

It's All About Learning: Ensuring That Students Are

This article describes and advocates for taking the next step in connecting school library media programs to student learning and academic achievement. It's time to get specific and detailed in terms of the examining and documenting the relationship between library media program services, particularly information

skills instruction, and student performance as measured on standardized tests. Making this connection is crucial if school library media programs are to thrive in an educational system increasingly focused on accountability and measured achievement through examination by standardized testing.

Where the Action Is

It's pretty obvious. The bottom line in K-12 education today is student achievement, and, like it or not, increasingly that achievement is defined by standardized testing and the "No Child Left Behind" act. For example, an August 2003 poll on the Big6.org website asked, "Starting the 2003-04 school year, what is the new initiative in your district?" Of the almost 700 responses, 86% indicated No Child Left Behind/Standardized Testing! Standardized testing is the overwhelming educational focus around the country. We as educators need to take action to ensure success for all students.

"No Child Left Behind," President Bush's education agenda, is designed to improve student achievement in all schools across the United States. The Act is intended to guarantee quality education for all children—with an emphasis on increased funding for poor school districts, higher achievement for poor and minority students, and new measures to hold schools accountable for their students' progress. The Act significantly expands the role of standardized testing in American public education.

The bill mandates that states develop and implement "challenging" academic standards in reading and math, set annual statewide progress objectives to ensure that all groups of students reach proficiency within 12 years, and then test children annually in Grades 3 through 8, in reading and

math, to measure their progress. The bill specifically prohibits any "national testing" or "federally controlled curriculum." It is up to the states to select and/or design their own tests, and to make sure that the tests are aligned with the state curriculum standards. (U.S. Department of Education 2003; Public Broadcasting System, 2003) The test results are made public in annual "report cards" on how schools are performing and how states are progressing overall toward their proficiency objectives.

Before continuing, let me be very clear about one thing: I am not a proponent of standardized testing. Standardized testing has its place, but the "testing movement" seems overboard to me. As library and information professionals, it is our job to fight for true education reform (e.g., focusing on higher-level thinking skills) rather than simply testing. At the same time, we need to help students succeed at whatever has been set before them. Today, that means focusing on standardized tests and the relationship between information literacy skills instruction and student performance on these standard tests.

What This Means for Library Media Programs

In considering a more direct connection between library media programs and standardized tests, it's important to remind ourselves of our ultimate purpose and goal: "the mission of the library media program is to ensure that students...

are effective users of ideas and information." (Information Power, 1998) Our work is founded on a fundamental conviction—the more skilled that students are in gathering, processing, evaluating, and applying information, the more they will be able to achieve on any task. Thus, it is essential that we direct our attention to student success as measured by standardized tests.

The school library media field appears to be increasingly aware of this need to focus on achievement and standards. Over the past 10 years, much progress has been made in focusing programs on student performance and the connection to state and subject area standards. Teacher-librarians recognize that the key to providing a meaningful program is the direct connection to curriculum and the classroom.

The library media field has also made progress in recognizing that it's not enough to simply "say" that we are important and make a difference. Ross Todd nailed it on the head in his August/September 2003 article in LIBRARY MEDIA CONNECTION. It's right on the cover, "It's not enough to say that school libraries contribute to learning. Now you have to prove it." Exactly, and as Todd implies, we need to focus on what it all means for students—how does an effective school library media program help students? What does it enable them to do and to become? What does it mean in terms of student learning? (p. 13).



Effective Users of Information on Standardized Tests

Among the research that Todd reviews are the well-cited studies conducted by Keith Curry Lance and colleagues. (Lance 2001) These studies empirically analyzed the connection between student achievement and school library media programs. As recently reported in an Association of Supervision and Curriculum Development Research Brief (ASCD 2003), the Lance studies confirmed a correlation between the presence of a library or librarian and higher student achievement, especially in reading. Among other findings, studies in Alaska, Colorado, Oregon, and Pennsylvania found that professionally trained and credentialed teacher-librarians have a positive effect on student achievement.

The Smith (2001) study of Texas school library media programs looked specifically on the effects of school libraries on student achievement as measured by the reading portion of the Texas standardized test, the Texas Assessment of Academic Skills (TAAS). The study found that school library media programs do have a measurable effect on student achievement. At the elementary and middle school levels, library media programs could account for approximately 4% of the variance in TAAS scores; at the high school level, 8.2% of variance.

Furthermore, at the middle school level, two variables stood out, including “providing information skills instruction to students.” At the high school level, seven variables were noted including “units planned with teachers.”

This is great news, right? Isn't this the evidence that we've all be waiting for? We should be shouting the news from roof-tops and on street corners! Better yet, the eyes of administrators and school boards should be finally opened and the money and support for library media programs should be flowing.

Well, not so fast. While these results are encouraging, they are not overwhelming in any sense. First, these studies are correlational, not causal. It appears that effective

library media programs have a positive impact on student performance, but there are no studies that demonstrate a direct causal effect. Second, we are talking potential impact in the 4–8% range, and that pales before the strongest predictor of academic success, socioeconomic factors. Lastly, as the ASCD piece asks, how much does a 4–8% variance cost a district? What is the cost-benefit analysis, and what specific aspects of the library media program account for the variance?

A missing element is a direct connection between core library media functions (specifically information skills and reading advocacy) and performance on standardized tests. We do have valuable and important studies on the nature and impact of information

Comparison of Information Skills Process Models				
Kuhlthau Information Seeking	Eisenberg/Berkowitz Information Problem Solving (The Big6 Skills)	AASL/AECT Information Literacy Standards	Pitts/Stripling Research Process	New South Wales Information Process
1. Initiation 2. Selection	1. Task definition 1.1 Define the problem 1.2 Identify info requirements		1. Choose a broad topic 2. Get an overview of the topic 3. Narrow the topic 4. Develop thesis/purpose statement	Defining
3. Exploration (investigating info on the general topic)	4. Formulation (of focus)	2. Information seeking 2.1 Determine range sources 2.2 Prioritize sources	5. Formulate questions to guide research 6. Plan for research and production 7. Find, analyze, evaluate resources	Locating
5. Collection (gather info on the focused topic)	3. Location and access 3.1 Locate sources 3.2 Find info	1. Accesses information efficiently and effectively.	8. Evaluate evidence, take notes/compile bib	Selecting
6. Presentation	4. Information use 4.1 Engage (read, view, etc.) 4.2 Extract info	2. Evaluates information critically and competently.	9. Evaluate evidence, take notes/compile bib	Organizing
7. Assessment (of outcome process)	5. Synthesis 5.1 Organize 5.2 Present	3. Uses information accurately and creatively.	10. Create and present final product	Presenting
	6. Evaluation 6.1 Judge the product 6.2 Judge the process		(Reflection point—is the paper/project satisfactory)	Assessing

M. Eisenberg 2003

Figure 1: Comparison of Information Skills Process Models

(Adapted from Eisenberg, M. and Brown, M., 1992 and Spitzer, Eisenberg, and Lowe, 1998)

<p>1. Task Definition:</p> <p>1.1 Define the problem.</p> <p>1.2 Identify the information needed.</p> <p>2. Information Seeking Strategies:</p> <p>2.1 Determine all possible sources.</p> <p>2.2 Select the best sources.</p> <p>3. Location and Access:</p> <p>3.1 Locate sources.</p> <p>3.2 Find information within sources.</p>	<p>4. Use of Information:</p> <p>4.1 Engage (e.g., read, hear, view).</p> <p>4.2 Extract relevant information.</p> <p>5. Synthesis:</p> <p>5.1 Organize information from multiple sources.</p> <p>5.2 Present information.</p> <p>6. Evaluation:</p> <p>6.1 Judge the result (effectiveness).</p> <p>6.2 Judge the process (efficiency).</p>
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Figure 2: The Big6

skills instruction. Kuhlthau (2001, 1993), Todd (2003), and others investigate student performance on papers, projects, and reports. These are certainly important pieces of the evidence puzzle. But, we need to go one step further; we need to address the specific questions of performance on standardized tests.

Therefore, I propose that we complete the picture by taking the next, bold step—to get detailed and specific in focusing our attention on state standards and tests and the connection to core library media functions. I propose that we move from broad, sometimes vague correlations to specific and direct connections.

Specifically, that means:

- analyzing state standards and test items to determine direct connections to information skills instruction.
- targeting information skills instruction actions to specific standards and test items.
- evaluating the impact of these interventions on student performance on test items.

Today’s library media program encompasses three important functions: reading advocacy, information skills instruction, and information management. While there are direct connections between all of these functions and standardized tests, we are limited as to what can be covered because of time and space constraints.

Therefore, the focus for the remainder of this article will be on information skills instruction and testing.

Information Skills Instruction

There’s an extensive body of literature on the information skills instruction and information literacy (see Eisenberg, Lowe, and Spitzer, 2004) including the empirical work of Carol Kuhlthau (1993), various state standards (e.g., Wisconsin 1998), the national AASL/AECT standards (AASL/AECT 1998), and my Big6 problem solving skills approach, developed in conjunction with Bob Berkowitz. (Eisenberg and Berkowitz, 1990)

I have previously written on a number of occasions about the commonalities among these models. (see Figure 1, based on Eisenberg and Lowe 1996; also in Spitzer, Eisenberg, and Lowe, 1998). From this side-by-side view, we see a process unfold—that information skills are connected activities that flow from identifying a task through gathering, evaluating, use, synthesis, and assessment of information.

More recently, Janet Murray went even further, matching the Big6 model, the AASL/AECT national standards, Information Literacy Standards, and the National Educational Technology Standards for Students (NETS) developed by ISTE. Murray documented the relationship between the Big6 and specific state information and

technology skills standards, with examples from Washington, North Carolina, Colorado, and Missouri. (see Murray, 2002)

What all this means is that, regardless of the information skills curriculum, model or standards used, you can make the connection to other models and standards, including the AASL/AECT framework and the Big6 approach. Because it is the most widely used approach to information literacy instruction in K-12 schools and because of my familiarity with it, I will use the Big6 process to explore the relationship of information skills instruction and standardized tests. The Big6 is a process model of how students solve an information problem. From practice and study, we found that successful information problem-solving encompasses six stages with two sub-stages under each (see Figure 2).

Students go through these Big6 stages—consciously or not—when they seek or apply information to solve a problem or make a decision—both on a personal level and with school work. It’s not necessary to complete these stages in a linear order, and a given stage doesn’t have to take a lot of time. We have found that in almost all successful problem-solving situations, all stages are addressed.

Content Area Standards and the Information Skills Connection

State and subject area standards are now part of the fabric of K-12 education and define the goals of education across the United States. McREL, the Mid-Central Regional Education Lab, has compiled content for K-12 curriculum (see McREL 2003, www.mcrel.org/standards-benchmarks). According to McREL, in the 1980s and 1990s, most national subject-matter organizations sought to establish standards in their respective areas, including mathematics, science, civics, dance, theater, music, art, English/language arts, history, and social studies. “Since 1990 the movement has acquired considerable momentum at

the state level as well. As of 1999, the District of Columbia, Puerto Rico, and every state except Iowa have set or are setting common academic standards for students.” (American Federation of Teachers, 1999 quoted on the McREL website).

Much has been written about the importance of connecting library media programs to school and classroom curriculum. We talk about context and collaboration, and one important tangible way to do this is to make the connection between information skills instructional programs to state content area standards. Furthermore, this connection is essential when we turn to focusing on standardized tests. Tests are developed to assess student performance on state standards, and individual test questions are referenced to the state standards (this is explained in more detail in the next section). The connection between information skills standards and state content standards allows us to make the necessary connection and target information skills instruction to student achievement as measured on the standardized tests.

Fortunately, we have a number of excellent models of how to make the connection between state content standards and information skills. Wisconsin (1998) was one of the first states to develop combined information and technology skills standards. The heart of these standards, “Information and Inquiry” is based directly on the Big6 approach. Wisconsin also led the way in fully integrating information and technology skills standards with content area standards and offers an extensive set of matrices connecting information technology literacy standards to content area standards. (Wisconsin 2000). See *Figure 3 for more information on these connections*.

The state of Missouri also fully documents the relationship between state information and technology literacy skills standards and the state content standards, as well as more general process/performance standards. (Missouri 2001) *Figure 4*

illustrates how, under the broad information skill of “Access of Information,” the specific skill of “Determine purpose” links to Process/Performance Standards 1.1 and 3.1. The even more detailed sub-skill “Brainstorm” links to Process/Performance Standards 3.6 and Science Content/Knowledge Standards SC 7. *Figure 4* illustrates the similarities between the Missouri program and the Show-Me Standards.

If your state does not have a linking document, it is relatively easy to do so. Sue Wurster and I (Eisenberg and Wurster 2002) created a matrix aligning the Florida Language Arts Standards with the Big6 Skills. We paid particular attention to Language Arts Standards that are tested on the Florida FCAT exams (see *Figure 5*)

The Final Chapter: Making the Connection to Standardized Tests

Making the connection between information skills standards to state content standards is essential to the task of making library media programs relevant to educational priorities, but it is not the end of the story. The last part of the plot is extending the connection to the state tests themselves. This requires:

- Becoming familiar with various state tests (including the nature, format, and content of the tests)
- Analyzing the tests and individual test questions from an information perspective (i.e., identifying relevant information skills standards or skills within models such as the Big6 that would help students to succeed on specific test questions).
- Collaborating with classroom teachers to offer opportunities for students to learn and apply the relevant information skills to specific test questions.
- Designing and delivering lessons that help students to learn and apply the relevant information skills to specific test questions.

- Documenting actions taken to connect information skills instruction to tests, test questions, and standards.

A. Mathematical Processes

Students in Wisconsin will draw on a broad body of mathematical knowledge and apply a variety of mathematical skills and strategies, including reasoning, oral and written communication, and the use of appropriate technology, when solving mathematical, real-world and nonroutine problems.

ITL Performance Indicators

- formulate initial questions to define what additional information is needed—B.4.1
- determine a specific focus for the information search questions—B.4.1
- recognize that materials in the school library media center are organized in a systematic manner—B.4.3
- locate materials using the classification system of the school library media center—B.4.3
- identify new information and integrate it with prior knowledge—B.4.6
- determine if information is relevant to the information question—B.4.6
- select information applicable to the information question—B.4.6
- seek additional information if needed—B.4.6
- apply the information gathered to solve the information problem or question—B.4.6
- recognize the three common types of communication or presentation modes (written, oral, visual)—B.4.7
- choose a presentation format (e.g., speech, paper, web page, video, hypermedia)—B.4.7
- develop a product or presentation to communicate the results of the research—B.4.7

Figure 3: Wisconsin 4th Grade Examples of Connections: Mathematics

(From Combined Matrix, Model 2, B. Information and Inquiry ITL Content Standard: p. 179–180)

■ Assessing success by looking at the test results (as provided in the various state “report cards”).

■ Revising and planning for future instruction.

This is clearly a long-term commitment and effort. One-shot lessons and interventions will probably not result in any measurable improvement in student performance. However, over time, teacher-librarians can make a difference by working with classroom teachers to integrate information skills instruction into subject area learning that is targeted to performance requirements on standardized tests. This is not “teaching to the test.” It is “teaching skills that allow students to perform better on tasks as measured by standardized tests.”

Information on tests is readily available from most states on the Web. These include sample exams across subject areas and grade levels. Most samples also include references to the related state content standards. These references

provide useful insights into how standards are translated into test items as well as the style and format of test questions.*

Here are three examples of what I am proposing—using sample test questions from three different states, subject areas, and grade levels.

Example 1: Wisconsin 4th Grade Mathematics

Sample test questions for the “Wisconsin Knowledge and Concepts Examinations” are presented by subject, grade, and proficiency category (minimal performance, basic, proficient, and advanced). The questions provided are edited and are intended as samples only. Actual questions are available to Wisconsin educators through the local district or school.

Mathematics Question 9 from the Wisconsin Department of Public Instruction, Office of Educational Accountability (1997, <http://www.dpi.state.wi.us/dpi/oea/math4bas.html>) reads:

“The tree in the picture is 10 feet tall. Next to the tree, draw another tree that is 20 feet tall. Explain how you decided how tall to draw your tree.”

This question is followed by a picture of a tree with a ruler next to it noting its height as 10 feet. Blank spaces are provided below for students to show and explain their answers.

According to the scoring explanation provided, this item tests two objectives: Measurement and Communication. For Measurement, the student demonstrates an understanding of scale by drawing the second tree twice the height of the first. The student can use the ruler provided or another strategy. Communication objectives include relating daily vocabulary to mathematical terminology and relating models, diagrams, and pictures to mathematics. Students validate their solutions by explaining their decision-making process.

Looking at this question from an information perspective, it appears to relate to two Big6 skills:

Big6 #1: Task Definition—recognizing that the question has two parts to it. It’s not enough to just draw a tree, the student must also explain his or her decision-making process.

Big6 #6: Evaluation—reflect on decision-making process. “Explain how you decided how tall to draw your tree” is asking students to describe and reflect on their decision-making process.

Task Definition lessons may include:

■ Recognizing multiple parts of questions. Assignments and questions frequently have multiple components, and students need to learn to focus on this. Using existing homework, tests, and other assignments, students can

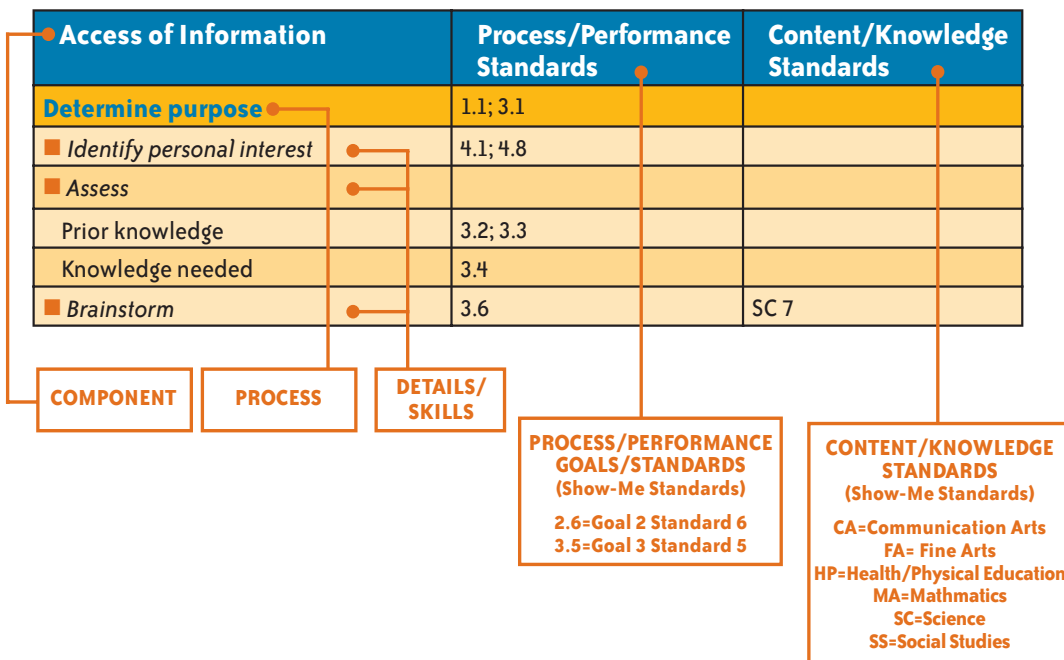


Figure 4: Missouri (2001) Information and Technology Literacy: A Comparison to the Show-Me Standards (p. 7)

be asked to break them down and identify the parts—and the relative importance of each part to the assignment or question.

■ Learning key words in questions. Bob Berkowitz works with high school students to highlight and define the key verbs in questions. Students make flash cards to help them study and remember the terms. For example, in the question above, the key terms are “draw “ “explain” and “decided.” Most students will understand “draw” but they may have more trouble with knowing what is required for “explain” and also that “decided” means that they are to reflect on their decision-making process.

For Evaluation, students should be able to reflect on their process and communicate what they did:

■ Teacher-librarians and classroom teachers can teach students how to break down their actions into steps, for example, by listing them one-by-one or writing them on cards.

■ Students can practice this type of written self-reflection if they are sometimes required to include an explanation of their work when they turn in assignments.

Example 2: Florida (FCAT) 8th Grade Reading

Florida provides extensive sample information for its FCAT. (Florida’s Comprehensive Assessment Test Keys (2002–2003). A series of questions, including #16, follows a 900+ word reading passage, *America’s Saltiest Sea: Great Salt Lake* by Angela B. Haight, illustrations from the Utah Division of Wildlife. *Cricket Magazine*, April 1996. Question 16 (from Florida’s Comprehensive Assessment Test FCAT Sample Test Books and Answer Keys (2002–2003) Grade 8 Reading, 2003, p.12):

Question 16: Using details and information from the article, summarize the main points of the article.

For a complete and correct response, consider these points.

3rd grade – 5th grade

LA.A.2.2.8: The student selects and uses a variety of appropriate reference materials, including multiple representations of information, such as maps, charts and photos, to gather information for research projects. (Tested on FCAT)

6th grade - 8th grade

LA.A.2.3.5: The student locates, organizes, and interprets written information for a variety of purposes, including classroom research, collaborative decision making, and performing a school or real-world task. (Tested on FCAT)

Big6 Skill #2: Information Seeking Strategies

- 2.1 Determine the range of possible resources
- 2.2 Select the best sources

Big6 Skill #3 Location and Access

- 3.1 Locate sources (intellectually and physically)
- 3.2 Find information within sources

Big6 Skill #4: Use of Information

- 4.1 Engage (e.g., read, hear, view) the information in a source
- 4.2 Extract information from a source

Big6 Skill #3 Location and Access

- 3.1 Locate sources (intellectually and physically)
- 3.2 Find information within sources

Big6 Skill #4: Use of Information

- 4.1 Engage (e.g. read, hear, view) the information in a source
- 4.2 Extract relevant information from a source

Big6 Skill #5: Synthesis

- 5.1 Organize information from multiple sources
- 5.2 Present information

Note Standard L.A.A. = Reading

Figure 5: Sample Florida Language Arts Standards and the Big6

- its history
- its interesting features
- why it is a landmark.

A Scoring Rubric for Question 16 is provided in the Grade 8 Answer Key Book (p. 11). It refers to the passage as an “informational text” and references it to the following Language Arts Benchmark:

Benchmark: LA.A.2.3.5 The student locates, organizes, and interprets written information for a variety of purposes, including classroom research, collaborative decision-making, and performing a school or real-world task. (Includes LA.A.2.3.6 uses a variety of reference materials, including indexes, magazines, newspapers, and journals, and tools, including card catalogs and computer catalogs, to gather information for research projects; and LA.A.2.3.7 synthesizes and separates collected information into useful components using a variety of techniques, such as source cards, note cards, spreadsheets, and outlines.)

According to the Rubric, “a top-score response will include information about the Great Salt

Lake’s history, interesting features, and why it is a landmark.”

From the Eisenberg/Wurster chart (see Figure 5), we see that Florida Benchmark: LA.A.2.3.5 is linked to Big6 Skills #3, Location and Access, #4, Use of Information, and #5, Synthesis. Therefore, in considering this question and the rubric from an information perspective, and by analyzing the question and information skills required of students more carefully, it seems that students will be successful if they are able to:

- effectively and efficiently extract relevant information (Big 6 4.2, Use of Information).
- organize and present complete information (Big6 #5, Synthesis)

Use of Information lessons related to this need might include:

- Teaching students how to skim and scan a text. One key element of this is helping students to learn to read for a purpose (i.e., to look at the questions being asked of them before they start reading the text) so that they know what to look for.

■ Highlight relevant parts of a reading passage. Again, students should learn to first look at the questions being asked and then how to read a text and highlight key parts.

Another possible approach to this question combines Task Definition, Use of Information, and Synthesis. Devised by Bob Berkowitz, students learn to analyze the parts of question, create a chart that outlines the parts, read the text and take notes on the chart, and finally to write the full answer from the chart.

For example, Question 16 requires three information items about the Great Salt Lake: its history, its interesting features, and why it is a landmark. Before even reading the passage, students can create the following blank chart:

History	
Interesting Features	
Why a Landmark	

Then, if they come across any information on the aspects when reading the passage, they can simply enter the information into the chart, for example:

History	<ul style="list-style-type: none"> • In 1847, settlers arrived in Salt Lake City • Once, during a swarm of crickets, seagulls saved the settlers' crops
Interesting Features	<ul style="list-style-type: none"> • 25 percent salt • 75 miles long by 50 miles wide • the largest body of water west of the Mississippi River.
Why a Landmark	<ul style="list-style-type: none"> • the largest body of water west of the Mississippi River.

With this chart in hand, it's a straightforward matter to write a complete response that directly answers the question. Students are able to draw the relevant facts out of the passage before having to worry about the writing process.

Example 3: Missouri 10th Grade Science

The Missouri State Department of Elementary and Secondary Education provides up-to-date examples of the Missouri Assessment Program (MAP). Question 2 on

the 2003 Grade 10 Science test (Missouri State Department of Elementary and Secondary Education 2003 Science Released Items Grade 10, p. 3) asks:

Each of the three main particles that make up a neutral atom has mass and either a positive (+), negative (-), or neutral (0) charge.

List the three main particles found in a neutral atom.

1. _____
2. _____
3. _____

Show the charge on each of these three particles by writing a symbol (+, -, or 0) to the right of its name.

Circle the name of the particle that has the least mass.

The Scoring Guide for Question 2 notes that this relates to Missouri Standard: III.A.4 (Std 1) Goals: 1.10. The answer should include the following elements:

- electron, proton, neutron (in any order)
- - with electron, + with proton, 0 with neutron
- Electron is circled.

Students receive the following scoring points:

- | | |
|----------|--------------------|
| 3 points | three key elements |
| 2 points | two key elements |
| 1 point | one key element |
| 0 points | other |

Analyzing this question from an information perspective, we again see that a key to this question is Big6 #1, Task Definition as well as Big6 #6, Evaluation, for which students are able to judge and score answers themselves.

For question 2, Students must include all three elements to receive the 3 maximum possible points. Teacher-librarians can work with classroom teachers to design learning experiences that help students learn to recognize the requirements of a complete answer and to make sure that students do, in fact,

include all of the requirements in their answer. These learning experiences can include:

- Lessons that teach students how to analyze questions and identify the requirements.
- Exercises and homework that have students practice analyzing questions and identifying requirements.
- Having students create their own rubrics for questions, homework, and assignments.

Summary: Putting It All Together

The three examples presented in the previous section demonstrate how it is possible to not only link information skills standards to content area standards, but to get much more specific in providing meaningful information skills instruction that helps students to succeed on standardized tests. I recognize that one lesson here and there will not have much of an impact on student performance. However, over time, repeated lessons that focus on the same information skills—targeted to questions in the same format and style that appear on statewide tests, taught collaboratively by the teacher-librarian and classroom teacher—can make a difference.

To review the recommended approach:

- Become familiar with various state tests.
- Analyze and break down the tests and individual test questions from an information perspective.
- Collaborate with classroom teachers to offer opportunities for students to learn and apply the relevant information skills to specific test questions.
- Design and deliver lessons that help students to learn and apply the relevant information skills to specific test questions.
- Document actions taken to connect information skills instruction to tests, test questions, and standards.
- Assess success by looking at the test results.
- Revise and plan for future instruction.

While not discussed in detail in this article, these last three bullets—document, assess, and plan—are as important as the others to overall success. Documentation (through charts, schedules, or reports) of specific information skills instructional efforts provides evidence of the involvement of the library media program in the effort to improve student achievement.

Documentation also provides a baseline for assessing any potential impact on test scores. In addition to assessing success, examining test results will point to problem areas for student performance, and future information instructional efforts can be targeted to the most problematic areas. Lastly, revisions in the instructional efforts should be systematically planned and communicated to administrators and school decision makers.

The targeting of library media information skills instructional programs to standardized testing is not an add-on to existing programs. Rather, it is a long-term commitment to targeting the focus of instruction to school and district priorities. It is fully consistent with the mission and goals of the library media program as it takes a systematic approach to “ensuring that students are effective users of ideas and information.”

The potential result is for library media programs to make a difference in student performance and to finally gain the deserved recognition that library media programs are vital to education in an information society. ■

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** Unfortunately, I have not found any references to state information skills standards. It is up to us—the library media field—to begin to make and communicate these connections.*

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