative writing and descriptive: Telling a story; making comparisons; detailed descriptions; other forms of creative writing
2. Content-Area Literacy	
<p>Defined as: Reading, writing, speaking, and listening to demonstrate content-area learning</p> <p>Purpose: Understanding and use of content-area-specific knowledge and skills directed toward a specific result or demonstration of skill through a variety of means</p> <p>Sources: Benjamin (2002), Burke (2000), Harvey and Goudvis (1998, 2000), Miller (2003), Vacca and Vacca (2002)</p> <p><i>Academic literacy differs from the literacy that is required to read fiction. When we read fiction, we usually do so for pleasure, looking to lose ourselves in the beauty of the language and the story. With academic readings, we need to employ strategies of reading that are directed more toward finding specific information and remembering it (Benjamin, 2002, p. 29).</i></p>	<ul style="list-style-type: none"> • Vocabulary Acquisition: Gateway to using content-area knowledge; development and interconnection of concepts in a content area • Questioning: Formulating questions to understand and inquire further about a content-area skill or concept • Text orientation: Understanding the construction and factors that aid meaning in text or material construction for a particular content area including graphical or visual representations as well as book parts and text clues • Expository writing: Factual information to recount or inform or direct a reader; convey thinking about a content-area topic or problem; note patterns or trends; and demonstrate usefulness of the content area • Presentation and product creation: Performance-based summative demonstration of the integration of information and skills given a topic or problem

Type of Literacy	Critical Factors
3. Technological Literacy	
<p>Defined as: Using reading, writing, speaking, and listening in multimedia venues to create products and demonstrations of learning</p> <p>Purpose: Multidimensional thinking and production through access, use, and creation employing technology-based tools and strategies</p> <p>Sources: Bruce (2003), Thornburg (1991)</p> <p><i>As a user of personal computers, you can help others understand the benefit of this technology in extending students' ability to explore the space of concepts and ideas (Thornburg, 1991, p. 13).</i></p>	<ul style="list-style-type: none"> • Questioning authenticity: Applying criteria to establish author and website credibility; detecting assumptions, purpose, and clarity • Searching for information: Using the nature and structure of web-based information to find what you need; demonstrate dimensional or embedded thinking and solve problems • Media orientation: Determining the best method of conveying meaning and presenting the product • Production: Using computer-based and other multimedia production to demonstrate literacy competencies and produce products to convey meaning, solutions, and adaptations • Demystifying directions: Understanding and using directions in multiple forms and verbal or written construction of sequential steps for use of technological and other tools and processes
4. Innovative Literacy	
<p>Defined as: Reading, writing, speaking, and listening to do or solve something complex, invent something unique, or produce something innovative</p> <p>Purpose: Develop the adaptability and orientation to work and life inside and outside of the school setting to survive and thrive amid rapid change and expansion of knowledge</p> <p>Sources: Barton (2003); Manzo (1998); Manzo, Barnhill, Land, Manzo, and Thomas (1997); Manzo, Manzo, and Albee (2002); Manzo, Manzo, Barnhill, and Thomas (2000); Manzo, Manzo, and Estes (2001)</p> <p><i>Successfully intelligent people are flexible in adapting to the roles they need to fulfill. They recognize that they will have to change the way they work to fit the task and situation at hand, and then they analyze what these changes will have to be and make them (Sternberg, 1996, p. 153).</i></p>	<ul style="list-style-type: none"> • Innovation and Creativity: Entrepreneurial sense of thinking and acting, fluid and flexible in use of information and transformation of knowledge into new things, attitudes, solutions, products, or actions • Lifelong Learner Orientation: Acquiring marketable skills over time, responding to anticipated need, and creating ways to assimilate and accommodate to change, regardless of speed of the change • Practical and adaptive thinking: Scenario-based thinking and responses to real-life situations; interpreting new information; inquiry; consumer skills that are self-selected based on desired result.; adapting the information or interactions to make decisions or plans for the present and the future • Influential communication: Communicating to convince others of a point of view, applying rationale, ethical, and congruent logic that supports creative, positive solutions and conclusions

Source: Gregory & Kuzmich (2005b, pp. 8–9).

Standards and Curricula

The four competencies in literacy and the five language proficiency levels act as a lens for the standards and curriculum for which teachers are accountable, and can help us frame the critical elements for which we want to hold students accountable. Each of the four competencies is critical to the overall development of our students and their ability to access and process information at an accelerating rate in an ever-changing world. Although each can be taught separately, most learning will lend itself to a combination of competencies. Within each literacy competency, levels of language proficiency must be addressed to increase student success. This will help us select key standards-based concepts and strategies that help students focus on language acquisition while increasing skills to demonstrate content learned.

Critical Thinking

Across each of the literacy competencies is embedded the idea of critical thinking:

- *Schema development*: Summarizing and generalizing concepts and ideas, making connections from the known to the unknown
- *Inferential thinking*: Discovering the meaning behind the obvious; using cause-and-effect analysis; determining point of view, voice, and congruence in thinking
- *Questioning*: Formulating questions that determine assumptions, allow self-evaluation, and establish purpose and clarity
- *Problem solving*: Analyzing a problem and developing solutions that make sense, then speaking, writing, or producing to convey solutions and methods

Critical thinking can be hampered by a lack of English language proficiency, creating an extra challenge in the classroom.

Instructional Strategies

Which instructional strategies have the highest payoff? Marzano and colleagues (2001) looked at the research carefully and did a metacognitive study of strategies that resulted in increased performance for students. Figure 1.6 lists the nine strategies shown to have resulted in percentile gains and connections to what we know about the brain. The literacy tactics in the right column are used to teach thinking, reflecting, and developing skills related to the main nine strategies. We will refer to and use these and other research-based instructional strategies throughout this book. We will also look at each of the four literacy competencies in more detail, and then show you the natural connections and advantages in planning units for various grade levels and subjects.

Figure I.6 Research-Based Literacy Tactics and Percentile Gains in Student Performance*

Strategy	Percentile Gain	Connections to Brain Research	Literacy Tactics
Using similarities and differences, analogies and metaphors	45	The brain is a pattern-seeking device. It naturally looks for connections and relationships between and among prior and new learning.	<ul style="list-style-type: none"> • Classifying • Compare/contrast • Venn • Synectics • Concept attainment • Concept formation
Summarizing and note taking	34	Relevance and meaning are important to the brain. It deletes what is not useful.	<ul style="list-style-type: none"> • Mind maps • Concept webs • Jigsaw • Reciprocal learning • Templates and advanced organizers
Reinforcing effort and providing recognition	29	The brain responds positively to challenge and negatively to threat. Emotions enhance or negate learning.	<ul style="list-style-type: none"> • Goal setting and feedback or reflection • Journals • Portfolios
Assigning homework and practice	28	Practice and rehearsal are necessary to put new information into long-term memory. Marzano et al. (2001) suggest that learners need twenty-four practice trials to reach 80% mastery.	<ul style="list-style-type: none"> • Extension of application • Four squares • Book bags • Puppets • Five-finger writing
Generating nonlinguistic representations	27	The brain is a parallel processor. Visual stimuli are recalled with 90% accuracy.	<ul style="list-style-type: none"> • Mind maps • Graphic organizers • Models
Using cooperative learning	27	The brain is social and desires opportunities to process and make meaning through interaction and dialogue.	<ul style="list-style-type: none"> • Shared reading • Guided reading • Reciprocal learning • Peer editing • Buddy reading • Choral reading • Progressive writing • Jigsaw • Literature circles
Setting objectives and providing feedback	23	Relaxed alertness is important for the brain. High challenge and low threat are optimal for learners. The brain likes to have purpose and know where the learner is going. This provides safety, clarity, and structure.	<ul style="list-style-type: none"> • Goal setting • Rubrics • Clear criteria • High expectations • Appropriate challenge and choice

(Continued)

Figure 1.6 (Continued)

Strategy	Percentile Gain	Connections to Brain Research	Literacy Tactics
Generating and testing hypothesis	23	The brain is curious and seeks meaning and clarity. It establishes schemas for future use and makes meaning through patterns.	<ul style="list-style-type: none"> • Research papers • Investigations • Debates • Persuasive writing
Providing questions, cues, and advanced organizers	23	The brain appreciates wholes and parts. The brain has to have schemas and mental constructs on which to hook new learning.	<ul style="list-style-type: none"> • Levels of Bloom's Taxonomy (Sousa, 2001) • Paul and Elder (2001) standards for questions • Agenda maps • Guided reading • Diagrams and charts • Graphic organizers

Source: Gregory & Kuzmich (2005b, pp. 11–12). Adapted with permission from Gregory and Parry (2006).

Note: For a fuller discussion of this topic, see Marzano and colleagues (2001).

ASSESSMENT DATA

We will highlight numerous strategies in this book that work equally well for gathering both formal and informal data, and for both instructing and demonstrating learning. Data-driven decisions are critically important to choosing the most valuable instructional strategies for diverse learning in a variety of circumstances. This type of thinking will help us make the numerous adjustments that growth of a diverse student population requires (Gregory & Kuzmich, 2004). Students learning English are especially susceptible to poor performance on standardized testing, so the use of varied assessments is crucial.

Painless Diagnostic Assessment for Middle School and High School Students

In a Colorado high school, teachers in the science department develop and design a unit for each science course to begin the school year. The entire unit is a preassessment of students' science and literacy skills. Throughout the unit, students do the following:

- Report on new discoveries in science using computer-based research
- Listen to other students and provide feedback

- Conduct and write a science experiment
- Use a rubric for writing up experiments and short, constructed responses
- Use text orientation and interpretation strategies to better comprehend resources materials in the science classroom
- Solve problems using geographical displays, math strategies, and other resources

What kinds of data will teachers have when the unit is complete? Will it help them plan for future instruction, homework, and learning throughout the course? The teachers will know the following, and more, about their students:

- Scientific awareness
- Application of scientific methods and strategies
- Fluency of thinking with science concepts
- Sense of meaning and thinking
- Sense of purpose
- Skill with equipment for experiments and other scientific projects
- Social interaction skills
- Communication skills, oral and written
- Ability to use text, computerized resources, and other nonprint resources
- Technology skills
- Creativity
- Problem-solving skills and initiative
- Ability to cooperate in a group

Again, the use of an engaging unit of study that integrates literacy and content-area skills is an effective way to preassess.

What do we do when a student is learning English in addition to literacy skills? Whenever possible, we include an adult who speaks the student's home language. If this is not possible, we may need to schedule individual time with the student, or we may need to rely on student peer support. If you have no time, no peer or adult support, and no access to second-language materials, you must be able to apply nonverbal literacy strategies to the environment and treat the student based on the assumption that no literacy skills are present while still using age-appropriate materials. Students will be reluctant participants in an environment that is overly simplistic or insulting to the age.

Ongoing Format Assessment

Not all assessments need to be individual or formally written and recorded. The collection of the right kind of informal data can be invaluable in helping teachers plot out next steps. From a unit like this, a science teacher could flexibly group students for projects and experiments, provide or seek out appropriate-level materials to enhance comprehension, determine the next steps for scientific writing and oral presentation, plan to encourage the thinking strategies that will advance the use of newly learned concepts, and much more. Information also can be collected using

flexible groups for phonics lessons. The teacher can select (and help a student select) materials of an appropriate level to advance fluency and meaning, choose the next steps in writing and fine motor coordination, and plan the type of sharing needed to advance oral language skills, and much more. These strategies are especially useful when working with English language learners: individual, informal assessment can be flexible when you are dealing with language-specific issues.

Diagnostic thinking is an essential element in a successful literacy program that meets the needs of and accelerates the learning of diverse students. In many classrooms, we have data about student learning, and teachers have a repertoire of strategies to help students learn. We must connect what we learn about student performance in our selection of strategies. We will accelerate learning if we choose strategies that make sense, given current student demonstrations of literacy. Diagnostic planning is an ongoing process.

We must collect classroom data frequently so that we can adjust our strategies to reflect student speed of learning and success with learning (see Figure 1.7). Waiting three months to discover that a student has not made the expected progress will not close a learning gap. Continuous strategy adjustment and monitoring will increase the accuracy of our instruction and thereby increase the probability that students will demonstrate growth in literacy skills.

Figure 1.7 Selected Methods for Collecting Assessment Data About Literacy Skills

Type of Literacy	Selected Data Collection Methods
Functional Literacy	Oral reading for fluency Writing sample Verbal report, description, or story Retell a written or oral story. Write a question or two with the answer. Identify the main idea. Miscue analysis (noting phonological and phonemic errors) Draw a picture to represent an idea or story. Create a word list for writing. Correct a writing sample to conventional spelling, grammar, punctuation, or capitalization. Narrative or descriptive writing that tells a story, makes comparisons, gives details, and is creative
Content-Area Literacy	Graphic organizer completion Note taking Homework Develop questions for investigation of a topic or issue. Choose a topic or problem to investigate. Expository writing samples, both short and long Presentation of a project or solution Explanation of a process or solution

Type of Literacy	Selected Data Collection Methods
	<p>Interpretation of a visual or graphic piece of information</p> <p>Correct a writing sample for word choice accuracy and variety.</p> <p>Create a written or verbal summary.</p> <p>Cause-and-effect analysis</p> <p>Analyze a problem and develop solutions.</p> <p>Write to test a premise, determine a point of view, express voice, report, or draw conclusions.</p> <p>Correct a writing sample for voice, details, evidence, and conclusions.</p> <p>Predict outcomes or effects.</p> <p>Generalize concepts through application-oriented activities like role plays or simulations.</p>
Technological Literacy	<p>Scavenger hunt for sources on the Internet</p> <p>Question an assumption.</p> <p>Self-evaluate work.</p> <p>Create a flowchart for a search or information.</p> <p>Map a complex idea.</p> <p>Choose the best product or resources for the desired results.</p> <p>Computer-generated writing samples</p> <p>Graphic organizer generation or other visual representation like Microsoft PowerPoint or drawing programs</p> <p>Generate directions or implement action based on complex directions.</p> <p>Teach others a process, program, or product using various media.</p> <p>Correct a writing sample for format, graphics, color, and other media.</p>
Innovative Literacy	<p>Use a “4 Squares for Creativity” organizer.</p> <p>Anticipate a need or develop a solution to a possible problem.</p> <p>Create budget, graph data based on self-generated data.</p> <p>Respond to a scenario, participate in a simulation.</p> <p>Self-select method of learning and justify the choice.</p> <p>Persuasive writing sample</p> <p>Detect errors and describe how to fix them.</p> <p>Generate multiple and creative uses for an object.</p> <p>Anticipate the needs of self and others in completing a complex task, listing necessary resources or assistance.</p> <p>Correct a writing sample for innovative ideas, point of view, adequacy of a claim and evidence to back it up, creativity of conclusions.</p>

Source: Gregory & Kuzmich (2005a, pp. 15–16).

A COMPREHENSIVE LITERACY PROGRAM

Comprehensive literacy instruction should include the four core literacy competencies in two distinct ways. First, strengthening these areas of literacy gives us tools and support for the traditional literacy skills of reading, writing, speaking, and listening. These are the very skills affected by English language proficiency. Also important for learners are the emerging

literacy skills that will support successful lifelong learning in the twenty-first century.

Technology can be a tool that helps learners with special needs who struggle with fluidity in writing. It can provide a more effective means of getting thoughts down than handwritten work would allow. The second way to include the four literacy competencies is to learn to search for information in a web-based environment because this distinct form of literacy is recent and evolving. A project that is enterprising and oriented to real life may engage an otherwise reluctant tenth-grade male student in new ways. An added payoff comes as adaptive reasoning using multiple sources of information becomes an essential and highly valued literacy skill in the work world.

This type of approach goes beyond deep thinking and higher-order skills to the combination of information assimilation, creative use of products or process, and a transformative goal such as the invention of a product or creation of a web-based business. In this book, we will apply these literacy competencies to the growth of diverse learners and to identification of tools to assist struggling, functional, and advanced learners.