We Boost Achievement!

Evidence-Based Practice for School Library Media Specialists

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With Ross J. Todd

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Introduction

Several years ago, Ross J. Todd gave the keynote address for the International School Library Association Conference. During his speech, he elaborated on research that he had done in Australia linking school information literacy teaching to academic achievement. After that speech, I resolved to gather the many thoughts I had written about for years in the area of evaluation, develop new techniques, and try to publish a practical volume for school library media specialists. Dr. Todd graciously agreed to write a theory chapter for the book, and what you hold in your hand is the result.

We are in a time when all parts of education are being asked to be accountable – for high test scores – at least. The Lance studies and other research of the past decade have put the contribution of library media programs on the table – as I like to say, we are the milk on the cereal, not the butter on the bread. We have all applauded those studies and they have been used across the country to bolster our efforts to keep our vital programs alive.

But state studies do not answer the question, "What contribution am I making to achievement in my school?" This volume was prepared with the building-level library media specialist in mind.

Evidence-based practice or data-driven decisionmaking are terms that ask library media professionals to base what they do every day on evidence they collect about their impact. That is, instead of going to school in the morning and responding to emergencies at a frenzied pace (quite possible in any school library media center), that our agenda followed by our action be based on what we can and do contribute to achievement. Do we shelve books or design a reading log for a dinosaur unit; do we re-arrange the furniture or plan collaboratively with a teacher for her next unit? Evidence-based practice asks us to monitor our days so that as we discover our best techniques for raising achievement – we put high priority on those activities as opposed to those that contribute little or nothing.

After Ross Todd's introduction and challenge about the area of evidence-based practice, a framework is set out for collecting evidence and data from:

- The learner level
- The teaching unit level
- The organization level

And in two dimensions:

- Direct evidence
- Indirect evidence

Then chapters concentrate on the areas of the library media program that should be measured:

- Collaboration
- Reading
- Information Literacy
- Technology

A banquet of measures has been provided for the library media specialist who can select, adapt, modify, and use in a local effort to ascertain impact.

Chapter seven provides a number of tips and tricks and selected sources for assistance, and the final chapter provides a few tips on the presentation of the evidence to various audiences.

The authors sincerely hope that school library media specialists find in these pages what we call "pebbles in the pool" measures – those gauges that when tested and perfected have ripple-effects throughout their programs. Comments and suggestions to the authors are always appreciated as these measures are tested and tried. (davidlmc@qwest.net)

David V. Loertscher
October 2003

Master List Of Measures Of Evidence By Number

Collaboration

1. Measure The Time Spent Collaborating
2. Chart The Move From "Bird Units" To Quality Learning Experiences In The LMC (Teaching Unit Level)
3. Gauge Te Dispersion Of Collaboration Across The Faculty (Organization Level)
4. Joint Assessment During Collaboration (Teaching Unit Level)
5. Standardized Assessment And Collaboration (Learner Level)
6. Local Assessment And Collaboration (Lerner Level)
7. Memorable Learning Experiences (Learner Level)
8. Deep Learning Vs. Surface Learning (Learner Level
9. Assessment, Collaboration, And Rubrics (Teaching Unit Level)
10. Teacher-Pupil Ratio (Teaching Unit Level)
11. Collegial And Trusting Relationships (Teaching Unit Level)
12. The Role Of The LMC Program And State Standards (Teaching Unit Level)
13. Collaboration And Reflection (Teaching Unit Level)
14. Administrators And Collaboration (Organization Level0
15. Staff Size And Collaboration (Organization Level)
16. Professional Development And Collaboration (Organization Level)
17. School Schedules And Collaboration (Organization Level)

Reading

1. Document Access To Reading Materials For Individuals (Learning Level)
2. Do A Classroom Reading Audit (Teaching Unit Level)
3. Document Online Access To Reading Materials (Organization Level)
4. Document Organizational Access Policies To Reading Materials (Organization Level)
5. Gauge Free Voluntary Reading (All Levels)
6. Have Learners Keep Reading Logs For Special Purposes (Learner Level)
7. Ask Who Likes To Read (Learner Level)
8. Standardized Assessment In Reading (Learner Level)
9. Local Assessment In Reading (Learner Level)
10. Cornwell's Independent Reading Rubric (Learner Level)
11. Rubric Points For Additional Reading (Learner Level)
12. Self-Assessment In Reading (Learner Level)
13. Observation Of Readers (Learner Level)
14. Encouragement And Motivation To Become Avid Readers (Learner Level)
15. Standardized Assessment In Reading (Teaching Unit Level)
16. Local Assessment In Reading: Check Tests (Teaching Unit Level)
17. Local Assessment In Reading: Types Of Learners (Teaching Unit Level)
18. Local Assessment In Reading: Progress Of The Class (Teaching Unit Level)
19. Rubric Points For Additional Reading: Individual Reading Logs (Teaching Unit Level)
20. Rubric Points For Additional Reading: Results Of A Reading Challenge (Teaching Unit Level)
21. Self-Assessment In Reading: Class Reflection (Teaching Unit Level)
22. Self-Assessment In Reading: Yellow Brick Roads (Teaching Unit Level)
23. Self-Assessment In Reading: Electronic Reading Program Points (Teaching Unit Level)
24. Self-Assessment In Reading: Circulation Totals After Booktalks (Teaching Unit Level)
25. Self-Assessment In Reading: Author Interview (Teaching Unit Level)
26. Self-Assessment In Reading: Letters To Mayor (Teaching Unit Level)
27. Self-Assessment In Reading: Letters To City Council (Teaching Unit Level)
28. Results Of Classroom Reading Initiatives: SSR (Teaching Unit Level)
29. Results Of Classroom Reading Initiatives: Book Bag Initiatives (Teaching Unit Level)
30. Results Of Classroom Reading Initiatives: Reading Logs (Teaching Unit Level)
31. Results Of Classroom Reading Initiatives: Language Arts Goals (Teaching Nit Level)

32. Results Of Classroom Reading Initiatives: Electronic Reading Program Intervention (Teaching Unit Level)
33. Teacher Competence In Reading (Teaching Unit Level)
34. Support For Willing Teachers Who Include The LMC Reading Program (Teaching Unit Level)
35. Support Of The Language Arts Curriculum (Teaching Unit Level)
36. LMC Staff And Achievement: Size Of LMC Staff (Organization Level)
37. LMC Staff And Achievement: Staff Time Spent On Reading (Organization Level)
38. Budgeting As It Affects The Reading Program And Achievement (Organizational Level)
39. Assessment And The Library Media Reading Program: Assessment Results (Organizational Level)
40. Assessment And The Library Media Program: Profile Of Teachers (Organizational Level)
41. Access To Reading Materials: Access Policies (Organizational Level)
42. Access To Reading Materials: Patron Education (Organization Level)
43. Access To Reading Materials: Unlimited Checkout Policies (Organization Level)
44. Access To Reading Materials: Digital Access To Reading (Organization Level)
45. Access To Reading Materials: Pleasant Facilities For Reading (Organization Level)
46. Access To Reading Materials: Wireless Access (Organization Level)
47. Encouragement And Motivation To Become Avid Readers: Leadership In Reading (Organization Level)
48. Encouragement And Motivation To Become Avid Readers: Life-Long Reading Habits (Organization Level)
49. Encouragement And Motivation To Become Avid Readers: Conversations About Reading (Organizational Level)
50. Encouragement And Motivation To Become Avid Readers: Advertising Good Books (Organization Level)
51. Encouragement And Motivation To Become Avid Readers: Other Simple Measures (Organization Level)

Information Literacy

1. Build A Joint Teacher/LMS Rubric For An LMC-Based Unit (Teaching Unit Level)
2. Research Logs (Learner Level)
3. The Clincher: Life-Long Learner (Learner Level)
4. The Measurement Of Individual Information Literacy Skills (Learner Level)
5. Standardized Assessment In Information Literacy (Learner Level)
6. Local Assessment In Information Literacy (Learner Level)
7. Track The Teaching Of Information Literacy (Teaching Unit Level)
8. Compare The Teaching Of Information Literacy To Achievement Scores (Teaching Unit Level)
9. Local Assessment In Information Literacy (Teaching Unit Level)
10. Teacher Competence In Information Literacy (Teaching Unit Level)
11. Standards And Information Literacy: State Standards (Teaching Unit Level)
12. Standards And Information Literacy: Added Literacy Skills (Teaching Unit Level)
13. Support For Willing Teachers Who Include Information Literacy (Teaching Unit Level)
14. LMC Staff And Achievement: Size Of Staff (Organization Level)
15. LMC Staff And Achievement: Time Spent Teaching Information Literacy (Teaching Unit Level)
16. Teacher Progress In Information Literacy: Teachers Using Assessments (Organization Level)
17. Teacher Progress In Information Literacy: Info. Lit. As A Part Of The Curriculum (Organization Level)
18. Teacher Progress In Information Literacy: Adoption Of An Info. Lit Model (Organization Level
19. Information Literacy And Achievement
20. Information Literacy And School Culture: Random Questioning (Organization Level)
21. Information Literacy And School Culture: Administrator Understanding (Organization Level)
22. Information Literacy And School Culture: The Priority Of Information Literacy (Organization Level)

Technology

1. The Digital School Library: Reliability (All Levels)
2. The Digital School Library: Accessibility (All Levels)
3. The Digital School Library: System of Choice (Learner Level)
4. The Digital School Library: Efficiency (All Levels)
5. Assessment of Learning Through Technology (Learner Level)
6. Standardized Assessment and Technology (learner level)
7. Check Tests (Learner Level)
8. Reflecting With Students: A Teaching Unit Level Assessment
9. Judging Glitz vs. Content in Hi-Tech Products at the Learner Level
10. Percent of Students Who Would Rate Technology as Helpful
11. Percent of Teachers Who Would Rate Technology as Contributing to Learning
12. Teacher Skill With Technology
13. Sophistication of the Technology Infrastructure
14. Integration of Information Technology into the School as a Whole

1 Evidence-Based Practice
Overview, Rationale, And Challenges

By
Ross J. Todd

Introduction

This chapter provides an overview of the concept of evidence-based practice as it applies to school library programs. It situates the elaboration of this important concept within a discussion of the core beliefs around which an effective school library program is based. It provides an overview of the emergence of the notion of evidence-based practice within the health sciences and social sciences fields, and defines this concept within the profession of school librarianship. Though a recent research study undertaken in 2002-3, it identifies and discusses some of the approaches and strategies to evidence-based practice, as well as presents some of the barriers and enablers.

Core Beliefs: Difference, Intervention and Outcomes

The provision of effective school library services and ensuring the vital future of school libraries rests on three key beliefs which are the mandate and for the professional role of school librarians. The first key belief is that the provision of information and information services makes a DIFFERENCE to the lives of people. If we do not believe that our information services can make a difference to people, then there is no point to their provision. An enormous body of research in librarianship and information science over several decades shows that people are not merely passive recipients of information, empty receptacles into which information can be poured; rather, people engage actively and highly selectively with information that surrounds them, and this engagement with information has some effect – their existing knowledge is changed or transformed in some way. This "effects" or "difference" orientation is faithful to the Greek and Latin roots of the word "information": *in* = within; *formere* = to shape or form; that is, information's effect is inward forming. Conceptualizing information as it is internalized by people, and in terms of the differences or effects that information makes to people puts emphasis on the user of information, and shifts the professional responsibility from a concern about the transmitting and transferring of information - an access and exchange orientation - to

a concern for understanding the human dimensions of how information enables people to build new understandings and move on with their lives.

Second, learning in complex and diverse information environments does not happen by chance, and nor can it be left to chance. The key role of the school librarian centers on pedagogical INTERVENTION that directly impacts on and shapes the quality of student learning through their engagement with information. Explicit, systematic and planned pedagogical intervention must be the distinguishing and observable characteristic of the role of the school librarian. This role revolves around working closely with classroom teachers to design authentic learning experiences and assessments that integrate a range of information and communication abilities needed to meet curriculum objectives, and to provide learning opportunities that encourage students to become discriminating users of information and skilled creators of new knowledge. Underpinning this approach is the belief that people's engagement with information is something that does not happen by chance, and which cannot be left to chance. Information literacy, as the centre piece of the instructional role of the teacher-librarian, is about pedagogical intervention. It is about the systematic and explicit provision of a range of intellectual scaffolds for effective engagement and utilisation of information in all its forms (electronic, print, popular culture) and for constructing sense, understanding and new knowledge. Instructional intervention is about moving beyond chance encounters with information to a more formal systematic and explicit approach through embedding learning scaffolds into the teaching and learning process. The research evidence to date suggests that deliberately planned pedagogical intervention impacts positively on mastery of information scaffolds, mastery of content, and attitudes to self, to learning, and to schooling in general.

This essential role is clearly expressed in the International Federation of Library Associations and Institutions (IFLA) Manifesto for School Libraries (http://www.ifla.org/VII/s11/pubs/manifest.htm). It states that "the school library offers learning services, books and resources that enable all members of the school community to become critical thinkers and effective users of information in all formats and media", and that core school library services center on dimensions such as "supporting and enhancing educational goals as outlined in the school's mission and curriculum", "developing and sustaining in children the habit and enjoyment of reading and learning, and the use of libraries throughout their lives", and "working with students, teachers, administrators and parents to achieve the mission of the school". It is also clearly expressed in *Information Power: Building Partnerships for Learning* (1998): "An effective instructor of students, the library media specialist is knowledgeable about current research on teaching and learning and skilled in applying its findings to a variety of situation--particularly those that call upon students to access, evaluate, and use information from multiple sources in order to learn, to think, and to create and apply new knowledge … Working with the entire school community, the library media specialist takes a leading role in developing policies, practices, and curricula that guide students to develop the full range of information and communication abilities. Committed to the process of collaboration,

the library media specialist works closely with individual teachers in the critical areas of designing authentic learning tasks and assessments and integrating the information and communication abilities required to meet subject matter standards". Very clearly, pedagogical intervention is at the core of being a school librarian. The importance of this centers on actions, changes and effects – effects in relation to personal, social, intellectual and emotional needs and well being; effects that make a difference to the lives of people. It is about outcomes. Outcomes are the transforming effects of pedagogical intervention.

Third, the role of pedagogical intervention is to bring on TRANSFORMATION. Learning takes place, and the lives of our students are transformed. The knowledge, skills, attitudes and values of learners are shaped and grow though their engagement with the school library and its pedagogical intervention. Learning outcomes matter. Learning outcomes, as the transforming effects of the school librarians' pedagogical (and collaborative) intervention, are the raison d'être for school libraries**.** *Information Power: Building Partnerships for Learning* (1998) asserts: **"**In their unique roles as information specialist, teacher, and instructional consultant, library media specialists actively participate in both the planning and implementation of outcomes-based education". AASL's position statement on the role of the school librarian in outcomes-based education establishes that the school librarian "has an essential role in curriculum development. Outcomes-based education is a curriculum practice which establishes clearly defined learner outcomes based on the premise that all students can be successful learners. High expectation outcomes, which are essential for success after graduation, require carefully aligned curriculum, instructional strategies and performance-based assessment. In their unique roles as information specialist, teacher, and instructional consultant, library media specialists actively participate in both the planning and implementation of outcomes-based education".

An outcomes focus of school libraries is also clearly in line with syllabus developments across many countries, where emphasis is given to specifying learning outcomes, establishing measurable indicators for these outcomes, and providing feedback to the learning community of the achievement of these indicators. An outcomes focus is directed towards maximizing learning experiences of students, and where attention is given to identifying, understanding, and coming to terms with the real effects of information literacy interventions.

Lorenzen, Library Instruction Coordinator at Michigan State University defines outcomes-based education as a "method of teaching that focuses on what students can actually do after they are taught. All curriculum and teaching decisions are made based on how best to facilitate the desired outcome. This leads to a planning process in reverse of traditional educational planning. The desired outcome is selected first and the curriculum is created to support the intended outcome" (Lorenzen, 1999:141). Boschee and Baron define outcomes as" future oriented, publicly defined, learner-centered, focused on life skills and contexts; characterized by high expectations of and for all learners, and sources from which all other educational decisions flow" (Boschee & Baron, 1994). Towers posits that "education that is outcome-based is a

learner-centered, results-oriented system founded on the belief that all individuals can learn" (Towers, 1996: 19). Spady and Marshall further define outcomes as "clear, observable demonstrations of student learning that occur after a significant set of learning experiences. … Typically, these demonstrations, or performances, reflect three things: (1) what the student knows; (2) what the student can actually do with what he or she knows; and (3) the student's confidence and motivation in carrying out the demonstration. A well-defined outcome will have clearly defined content or concepts and be demonstrated through a well-defined process beginning with a directive or request such as 'explain,' 'organize,' or 'produce.' (Spady & Marshall, 1996: 20,21).

Speaking from a constructivist perspective, Wilson (1996:3) claims that learning which emphasizes "meaningful, authentic activities that help the learner to construct understandings and develop skills relevant to problem solving" is the central mission of the school. Hein (1991) emphasizes the idea "that learners construct knowledge for themselves; each learner individually (and socially) constructs meaning as he or she learns. Constructing meaning is learning. There is no other kind". These are powerful words. He goes on to say that "Learning is a personal and social construction of meaning out of the bewildering array of sensations which have no order or stature besides the explanations which we fabricate for them". The instructional interventions of school librarians centering on information literacy are about providing the best context and opportunities for people to make the most of their lives as sense-making, constructive, independent people. The provision of information does not necessarily mean that our learners become informed. Information is the input; through this input, existing knowledge is transformed, and new knowledge - as understanding, meaning, new perspectives, interpretations, innovations – is the outcome. Empowerment, connectivity, engagement, and interactivity define the actions and practices of the school library, and their outcome is knowledge construction: new meanings, new understandings, new perspectives. These new knowings are the heart of outcomes-based education.

Against this backdrop, take a look at this scenario, a cry that is being repeated time and time again in many school libraries around the world:

> I am a school librarian at x. We are confronting a serious situation. Because of the financial crisis in our community, our school board is addressing a proposed substantial budget cut. One of the proposed strategies is to drastically reduce the number of school librarians in the area claiming that school libraries can be effectively run by aides to ensure services are provided and the library remains open. This is despite the fact that I have hundreds of students in the library each day, and teach in the classroom regularly. I have voiced my objection, but I am told that such reductions will not impact on student learning in any way.

The focus on difference, intervention and transformation raises one of the most critical questions facing school libraries today. The question is this: "what differences do my school library and its learning initiatives make to student learning

outcomes? Or, expressing it another way: what differences do my library and its learning initiatives make to student learning? That is, what are the differences, the tangible learning benefits, defined and expressed in ways that lead a school community to say: "we need more of this!" rather than to say "we must cut school library programs".

The strong voice of the profession has to be telling the story of how effective school libraries make a difference to the learning outcomes of students. This is not just other school libraries, but YOUR school library as well. How does your school library make a difference to student learning outcomes? If your local newspaper phones you and says: "We want to do a story on your school library and how it really helps students learn", what would be your response? Could you quickly draw on a portfolio of actions and evidences to build your case? If your school board, in its efforts to distribute a meager budget amidst budget cuts, asked you to give clear summary of how your school library has impacted on the students in your school in order to help its deliberations, what would you say? And how would you know this? If your principal or superintendent asked you to provide an overview of the current research on school libraries and their impact on meeting curriculum standards, technology standards, on independent and lifelong learning, what would be your response? The answer centers on the notion of evidence-based practice. Key stakeholders, educational policy makers and funding agents sometimes do not convincingly see the links between what school librarians espouse and do on a day by day basis, and how that enables the learning outcomes of students.

Evidence-Based Practice

Evidence-based practice is where day-by-day professional work is directed towards demonstrating the tangible impact and outcomes of sound decision making and implementation of organizational goals and objectives. It is an evolving concept in many professions, and for many it represents a new paradigm for professional practice. It emerged in the early 1990s in the fields of Medicine and Health Care Services initially to teach medical students how to independently find, appraise and apply the best evidence, and to apply it to solving clinical problems (O'Rouke, 1998, 1). Sackett defined evidence based medicine as the "conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. This practice means integrating individual clinical experience with the best available external clinical evidence from systematic research" (Sackett, 1996, 72-3). Implicit in this approach are important concepts such as "duty of care", "informed decision making" and "optimal outcomes", all seen as critical factors in making a difference to the well being and lives of people. At a fundamental level, the early evidence-based practice movement had as its goal the tangible capacity to make a difference to the lives of people, through carefully informed intervention to achieve optimal outcomes - DIFFERENCE, INTERNVENTION, and TRANSFORMATION. Interest in evidence-based practice has grown exponentially since the early 1990s, and today it is acknowledged as an important approach to professional practice in

many disciplines beyond the health care arena, to professional arenas such as education, social work and law.

Central to evidence-based practice is the combining of professional expertise, insight, experience and leadership with the ability to collect, interpret, and integrate valid, important and applicable user-observed and research-derived evidence to ensure significant outcomes (E-BEUK, 2002, 1). More recent explications of this concept establish evidence-based practice as an approach to professional work which argues that policy and practice "should be capable of being justified in terms of sound evidence about the likely effects" (E-BEUK, 2002, 1). Underpinning its role in education is the belief that student learning and student learning outcomes are "too important to allow [them] to be determined by unfounded opinion, whether of politicians, teachers, researchers or anyone else" (E-BEUK, 2002, 1). In other words, duty of care centers around being able to articulate clear learning outcomes, developing processes and strategies to enable these, and articulating the impacts.

In current usage, the concept of evidence-based practice thus has two important dimensions. First, it focuses on the conscientious, explicit and carefully chosen use of current best research evidence in making decisions about the performance of the day-by-day role. Second, evidence-based practice is where day-by-day professional work is directed towards demonstrating the tangible impact and outcomes of sound decision making and implementation of organizational goals and objectives. This latter dimension of evidence-based practice centers on local processes, local actions and local outcomes. A number of important notions are embedded in these dimensions. As a particular approach to practice, it moves beyond intelligent guesswork, clever hunches, and application of individual skills; beyond the anecdotal and tossing of coins so to speak, to establishing a sound research-based framework for decision making. However it is more than getting research into practice to guide day-to-day work. It is also about focusing on the delivery of services based on stated goals and objectives, and systematically demonstrating outcomes and endpoints in tangible ways, and critically reflecting on inputs and processes. It plays an important role in user-centered services to show that the rhetoric about those services is real, that expectations are met, and promised outcomes are actually delivered. In the context of school libraries and school goals and objectives, evidence-based practice means that the day-by-day work of school librarians is directed towards demonstrating the tangible impact and outcomes of services and initiatives in relation to student learning outcomes. It involves critically analyzing the accumulated data and on the basis of indicators, and deriving statements about student learning outcomes. What is important is that such evidence is cumulated, analyzed and synthesized so that a learning outcomes profile of students engaging in library learning initiatives can be constructed.

Build on the Existing Research Evidence

There is much research evidence already established in the school librarianship field that, when coupled with the enormous professional experience and wisdom of school

librarians, can contribute to the sound development of meaningful learning experiences for students and for charting and documenting student learning outcomes. While the research agenda in relation to school libraries has taken shape only within the last twenty or thirty years, a number of summaries and syntheses of this research have been published (Loertscher & Wools, 2002; Callison, 2001, and Haycock, 2003. Within this corpus of research, Callison (2001) identifies important themes such as instructional role, instructional methodologies, intellectual freedom, information search process, students' use of online technologies, program evaluation, and student achievement. Clyde (2002:66) identifies growth from 1991-2000 in the focus on national surveys, information literacy, information technology, principal support, and reading and reading promotion.

Some of the most prominent work comes from the USA. The state-wide studies undertaken by Keith Curry Lance and colleagues have involved hundreds of primary and secondary schools, and include: Colorado I (1993); Alaska (1999); Colorado II (2000); Pennsylvania (2000); New Mexico (2001); Oregon (2001); and Texas (2001). A similar study has been undertaken by Baughman (2000) in Massachusetts. These important studies have sought to empirically establish the relationship of school library programs to student achievement, and support several common findings. These include: professionally trained school librarians do make a difference that affects students' performance on achievement tests; in order for school librarians to make this difference, the support of the principals and teachers is essential, as well as the availability of support staff who can free the librarians from routine tasks to undertake their curriculum role; a dual instructional role of teaching students in facilitating the development of information literacy skills necessary for success in all content areas, and in-service trainers of teachers enabling them to keep abreast of the latest information resources and networked information technology services within and beyond the school library. These are very significant outcomes, and hopefully they should motivate and inspire school librarians to pursue their instructional role, or at least to question and reflect on their own practices if they do not include this strong instructional role.

The longitudinal research of Carol Kuhlthau (1991, 1993, 1994, 1999) provides some of the fundamental building blocks for the collaborative instructional role of the school librarian centering on information literacy development. This research provides evidence of the nature and dynamics of inquiry based learning centering on the information search process, and the nature of information literacy pedagogy. With a strong focus on knowledge construction through effective engagement with a variety of information sources and formats, Kuhlthau's research establishes the cognitive, behavioral and affective dimensions of the search process. Her Information Search Process (ISP) found to occur in seven stages: Initiation, Selection, Exploration, Formulation, Collection, Presentation, and Assessment, also provides a framework for gathering evidence on the learning journey of students as they progress from the time of the initiation of their research task, to the time they complete it and reflect on its outcomes.

Some very rich research on the impact of school libraries and learning is being undertaken by the Council for Museums, Archives and Libraries in Scotland. The research was conducted in secondary schools in Scotland between August 1999 and February 2001, and involved focus groups with teachers and students in selected schools across Scotland. Both groups shared a common perspective that the school library can contribute to learning. The collective perceptions of impact of the school library were: the acquisition of information and wider general knowledge; skills development in the areas of finding and using information, computer technology skills and reading skills; higher achievement in school work; developing a study and reading habit that encouraged independent learning; the ability to use these skills confidently and independently and the ability to transfer these skills across the curriculum and beyond school; and the development of interpersonal and social skills, including working collaboratively (Williams & Wavell, 2001: i). In this study, the school librarians interviewed were aware of what they were trying to achieve, but were not sure whether their objectives were being met. The study identifies some potentially useful tools for school librarians to monitor the impact on learning. These include: student observations of their activities and learning in the school library; discussion with and questioning of students about their work during and at the end of their activities; analysis of submitted work to identify learning gains; discussion with other members of the teaching staff about work, attitudes, and related incidents; and examination of reader records.

There is also considerable amount of smaller research studies that examine more closely the many different dimensions of the relationship between student learning outcomes and school library programs. Collectively these highlight:

- a process inquiry approach, focusing on the systematic and explicit development of students' abilities to connect with, interact with, and utilize information to construct personal understanding, results in improved performance in terms of personal mastery of content. This is shown in examination and assignment grades, and through the mastery of a wide range of particular information skills;

- successful information literacy programs are ones that set clear expectations and manageable objectives, establish realistic timelines, and provide opportunities for students to reflect on their successes and failures with finding and using information;

- the systematic and explicit development of students' abilities to connect with, interact with, and utilize information to construct personal understanding, results in: more positive attitudes to learning; increased active engagement in the learning environment; and more positive perceptions of students themselves as active, constructive learners;

- when students master a range of information processes – technical, critical, evaluative – they are empowered to learn for themselves; there is a strong relationship between an effective school library and personal agency;

- active reading programs encouraged by the school library can foster higher levels of reading, comprehension, vocabulary development, and language skills;

- when there is access to diverse reading materials, more reading is done, and literacy development fostered.

While the concept of school library outcomes, effectiveness and evaluation are not new, historically these has been directed to outputs in the form of statistical information related to resources, expenditure and facilities use – "the found", rather than in terms explicitly stated learning outcomes that identify and demonstrate the tangible power of the school library's contributions to the schools' learning goals and learning outcomes – "the understood". Historically, school libraries have celebrated the found. They have documented, for instance, the number of classes in the library, the number of library items borrowed, the number of students using the library at lunch times, the number of items purchased annually, the number of web searches or hits, the number of resources purchased, even the number of books lost or monies collected in fines! These are measures of pathways to learning, not of learning itself. Celebrating the understood is what evidence-based practice is all about. It is knowing and showing how the school library helps students learn, and the learning outcomes that are enabled. The research documented above clearly shows that learning outcomes can be charted in terms of: information processes and skills, mastery of networked information technology, reading, knowledge outcomes such as mastery of content, development of personal perspectives and viewpoints, independent learning strategies, changed attitudes and values, and gains in self concept and personal agency. These are knowledge and values outcomes, not merely information literacy skills outcomes. Evidence-based practice is about ensuring that daily efforts put some focus on not just gathering meaningful and systematic evidence on learning outcomes that matter to the school and its support community, and critically reflecting on this evidence to shape a dynamic school library program that clearly impacts on student learning outcomes. This evidence-centered cycle of development and reflection will clearly convey that learning outcomes are continuing to improve, and inform the process of their continued improvement.

From Research to Evidence-Based Practice

What are school librarians doing in relation to evidence-based practice? How do school librarians get underway with evidence-based practice? These questions are increasingly posed in the profession (Todd, 2001, 2002a, 2002b). One of the first ever studies of school librarians and evidence-based practice was undertaken in 2002 in Australia (Todd, 2003a, b). As a prelude to the focus of this book on the practice

of school library evidence-based practice, this study will be briefly elaborated. This study, sought to:

(a) provide more comprehensive and detailed evidence of how the teaching and learning focus of the school library improves student learning outcomes – what these outcomes actually are, and how school librarians can more effectively work towards these;

(b) provide school librarians with a range of strategies, initiatives and measurement techniques that will enable them to carefully and effectively chart and document the tangible learning outcomes of their teaching-learning activities;

(c) enable school librarians to be able to build a portfolio of local school evidence of the importance and value of the school library to their school communities; and,

(d) identify barriers of evidence-based practice.

In this particular study, a survey instrument based on a Critical Incident approach was used to collect the data. The Critical Incident Technique, based on work of J. C. Flanagan (1954) centers on the collection of detailed reports of incidents / discreet experiences in which individuals do something in achieving an articulated purpose. Based on this technique, data are derived chiefly from in-depth analytical description of an "intact cultural scene", involving the gathering of facts before, during and after the event or experience. Typically this approach uses an open-ended questionnaire, gathering retrospective data, and where questions typically help respondents recall events or steps in the events. The questionnaire collected data on school background, and to identify evidence-based practice, respondents were asked to describe one of the most recent curriculum units that she or he had planned and taught collaboratively with classroom teacher(s). The focus was to get an indication of what learning outcomes were achieved, and how respondents were able to identify these. Unit details included: Year/grade; Syllabus, Number and gender of students; their average age; brief description of students (eg. mixed ability, streamed, gifted and talented); Title of unit; Brief description of the unit (eg. time span of unit, number of sessions, lesson length); Syllabus outcomes addressed by unit (be specific); and Related information skills outcomes of unit. To document learning outcomes and their evidence, respondents were asked to identify:

1. The learning achieved in relation to the planned outcomes;

2. The techniques/measures/strategies/checklists/assessments used to identify that learning had taken place;

3. Learning outcomes in relation to information skills;

4. The techniques/measures/strategies/checklists/assessments used to identify that learning had taken place;

5. Any approaches you used to make before-and-after comparisons with the class.

6. Some other significant learning gains in addition to the planned outcomes, such as attitudes to learning, attitudes to school, self-esteem, developing independence of learning, engagement in learning, increased commitment by teachers to collaborative planning and teaching, informed future planning;

7. The techniques / measures / strategies / checklists / assessments that you used to identify these other outcomes;

8. The barriers experienced in relation to evidence-based practice, and how these barriers might be overcome; and

9. Additional approaches, other than collaborative teaching initiatives to demonstrating the impact of school librarians on learning outcomes.

The survey was distributed in the Australian journal *Scan* in May 2002, which has a circulation of over 3000. 11 responses to this survey were received. These were very rich and detailed responses. A number of reasons could be posited for the low response number. The questionnaire required considerable thought and time to complete, and the busy daily agendas of many school librarians may not have provided the time to complete it, or they may not have considered that the focus and/or outcomes of the study were important, and were unwilling accordingly to invest the time to complete it. It is also possible too that school librarians may not actually engage in evidence-based practice, and therefore have had little to contribute to the study. The responses came from 2 elementary schools and 9 high schools. What follows is a brief summary of some of the findings.

Findings: Learning Outcomes

The school librarians in this study could clearly articulate some curriculum and information literacy outcomes as a result of their instructional and service intervention. The information literacy outcomes ranged across the broad spectrum of skills in relation to defining, locating, selecting, organizing, presenting and assessing information. These were articulated quite concretely. For example, outcomes were expressed in terms students being able to:

- explore general / background information sources to increase familiarity with the topic;

- distinguish between primary and secondary sources;

- construct a search strategy using the appropriate commands for the various retrieval systems chosen;
- use various search systems to retrieve information in a variety of formats;
- record all the appropriate citation information for later use;
- read the text and identify and select the main ideas;
- compare information from different sources to evaluate accuracy, authority, recency and bias;
- show mastery of a particular presentation software;
- construct of concept map of the dimensions of a topic;
- draw conclusions or state personal position based upon information gathered.

Findings: Evidence-Based Strategies

The strategies for documenting evidence of learning outcomes fell into two broad categories: formal, structured records of evidence, and informal observational approaches. The formal structured approaches used to gather evidence were the use of checklists, rubrics, and formal feedback strategies. Each of these is briefly described.

(a) Checklists. A range of simple checklist strategies, where both students and school librarians provided checklist or ratings of perceived levels of skills and / or knowledge acquisition, mainly after the instructional period, and in four cases, both before and after so that comparisons of differences, changes in levels of knowledge and skills could be documented. These checklists were in relation to levels of mastery of information literacy competencies such as ability to identify main ideas, make notes, use different formats of information, understanding the differences in the different purposes of sources; competencies in relation to information technology, such as skills in searching, evaluating information on web sites, and using a range of presentation software such as Powerpoint and spreadsheets.

When checklists were used, some attention was given to deriving general statements about outcomes achieved on the basis of these comparisons. School librarians recognized this as an important process in evidence-based practice. This involved critically analyzing the accumulated data and, on the basis of evidence and goals of the intervention, deriving some general statements about student learning outcomes. Some outcomes statements that respondents were able to provide through use of checklists were:

"More than 80 % of the class showed improvement in their ability to effectively judge the quality of web sites after the sequence of lessons to develop this awareness";
"Virtually all of the students recorded citations accurately in their essays following the input on bibliographic citations";
"When we analyzed the essays submitted at the end, and following through some of the web sites that the students had cited, we saw a dramatic decrease in the level of plagiarism. We had explicitly built this issue into our teaching, and discussed it with the students, both in terms of being responsible and ethical users of information, and teaching them some analytical strategies to express ideas in their own words. We were thrilled, and discussed these findings and processes in our recent staff meeting"
"We ran a quick survey at the beginning of the unit to see how students were thinking about the unit. They were not terribly motivated or interested, and said so in their surveys. In our teaching of the unit, we worked really hard to build interest and motivation, and when we ran the little survey at the end, we had almost all of the students indicating how much fun the unit was, and how much they learned. It was hard work creating motivational activities, but worth it. We not only felt we had achieved something, we had some proof"

(b) Rubric strategies. Some school librarians indicated that they used rubric strategies where students' performance in final products were scaled according to a set of criteria that clearly defined what range of acceptable to unacceptable performances and/or information products look like. For example, a semester paper was based on and scaled according to Gordon's rubric (2001) for evaluating the research process. This rubric focused on a number of dimensions: Planning; Meeting deadlines; Organization; Working with the teacher-librarian; and Problem solving. The students scaled their performance in terms of: Excellent, Competent, Making some Progress, and Not yet competent, and were asked to write personal comments as well as the rating. In the feedback to the students, the school librarian also provided ratings and comments.

(c) Formal feedback strategies. One school librarian used a simple feedback survey every term on what the library does "best" and "least" to help students with their school work. This is a general survey made available to the students which asks two questions: *"During this term, how did the library best help you learn?"* And *"During this term, how could the library help you learn better"?* The school librarian reported that after one intensive collaborative with all the Year 8 teachers on more effectively using the internet for Science, the term survey clearly showed that the students believed that they had quite dramatically improved their web searching skills, not just in terms of finding more pertinent resources, but also in terms of meeting assignment deadlines on time, and feeling more comfortable about using accurate web sites for their research. Each term, the school librarian presented the results of this survey at staff meetings, and commented: *"I do not let an opportunity go by when I let staff know about what the library contributes to learning. I always quote some of the things the students have said to illustrate my points. The school*

has got the idea that what I am on about in helping kids learn. The key thing in my view is to have something to say that goes beyond gut reaction. The student survey does just that. ... I believe they listen a great deal to this". According to this school librarian, the feedback is also used to make decisions on improving services, designing information literacy classes, and planning the whole library team's work agenda.

(d) Informal Observational Approches. The use of informal observational approaches was more predominant than the use of planned strategies for recoding evidence. All school librarians indicated that their observations and in a few cases, observations of teachers were the basis for making statements about learning outcomes. These were based on discussions and observations during the teaching time, and on review of student products. The approaches were *"gut reactions",* drawing on professional expertise and experience to identify outcomes. School librarians said:

"I rely on my long experience to work out what is happening with the students";
"I watch the students casually though fairly consistently while they work in the library";
"I get ideas from the kids of questions students ask when they are in the library";
"Often when I am chatting to a student doing a major assessment item, I will ask them about what they have learned in the library".
"I have discussions with the teachers about what is going on"
"I take note of student behaviors while they are in the library"

These more informal approaches to gathering evidence enabled the school librarians to make some statements about learning outcomes. For example:

"The class teacher noted an improvement"
"Students completed learning journals"
"Students were certainly engaged in their learning"
"Students showed quite a lot of independence"
"Students worked well in groups"
"I saw increases in student motivation"
"Students displayed all or nearly all of the information skills"
"Students initiated email interaction and to me this showed engagement with the topic"
"I saw evidence of improved or extended technical vocabulary"
"The technology was used beyond my expectation"

What is particularly noticeable with the statements of outcomes based on casual observations and discussions is their lack of specificity and precision. Concrete outcomes were not clearly articulated. This is consistent with the finding of Williams & Wavell (2001, iii) in their study of secondary schools in Scotland. They found that

techniques such as observing students at work, questioning students about their work, examining work in progress, examining reader records, and discussions with teachers were typical techniques to monitor impact of learning. However, they also concluded that while the librarians were aware of what they wanted to achieve, they were not able to clearly and precisely articulate these as learning outcomes.

(e) Other Approches. Two further approaches were provided in the study. One school librarian examined the results of Year 7 English Language and Literacy Assessment tests, and sought to identify how one class group involved in an intensive reading enrichment program and literature discussions, compared to other students in the school. The school librarian noted that there appeared to be stronger test scores for this group of students. Another school librarian compared borrowing records of students during a collaboratively implemented science unit in the lower high school, and found that those students with the highest number of items borrowed for the unit also achieved the highest scores on the test at the conclusion of the unit. While it is difficult to establish strongly stated conclusions, such patterns show promising school library-outcomes relationships worthy of richer documentation.

Findings: Value of Evidence-Based Practice

Despite concerns and fears expressed about the intentions, processes and competencies in relation to undertaking evidence-based practice, school librarians identified 6 key benefits of evidence-based practice.

(1) Visibility of the school library's contribution to learning. Evidence-based practice was seen to provide evidence at the local school level that library initiatives make a visible contribution to learning, and that administrators, teachers and parents can see the real impacts:

> *"My boss actually talks about specific outcomes I have identified. He's proud of what we have achieved, and it's not because I tell him how important our school library is, it is because I actually show him the evidence. He shares this with the parents in the school newsletter"*

(2) Funding accountability. Evidence-based practice is seen to play a role in convincing administrators and community funding agencies that the money invested in the school library is worth it, as well as ensuring continued funding:

> *"Money in my school seems to flow easiest to those happenings / teachers in the school where students achieve success, and it is clearly seen ... anything which show learning and success and which the school celebrates. I've learned over the last year or so that if I want to jump on the money bandwagon, I show the achievements of my library initiatives. This is usually outcomes related to information literacy lessons, or my literature enrichment activities".*

(3) <u>The school librarian's role is learning centered</u>. Evidence-based practice demonstrates the school librarian's commitment to learning outcomes, with library goals, library actions and library outcomes having a clear student learning focus:

> *"When I tell the staff or parents about what the library is doing, I always try to tell about what we have achieved for the students, not from the library's perspective, but from the students. ... In the parent nights where teachers meet with parents to discuss students' grades, I always set up a display for parents to show our various projects and what the students learn through it. I get lots of positive feedback that recognizes our involvement in students' learning"*
>
> and
>
> *"My colleagues around the school see and hear me involved in learning. I'm not seen as the circulation police or fines controller, or the shusher or the stamper, I'm seen and valued as a teacher".*

(4) <u>Planning for instruction</u>. Evidence-based practice is seen to help school librarians plan more effective instructional interventions and information services:

> *"the feedback from students, and results of analysis of what students have learned or not learned helps me plan my teaching to be more effective, it identifies gaps in students' information literacy skills so I can make it better for them. ... Sometimes you can put a lot of effort into something, and then find out it didn't really achieve anything."*
>
> *"The evidence helps me work out what is really important for me to do each day, rather than concentrating on functional or management things, which sometimes take on a magnitude of importance well beyond the time and energy given to them".*

(5) <u>Job Satisfaction</u>. Some school librarians indicated that evidence-based practice confirms that their profession work is making a difference, and this in turn provides satisfaction and encouragement.

> *"When I can put my finger on what the students have achieved because of my work, I feel terrific, and get more enthused about being a teacher-librarian. I feel as if I am making a valuable contribution to the kids' learning, because I can see some actual results".*
>
> *"I get a real buzz each day because I know I make a difference to these kids at school"*

(6) <u>Moving beyond advocacy.</u> A number of school librarians indicated that evidence-based practice adds certainty to their role, by moving beyond anecdotal, guess work, hunches, advocacy, and the touting of others' research findings.

> *"I don't have to get on my library soap box and try and convince people about the value of the library. I make a habit of sharing with them details about every set of classroom units I do, and try and sum up how the students have benefited, using examples from their work. I don't think that advocacy without evidence goes far"*

Clearly, the school librarians in this study saw real benefits to their students and to themselves by engaging in evidence-based practice. They saw that it provides evidence at local school level that the school library makes a tangible difference to student learning outcomes, and de-emphasizes intuition, the anecdotal, and hasty decision making. In essence, evidence-based practice is effectiveness-lead: it targets time, energies, scarce resources, and scarce staffing in improving and demonstrating effectiveness.

Findings: Evidence-Based Practice Issues

Five key issues in relation to evidence-based practice were identified by the respondents.

(1) Accountability fears. Some school librarians felt that having to "*prove your worth*" through pressure to demonstrate learning outcomes and evidence of impact would be detrimental to the profession:

> *"It would encourage more anxiety and paranoia at a time when teacher-librarians' workloads are already full to overflowing"*
> "*evidence-based practice might be used as a basis for getting rid of us. It's something we haven't done, or had had to do, and because we now are not able to produce anything that focuses on what learning outcomes we bring on, we may be assumed to be ineffective when accountability demands are made".*

There are some clear messages here. School librarians are not immune from any kind of accountability for processes and outcomes, particularly at a time when calls for educational accountability are increasing. Accountability is all about taking responsibility for students' performance of all types of educational outcomes. Evidence-based practice is unquestioningly accountable practice. It is a systematic method to assure all members of the school community, policymakers, funding authorities, and the public that schools and school libraries are producing desired results. However, practice that focuses on elements such as goals, indicators or progress toward meeting those goals, measures, analysis of data, reporting procedures, and outcomes is not just evidence-based practice, in most professions it is *best practice.* It is not some new form of teacher-librarianship where the familiar current practice is discarded, where professional instincts and experience are devalued. In linking actions, goals, outcomes and evidence, evidence-based practice enhances day-to-day work by taking uncertainty and guess work out of the role, its value, position, action and its public perception. This is a powerful dimension of professional credibility and authority. Evidence-based practice is about building certainty and authority, not eroding it.

(2) Competency requirements. This issue centers around the assumed competencies needed to undertake evidence-based practice. As some school librarians said:

> *"It seems as if I need to be a statistician to do this. I just do not have these skills, and I disliked research methods at university".*
> *"We have to become researchers in order to undertake evidence-based practice, or at least have a mastery of statistics. Isn't that what the universities should be doing?"*

Some school librarians may feel that they have to become researchers in order to undertake evidence-based practice. Evidence-based practice does demand certain precision in identifying learning outcomes, establishing indicators of these, and skills in analyzing and synthesizing the evidence to establish specific achievements in learning outcomes. However, the intellectual skills required to undertake evidence based practice are not formal quantitative and qualitative research methodologies and complex statistical analyses. Rather, they are the skills of examining student learning goals and needs, selecting appropriate learning outcomes, identifying desired indicators of these outcomes, establishing systematic approaches to locating and gathering the evidence of achieving learning outcomes, analyzing, organizing and synthesizing the outcomes, presenting and celebrating the outcomes in the school community, and reflecting on how this continues to inform the ongoing teaching and learning process. Evidence based practice is about identifying, exploring, locating, focusing, selecting, organizing, presenting information. The information process that has guided the information literacy initiatives of school libraries and which has been the espoused educational platform for almost two decades is the very process of evidence-based practice.

The information process does not claim that school librarians become formal hard-core researchers in the academic sense, but does ask that they be researchers, like students, guided by the information process. It does mean that reflective practices, guided by the available formal academic research, give some careful attention to learner assessment and instructional evaluation, to documenting, analyzing and synthesizing the outcomes of collaborative teaching-learning initiatives, and how these outcomes support and enhance the learning goals of the school. What is important is that evidence is gathered in a systematic way that highlights the learning gains, both in terms of a range of information and critical literacies, but also how developing these scaffolds enables more effective learning of curriculum content and how this contributes to the development of new knowledge. It can also highlight how the library plays a role in shaping attitudes and values, in contributing to the development of self-concept, and in contributing to a more effective learning environment. And apart from the tangible outcomes that demonstrate the central role of the school library in learning, evidence-based practice as best practice provides a wonderful opportunity for school librarians to model the information process to their teaching colleagues.

(3) <u>Time pressures</u>. Some school librarians raised the issue of the time commitment needed to undertake evidence-based practice. One said: *"I see the value of evidence-based practice, and have tried to implement measures. It takes time, and I feel the pressure when I have so many other things to do".* This tension between belief

versus action was also reflected in the comment: *"I want to do it, but when do I find the time to do it?"* and "*I do not have enough time to do my current job as it is, let alone adding more, even though I would like to do this".* One other librarian claimed: *"In reality a lot of evidence is intuitive and the time element squeezes out the more formal measures".* Compounding the time pressure was the situation of school librarians scheduled to provide classroom teachers with release from face-to-face teaching: *"I need to be free from providing release from teaching for classroom teachers so that I have time to undertake this. This is a barrier to making real collaboration happen and working together to identify the outcomes".*

School librarians may feel the time pressure of evidence-based practice. It should not, however, be viewed as an add-on, another thing to do on top of busy schedules. As already stated, evidence-based practice is about best practice and reflective practice, where the process of planning, action, feedback and reflection contributes to the cyclic process of purposeful decision making and action, and renewal and development. It gives emphasis to identifying effective actions, putting value on appropriate actions rather than actions for the sake of doing something. It is sharper and clearer practice – more focused and productive.

(4) Evidence-based practice is contrary to lifelong learning. This issue was raised by one school librarian. It was posited that *"EBP is unrealistic, given the goal of lifelong learning that information literacy is all about. How can one realistically measure this outcome, especially when it may not be evident for many years?"* Lifelong learning is not some distant endpoint, rather, it is a process made up of multiple moments in time. Providing learners with a clear understanding of how they in the formative years of their lives, are actually learning in an information rich environment, particularly in terms of information literacy outcomes and indicators, providing them with feedback on their mastery, enabling them to refine their learning processes are fundamental to the work of school librarians. If indeed the notion of lifelong learning is some elusive rhetoric, and we are unable to provide substance as to how we might enable our students to become lifelong learns with explicit feedback and input along the way, then we are doing considerable disservice to our students. The rhetoric of lifelong learning must not become the scapegoat for not engaging in evidence based practice.

(5) Lack of knowledge and skills to undertake evidence-based practice. This concern was expressed by all school librarians:

"I lack the skills in devising accurate assessment tools";
"I need lots of practice with this to develop my skills";
"It would be nice to have access to some recent criterion-referenced or standardized tests to assess my students' standards and progress. This is really needed if we are to engage in evidence-based practice";
"I feel completely unqualified to accumulate sufficient or accurate evidence about what I do, or hope I am doing";
"I need to learn to write more performance descriptors";

It would be really helpful to have some school-wide information literacy tests";
"There are limited training opportunities available to develop new skills, initiatives or approaches to implementing EBP".

These comments highlight real needs if the profession is to engage in evidence-based practice, and identify a range of specific themes around which ongoing professional development can be structured. There are implications for teacher librarianship education, particularly in developing both a rationale for, and skills in carrying out evidence based practice. There is also golden opportunity for professional associations to provide the appropriate professional development to its members.

Moving Forward

Evidence-based practice is about opportunities and options. Some school librarians may say "why bother, it's futile", believing that such calls for evidence-based practice represent faddism or short-lived hype; that it may not do any good. This is a defeatist attitude. The more confrontational question is asking: "what are the potential implications and outcomes of not engaging in evidence-based practice?" One school librarian make this thoughtful comment: *"No change in the current situation for school librarians will be forthcoming until they can successfully demonstrate and document evidence of their support, success and impact on children's literacy, with all its ramifications".* If the answer to this question is a dismal perspective on the status quo, and if there is no personal motivation to engage in professional initiatives that might enable the profession to construct as preferred future, then the issue is a personal one that poses the question: *"Is my role as a school librarian a liability or a liberator of the profession"?* If we are not prepared to commit ourselves to initiatives that have the potential to create a bright future for the profession, then we seriously need to consider why we are in it, and what in fact we might be better off doing. Retreating to a position of no hope is retreating to a short future for the profession.

At this time in our profession, it is not enough to just say that the library is important, nor is it enough to say that there is plenty of evidence out there – why should I waste valuable library time getting mine? Many school administrators, school boards and parent communities are looking for tangible, documented evidence of the impact of their library on student learning, and use this as a basis for providing more library funding, technology, staffing. In a recent study published in School Library Journal (Lau, 2002:53) which explored Principal's perceptions of school librarians, it was found that only 37% of principals said that the school librarian made them familiar with current research of library programs and student achievement, and only 35% of principals were made familiar with current research on reading development. Principals and administrators want to know about student outcomes. The opportunity to identify local outcomes and local successes and to share these with school stakeholders is knocking. Evidence based practice is about having the rich, diverse and convincing evidence that demonstrates that the library is a vital part of the learning fabric of the school – that it is integral, rather than peripheral. Such evidence

can also be the basis for richer, meaningful discussion between stakeholders – students, parents, and community. Evidence based practice provides school librarians with a compelling opportunity to "seize the day". It is about empowering both the learner and empowering the profession. It is about improving learning effectiveness and demonstrating effectiveness. It is an enormous challenge, and one that will contribute to the longevity and vitality of the profession for years to come.

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2 A Framework for Evidence Upon Which to Base Sound Practice (And Tell Our Story)

Educators at all levels are being asked to collect various forms of evidence about the impact of their actions upon achievement. This evidence, added to guidance from educational research, personal experience, and judgmental skills guide what we do each day. This entire process constitutes what we mean by evidence-based practice. It would be the same for a physician: guided by medical research, personal judgmental skills, and experience during practice, the patient's health is affected each day.

Traditionally, library media specialists collected a variety of organizational data that described their programs and allowed comparison to state or national standards. The purpose was to give an indication of support upon which a quality library media program could develop. Such data as size of staff, budget, size of collection, numbers of computers and flexibility of facilities were important and still are. Yet, they have lost their punch in an academic-achievement-oriented frenzy. It would be the same for doctors who would claim that hospital facilities and equipment are the major factor in restoring health.

Called "input measures," counting people, things, and environments provide a potential impact but not a guaranteed one. For a period of time, the library profession was interested in output measures interpreted as results or outcomes. For school library media specialists, these never did provide a gauge on learning or a link to standardized test scores. They looked at circulation as an output, or the number of visitations of children to the LMC during a typical week. We needed measures of impact on learning.

The troubling part of extending measurement closer and closer to learning is our inability to invent a thermometer-in-the-mouth that will measure degrees of learning. And our current frustration is centered in the fact that too much faith is being put in the almighty achievement test.

Chapter two presents in almost handout form, a two-pronged look at the type of measures that have the potential to get closer to learning. Since we cannot precisely measure our target, we offer measures that "if it quacks like a duck, waddles like a duck, and looks like a duck" it must be a duck. Substituting the term "achievement," we would say, "If it looks like achievement, acts like achievement, and it performs like achievement, it must

be achievement." We would then challenge the doubters to prove that it **wasn't** achievement.

In this chapter, we prescribe multiple views: first, a triangular view followed by a second dimension of both direct and indirect evidence. We will then present a simple matrix to help the library media specialist see the possibilities of measuring a little every day to create a big picture. Finally, we present ripple-effect measures of programmatic elements that could be measured. It may seem a little daunting at first, but it all forms a matrix that affects practice and planning. Here is an overview of these elements:

Views from which to triangulate evidence:

1. **Triangulation of Evidence-Based Practice** – explains various views our evidence should create.

2. **Learner Level Evidence-Based Practice** – explains appropriate measures at the student level we might collect.

3. **Teaching Unit Level Evidence-Based Practice** – explains appropriate measures as classes use the LMC for research.

4. **Organizational Level Evidence-Based Practice** – reviews the tried and true measures we have collected for years and suggests a few new ones.

A second dimension of measures:

1. **Direct Evidence** – measures so close to actual learning that confidence in an impact could be inferred.

2. **Indirect Evidence** – measures of actions that set the sage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, and indicate change over time.

And finally, the program elements that need to be measured:

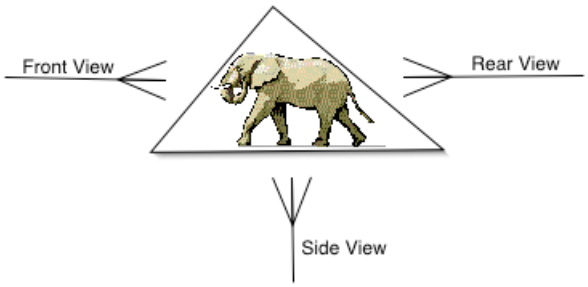
1. **Collaboration** – our efforts to create exciting learning experiences in the LMC with the teacher.

2. **Reading** – our efforts to increase literacy and increase the love of reading.

3. **Information literacy** – our efforts to teach the research process.

4. **Technology** – our efforts to enhance learning and efficiency through technology.

Triangulation of Evidence-Based Practice



Triangulation of data means to collect data from various points of view or vantage points before making a decision and taking action. To understand what an elephant is, better to get a view from the front, the rear and from the side rather than any single picture. Like the points of a triangle, there ARE different vantage points from which the impact on learning (the center of the triangle) can be viewed or validated. The trend in state and federal governments is to ask educators to collect more quantitative (or scientific) data by using more rigorous research designs. Those designs often require experimental conditions difficult to create in local schools. To compensate, since learning and teaching are not exact sciences, the more types of data we collect, the closer our views of the elephant will move toward validity. At the same time, local communities will need to learn to accept a wide variety of indicators of success rather than exclusively seeking test score evidence.

Library media specialists need to collect various evidences as a part of their effort to document what they contribute, what they do, and what they need to do next. Three major types of evidence suggested here, could be collected in any school to provide a more holistic view of the library media programs:

Data from the learner level. Data at the learner level such as achievement test scores are currently at center stage in the United States. Standardized test scores in almost every state have taken on great significance. There are, however, many other measures of how well an individual might be doing: portfolios, attitude, measures of performance, and other techniques used by both adults and learners to judge individual attainment.

Data from the teaching unit level. Data can be collected about the various learning experiences that are designed by adults to interact with LMC materials and technology. That is, we begin examining the impact of our resources on teaching and learning. "Because we have this, we did that." Data collected from the collaborative activities of teachers and LMC staff are quite powerful in describing impact. For example, the Lance studies did note that achievement was affected as the amount of collaboration between teacher and LMS staff increased.[1]

Data from the organization level. Common measures at the organizational perspective are size of facilities, the equipment available, the amount of funding provided, and the size of collections or staff. All these factors might be termed "inputs" or the resources we have to make a difference. They are often reported to accrediting agencies and in local reports to administrators and boards. The Lance studies of LMC impact looked at many inputs as they affect the "output" – reading scores.[2]

The Challenge: To use measures from all levels to triangulate the view of impact.

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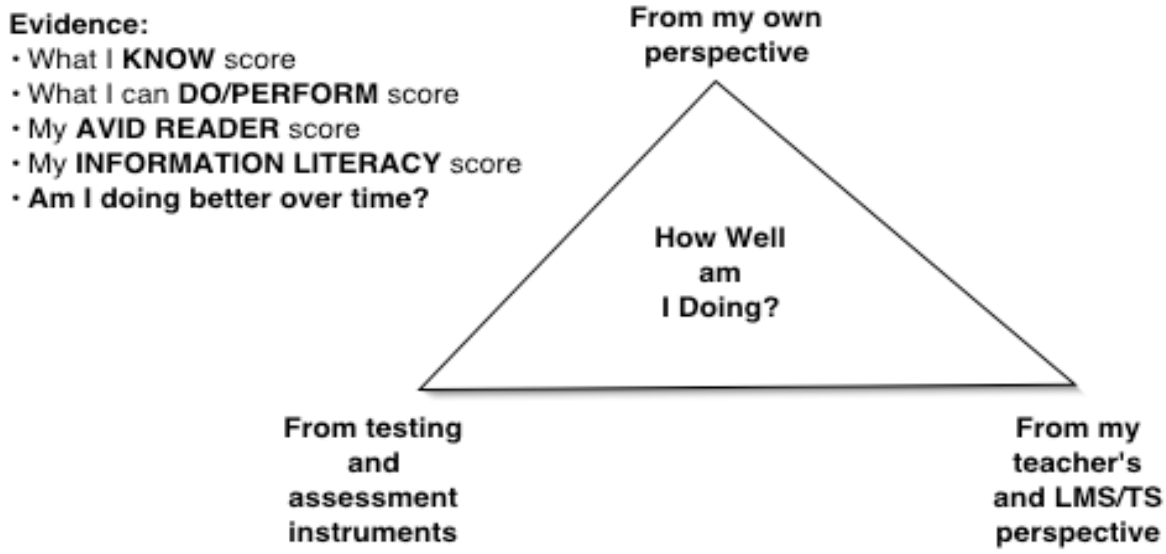
[1] See Lance, Keith Curry and David V. Loertscher. *Powering Achievement*. 2nd edition. Hi Willow Research & Publishing, 2003.
[2] *Ibid*.

Learner Level

Evidence-Based Practice
Triangulation of Data

During collaboration activities where teachers, library media specialists and teachers and other specialists combine expertise to enhance a learning experience, all members of the collaborative team should be interested in and help create measures whereby a learner will know how successfully they are growing and developing as learners. The measures here are designed from the learner's point of view.



Sources of evidence:

FROM THE LEARNER PERSPECTIVE	TESTING AND ASSESSMENT	TEACHER, LMS, TS PERSPECTIVE
Grade point averages	State tests	Checklists/questionnaires
Self-scored rubrics	Local tests	Conferencing
Journals	Performance tests	Demonstrations / showcase / re-enactment
Checklists/questionnaires		Journals
My own avid reader score		Portfolios
My information literacy score		Project assessments
Self-assessment of progress		Rubrics

Teaching Unit Level

Evidence-Based Practice

Triangulation of Data

Probing the impact of the instructional program, when the LMC and technology are integral, allows three major measurements to take place. These are measurements from collaboration logs, rubrics, and assessments of learning. What learning experiences have been created to help students achieve? Has collaboration between the teacher and the LMC staff affected the teacher's methods? How well have all the systems worked in support of the teacher? Did the impact of the LMC program show up as a factor across learners in a classroom? In learner rubrics? In other assessment measures?

Sources of evidence:

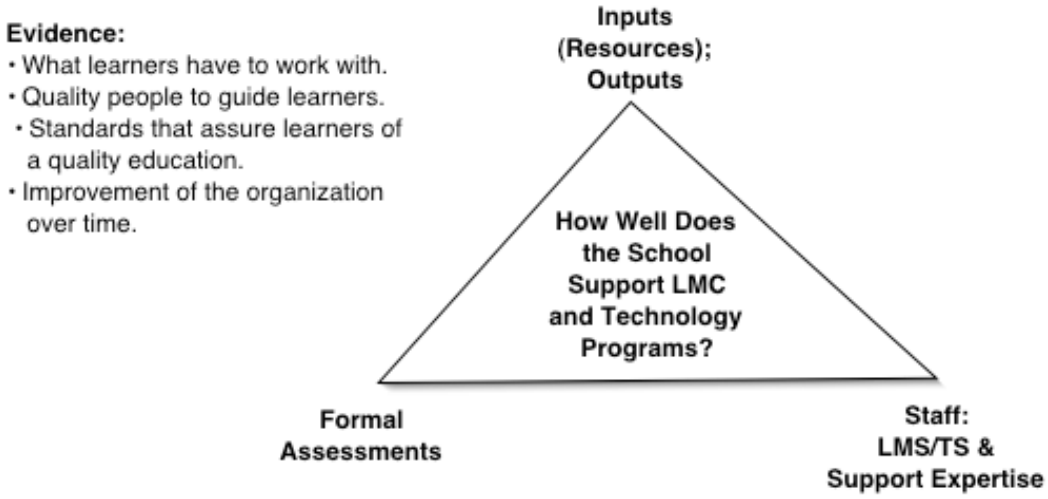
COLLABORATION MEASURES	RUBRICS (Group perspective)	ASSESSMENT OF LEARNING (Group Perspective)
Collaboration Logs	Quality of learning experience	Content learning
Impact!*	Contribution of technology	Product assessment
Collaborative units linked to LMC web page	Contribution of information literacy	Process assessment
Performance of LMC and technology systems		

*Miller, Nancy. *Impact Documenting the LMC Program for Accountability!*. Salt Lake City, UT: Hi Willow, 2003.

Organization Level

Evidence-Based Practice
Triangulation of Data

Professionals need to keep the school community apprized of the LMC program performance at any given time and across the years. Organizational data including inputs, formal assessments, and staffing have been commonly collected over the years as professionals try to gauge whether there is a powerful learning environment for all learners.



Sources of data:

INPUTS / OUTPUTS		FORMAL ASSESSMENTS	STAFF: LMS/TS & SUPPORT
Facilities	Use	Performance-based accreditation documents	Size and roles (professional & support)
Staffing	What they do	School improvement efforts	Certification; Endorsements
Collections	Use	District-level initiatives	LMS/TS National Board Certification (NBPTS)
Budgets	Collections; Databases	School library and technology audits	Personal growth plans
Administrative support	Program implementation		School-based performance evaluations
Technology infrastructure	Network use; Reliability		Growth in expertise over time (CE, professional organizations)

Add A Second Dimension: Direct and Indirect Evidence

To the levels of learner, teaching unit, and organization where evidence is being collected, the second dimension is the type of evidence to be collected. The matrix below introduces the idea that both direct and indirect evidence should be collected.

Direct measures of evidence would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.

Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures	**Assessments of various types given to learners showing impact on learning**	**Measurements of impact on teaching quality and classes engaged in LMC learning units**	**Behaviors of administrators and data that show an impact of the LMC program on the school as a whole**
Indirect Measures	**Environmental factors that support the individual learner**	**Support of teachers enabling successful use of the LMC program**	**Policies and support at the school and district level that enable a quality LMC program**

Building an Evidence-Based Practice Plan

Use this form to plan data collection in one of the four program areas of the LMC: Collaboration, Reading, Information Literacy, and Technology. One might try to collect something in each area or zero in on a single area for a period of time. Every box in the template need not have something in it. Neither should all data collected be in a single box. Data from several levels and both dimensions would be ideal.

Goal:

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*			
Indirect Measures**			

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

Ripple-Effect Measures; or, Pebbles in a Pool

For the past five years, many studies done by Keith Lance and Marcia Rodney have contributed mightily to the evidence that school library media programs make a difference. As a careful reader of research, I have been wondering why school libraries keep showing up as important – the milk on the cereal – not the butter on the bread. I am tempted by the following general explanation: Administrators both district and school who care enough about education to have a strong library media program, also care about a lot of other enriching elements that make the difference between high performance and low performance on achievement tests. As a profession, we have not been able to establish cause and effect relationships, yet every time careful correlational studies are done in different states with differing conditions, we are there.

Likewise, in daily practice, it seems that the best of library media specialists sense what to do each day that contributes to achievement. These professionals sense that busy work like shelving books, straightening books, cleaning computer screens – while necessary – are not features of their program that dominate their time each day. Rather, they have learned certain strategies that trigger higher-level contributions.

I like to think of these as ripple-effect strategies, which if measured and are successful, act like throwing a pebble in a pool. It is something simple, yet it causes a reaction far beyond its size and seeming significance. I sometimes call this the Joyce Valenza technique. Let me explain.

Joyce, a successful library media specialist in Pennsylvania who has been on the cover of *School Library Journal* told an audience a story that went something like this. She was in the teacher's lounge one day when teachers were complaining about the amount of plagiarism that was going on in student reports. Joyce knows the answer to that problem but wants to plan her "pebble" carefully. Here is how she does it. She goes to her favorite history teacher and states the problem and wonders if he would like to experiment on a solution. He would and they do. During a research assignment in the LMC, she teaches his students about plagiarism, helps them avoid it, and the products are excellent. She has her pebble. Now she is ready to toss it. She makes an appointment with the principal and she and the history teacher present their solution – that information literacy teaching "just in time" is a marvelous technique. Thoroughly convinced, the principal declares that the school will hereafter be known as the information literacy school. And that teachers will be evaluated on whether they incorporate information literacy into their classrooms. Joyce now not only has the ripple effect, but a tidal wave! Yesterday, she had one client. Today she has 100! So much for selecting the right pebble at the right time to throw into the right pool.

In the chapters to follow (collaboration, reading, information literacy, and technology) each begins with the author's best recommendations for pebbles – measures most likely to produce not only data, but also a transformation in the library media program. Look at these first and see if they can be adapted to your local situation. If one of the ripple-effect measures won't work well, each chapter contains a variety of other measures that might work better. Ultimately, the library media specialist must choose those measures that will return the type and level of impact representative of the local program.

Listed below are these pebbles to consider. They are covered in depth in their respective chapters.

Summary of Ripple-Effect Measures for LMC Programs

Collaboration:

1. The time professional library media specialists spend collaborating.
2. The move from "bird units" (low-level learning experiences) to quality learning experiences in the LMC.
3. The dispersion of collaborative experiences across the faculty and across the content areas.
4. Assessment of learning includes both classroom and LMC agendas including measurement of content learning, information literacy, amount read, and impact of technology.

Reading:

1. Access to a plentiful supply of materials learners want to read:
    a. In the Library Media Center
    b. In the Classroom
    c. At home
    d. Over digital networks
    e. As implemented in organizational policy

2. The Amount Read (Individuals, classes, the entire school).
    a. Free voluntary reading
    b. During topical unit studies

3. Whether a learner likes to read.

Information Literacy:

1. Use of a joint rubric (teacher and LMS) for a LMC-based unit. Learners realize that information literacy is an integral part of LMC learning experiences.
2. Learners complete research logs for critical points or extra credit.
3. Learners begin the process of internalizing their own information literacy model.
4. Assessment of information literacy happens as it is taught.

Technology:

1. Information systems emanating from the LMC are available 24/7 and are reliable.
2. LMC information systems are available at the elbow (in the LMC, the classroom, in the home, and on any technological device owned by the learner).
3. Learners prefer LMC information systems over full Internet access.
4. LMC information systems and tools add to learner efficiency.
5. Enhancement of learning through technology is a part of teacher assessment of student learning.

3

The Contribution of the LMC Program to

COLLABORATION

and Evidence-based Practice

Collaborative planning is defined as the teaming of teachers and library media specialists to create exciting learning experiences that take advantage of the information-rich and technology-rich environment of the school.

No other concept of the role of the library media center program is more central or more vital to its success. Research of library media programs[1] draws the conclusion that collaborative planning is a strong link to achievement of learners. Collaborative planning turns the library media program from passive to active in the curriculum of the school. Judging by the amount of money required to build and maintain a viable LMC program, a passive program is simply unacceptable. There are too many voices requesting funding to support any program not carrying its weight in meeting the requirements of state standards.

Professionals who collaborate to build rich learning experiences find great satisfaction in knowing they make a difference. Their jobs are exciting, extremely busy, rewarding, and empowering. And, successful LMC professionals are recognized by their peers as being on the leadership team.

Collaborative planning has been discussed in the professional literature for many years. It is also the area of the library media program that many find the most difficult to implement. Yet collaboration is a popular topic in the educational literature. There, the emphasis is on teachers collaborating with one another on grade level teams or departments. If teachers follow that advice, then they have the skills to accept us as members of their collaborative teams.

Do teachers and administrators receive training that the library media center is a part of a successful educational program? No. And if I may quote Ross J. Todd in a message to school librarians at IASL a couple of years ago, he said to us: "Get over it!" Move on. Accept the fact that you have to sell yourself by your example and your performance. Many have. Why not you? You were probably an excellent teacher in the classroom in a past life. You understand both sides of the fence. You can do it. And, to hold your job, you must.

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[1] Lance, Keith and David V. Loertscher. *Powering Achievement*. 2nd ed. Salt Lake City, UT: Hi Willow Research & Publishing, 2002.

Value-Added Components of the LMC Collaboration Program: Candidates for Measurement

Learner Level

- A memorable learning experience is created.
- Collaborative learning experiences encourage more investigation even after the experience has ended.
- A successful collaborative learning experience includes content learning, information literacy, adds additional reading, and enhances learning through technology.
- Collaborative learning experiences seek to provide the learner with deep learning as opposed to surface learning.
- Successful collaborative LMC learning experiences motivate learners to be more engaged and interested not only in the topic at hand but in education and personal success.

Teaching Unit Level

Prelude:

- Collegial and trusting relationships characterize a collaborative experience rather than a servant/master stance (library media specialist being the servant and the teacher the master).
- Time for collaboration and planning is sufficient to build exciting learning experiences.
- LMC scheduling encourages individual teachers to collaborative learning experiences that can take advantage of the LMC facilities, collection, and networks.
- The entire LMC staff is available to teachers doing collaborative experiences: professional, clerical, and technical.
- Resources on beyond the LMC are tapped as needed (district, state, and national).
- Technology and facility support are available and reliable enough to use in planning the most exciting learning experience possible.
- The professional library media specialist has extensive knowledge of curriculum, teaching and learning, plus expertise technology, reading, and information literacy.

Planning and Execution Stage:

- Collaborative planning of a teaching unit begins with state standards from which goals and objectives for what learners are expected to know and do are created.
- Assessment strategies are designed so that both teaching partners will know what has been learned and how well. Rubrics or other assessment measures are jointly constructed so that learners understand that both teacher and library media specialist agendas must be satisfied to receive an “A.”

- Collaborative units begin for students with clear goals and/or essential questions that need to be answered.
- Collaborative units draw upon the resources and technologies of the library media center and the information world beyond.
- Activities for a LMC-based learning experience are jointly taught by teacher and library media specialist thus reducing the pupil-teacher ratio and increasing the chances that learners will achieve.
- Activities in the LMC go far beyond the "cut and clip" mentality toward the "cut, clip, THINK" strategies ("bird units" are banned).[2]
- Culminating learning activities go beyond boring reports to pull together significant ideas of the research activities.

Postlude:

- All the partners of a collaborative LMC learning experience (including students) reflect on the learning produced and the collaborative experience itself to capture the best of what occurred and plan to overcome problems for future experiences.

Organization Level

- Administrators play a vital role in collaboration when they understand the role of the LMC as a curricular and achievement partner and do all in their power to encourage and make it happen.
- Administrators work with the LMC staff to provide the organizational structure necessary to make collaborative planning with the LMC staff work.
- The size of the LMC staff and its composition of professionals, support, and technical personnel is predictive of its impact on collaboration and the resultant impact on achievement.
- Professional development in the effective use of the LMC collaboration program to boost achievement is critical in any successful school culture.

[2] Loertscher describes "bird units" as the copying facts or downloading information to complete worksheets or fact-based assignments resulting in minimal learning.

The Library Media Center Collaboration Program
Ripple Effect Measures[3]

Goals

LMC Agenda	Curriculum Agenda
• Support state standards. • Build truly collaborative experiences. • Build high quality learning experiences.	• State standards met. • Achievement test scores high. • Learners at or above grade level.

Pebbles to Measure

1. The time professional library media specialists spend collaborating. (Collab1)
2. The move from "bird units" (low-level learning experiences) to quality learning experiences in the LMC. (Collab2)
3. The dispersion of collaborative experiences across the faculty and across the content areas. (Collab3)
4. Assessment of learning includes both classroom and LMC agendas including measurement of content learning, information literacy, amount read, and impact of technology. (Collab4)

Justification:

The pressure to achieve requires that precious time spent in the library media center produce the highest quality learning experience. The investment in information systems, technology, and facilities must pay its way in terms of achievement. The Lance studies all report the connection between collaboration and achievement.

Demonstrate through research and practice that:

- Collaboration is happening.
- The amount of collaboration and dispersion is improving over time.
- The quality of the collaboration is producing better and better learning experiences.

Report:

- Steady improvement over time.
- Improvement related to an initiative.
- That success is already high and is remaining constant.
- Improvement related to organizational policy shifts.

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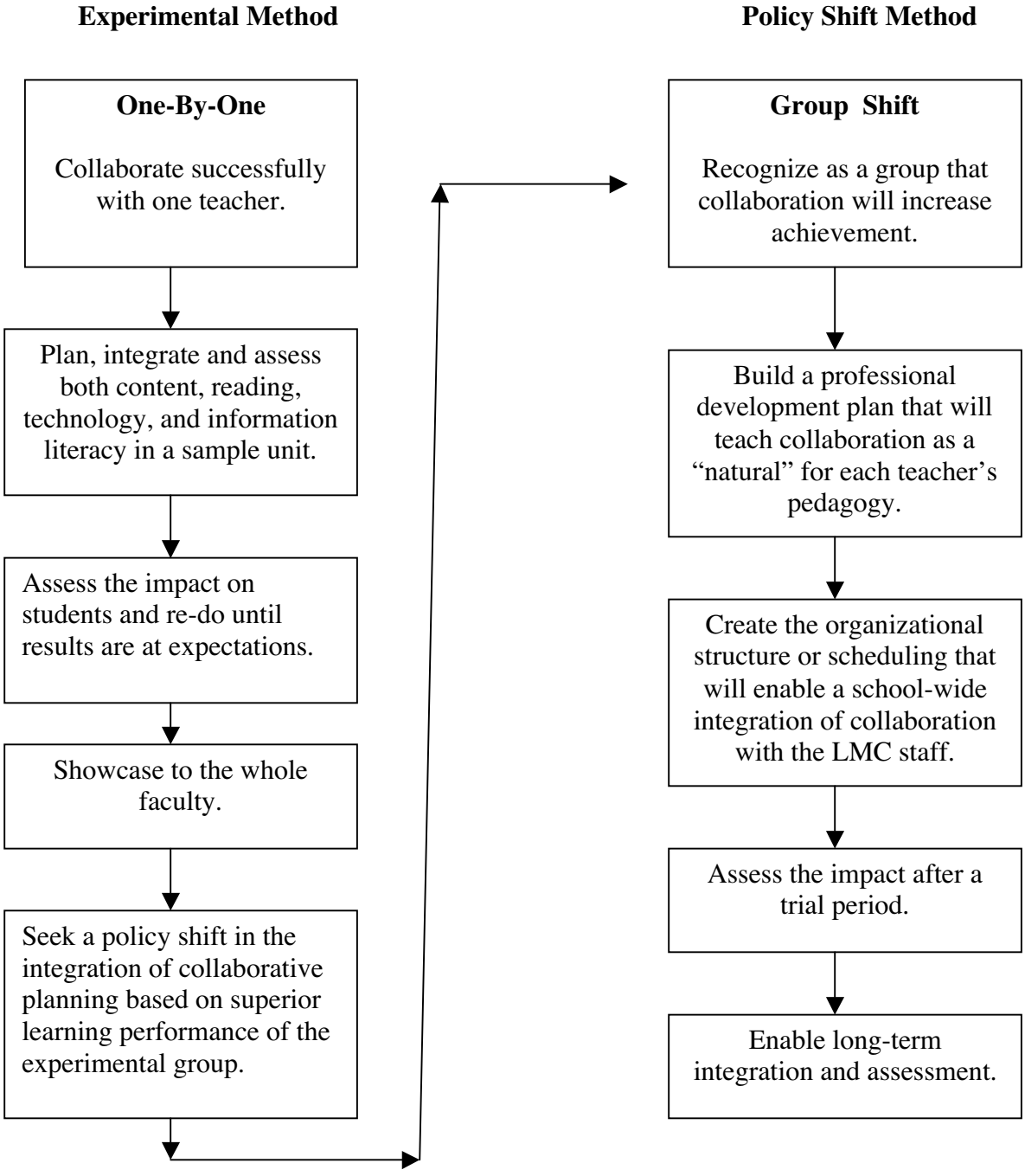
[3] Ripple-effect measures refer to significant measures that are most likely to produce results in achievement and indicate maximum teacher collaboration and organizational effectiveness. Because you have these data, a ripple effect occurs, like throwing a pebble in a pool, triggering many other organizational practices and policies.

Two Ways to Succeed in Evidence-Based Practice: Collaboration



(Collab1) Measure the Time Spent Collaborating

Definition of time spent. Time planning, implementing, assessing learning, and reflecting used to build a collaborative learning experience with a teacher, a group of teachers, or on school/district planning committees (such as curriculum committees) should be tallied as time spent collaborating.

Goal: When the time spent on collaboration meets or exceeds 50% of a normal day's work schedule, the library media specialist can be quite confident that an impact is being made.

What about those with several schools? You should document collaboration and do it in at least one school at least once a semester to showcase to the faculty and administration what it is and its contribution.

What about those who are alone and have no support staff? Your time spent collaborating will be lower than those who have support staff. This needs to be documented by comparison with another school, district, etc. However, if your time collaborating falls too far below the 50% level, the difference between you and a support person will be clouded. If things don't improve, a support person could replace you and no one would notice.

What about those who have scheduled classes? Scheduled class time should not be counted as collaboration time unless the teacher remains in the LMC with the class and you both are working on a planned learning experience together. All teachers should know that collaborative experience always take precedence over babysitting. If a group is in the LMC for collaboration, the scheduled group will sit in a corner and do SSR while the library media specialist works with the other group. For those in the SSR group, you will be raising their reading scores.

What about those who have support staff? Your time collaborating should rise much higher than the 50% level and that should be reported regularly. If it is below 50%, there is a major problem to be solved.

What about turn teaching rather than collaboration? When the library media specialist teaches an information literacy or library skills course in the library and finds out in advance what the teacher is covering the the classroom and makes some attempt to "correlate" what is being done, this author would recommend that <u>not</u> be counted as collaboration.

Time spent collaboration when counted as defined above is a **direct measure** at the teaching unit level and when added across experiences becomes a **direct measure** at the **organization level.**

Collaboration Time Collectors

Use a daily calendar method

At the end of the day or at opportune moments during the day, record the time you spent on collaboration activities. A simple total for the day is better than nothing. This can be tallied for the week, the month, and the year and the percent of time spent computed.

Better yet is time spent with individual teachers so that tallies by teacher, department, and grade levels can be computed and reported. The collaboration log discussed below is the easiest method.

Use a collaboration log

The (Collab3) measure – the collaboration log – records collaboration units on a regular basis and includes a suggestion that time spent collaborating should be recorded and tallied on the table of contents or summary page. These data can be extracted for a time analysis and reported by teacher, department, and grad levels on a weekly, monthly and yearly basis.

Use computerized tracking software

At the end of each collaborative experience with a teacher, use computer software to track what was taught to whom, when, what content standards were achieved, what information literacy skills were mastered, and any other useful information such as teacher, and grade level. Nancy Miller's *Impact!*[4] is one software package using an Excel template that can do some very sophisticated tracking with amazing reports being generated for presentation to faculty, administration, and school boards.

Try dividing and analyzing collaboration time spend during the day and as homework at night.

Teachers all have homework at night keeping up with their job. You might separate and report the block of time during the school day that you spend collaborating, and the time spent on your own doing it. Follow the same reporting methods a teacher who is a union member might do or what the master contract for the district says about work time outside of the school day.

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[4] Miller, Nancy A.S. *Impact! Documenting the LMC Program for Accountability*. Salt Lake City UT: Hi Willow Research & Publishing, 2003.

(Collab2) Chart the Move From "Bird Units" to Quality Learning Experiences in the LMC (Teaching Unit Level)

"Bird Units" or low-level learning experiences in the LMC take a number of forms: the completion of work sheets by students collecting facts on birds, states, old dead men, etc., etc., etc. Such activities teach kids to transpose facts from one medium to another. Whether learning takes place is highly questionable.

Fat bird units are a minor improvement – where students do a report, or a research paper on a topic of choice. The learner will know a little or a lot more about one topic, but little to fill the requirement of the state standard that usually requires a much more global understanding. Requiring oral reports from individuals or small groups about their reports is a passive and uninteresting passage of time for the class as a whole and guarantees boredom.

This author's campaign to turn bird units into cut, clip and THINK activities is well documented in the literature.[5] This simply calls for a ban on all lower-level learning activities in the LMC and always allowing collaborative high-level learning experiences to have first priority of the collection, space, time in the LMC, and technology assists. The defense of this is, of course, that the LMC is interested only in activities that raise achievement (this does not mean that fun is excluded).

Randy Sheets, a library media teacher in Garden Grove, California, once announced to his faculty that if any one of them would spend the time planning with him, their student's scores would go up. Some did and benefited. Tough luck for those who went it alone for whatever reason.

Most faculties have to be convinced that the LMC program actually makes a difference in achievement. Why? A myriad of reasons. That is why most library media specialists must document the transformation of each and every learning experience and let it be known.

If documented using the definition on the next page, then a transformed learning experience is **direct evidence** at the **teaching unit level** and when added up across teachers, departments, and grade levels constitutes powerful **direct evidence** at the **organization level**.

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[5] Two publications are: Loertscher, David V. *Reinventing Your School's Library in the Age of Technology: A Guide for Principals and Superintendents*. 2002 ed. Hi Willow Research & Publishing, 2002; and; Loertscher, David V. and Douglas Achterman. *Increasing Academic Achievement Through the Library Media Center: A Guide for Teachers*. 2nd ed. Hi Willow Research & Publishing, 2003.

Beyond the Bird Units
Documentation of Quality Learning Experiences

Definition: To count as <u>one</u> enhanced collaborative experience, both the teacher and the library media specialist must agree that this experience was superior to a previous experience in the classroom or LMC. Students learned more and we have and could present that evidence.

First victory to report and showcase:

That's One!

Then:

That's Two!

Then:

That's Three!

Then:

I ask for more staff, get it, and then say:

That's Ten!

That's Fifteen…

Secret: There is a direct correlation between the size of staff and the number of enhanced learning experiences that can be handled. We do not have any national statistics or track records to report on this aspect of the LMC program. We need it desperately.

(Collab3) Gauge the Dispersion of Collaboration Across the Faculty (Organization Level)

In the previous measure, we inspected the "damage" when all the guns of the library media center program and its technology were targeted at a single learning experience. In this measure, the library media specialist documents the spread of collaboration through a faculty.

Such a measure demonstrates an active rather than passive library media program. It makes the assumption that collaboration produces superior learning experiences (not always the case, but highly likely).

In the author's experience across the years, administrators who make a friendly compact or mutual goal with the library media specialist – a private challenge to see how far dispersion can be pushed – these are the schools in which the library media program makes the most difference.

The technique is known as the collaboration log described below and its critical summary page showing dispersion is given on the next page.

Collaboration logs are **direct measures** at the **teaching unit level**. The record of dispersion is a **direct measure** at the **organization level.**

Idea: Create a Collaboration Log.

Who: The library media and technology specialists and classroom teacher working as a team.

Activity: Each time there is a major collaborative learning experience jointly planned, executed, and evaluated by the library media specialist and classroom teachers, do the following:

- **File collaborative unit planning sheets** in a three-ring notebook in some sensible fashion. Only fully developed collaborative activities should be recorded — not every interaction between the library media and technology specialist and the teachers. An electronic record might be preferable.
- As the **first page** in the notebook, create **a collaboration log summary page** listing the collaborative activities as shown on the next page.
- **Principal's Activity:** Using the summary sheet, assess the collaboration log notebook as a whole looking for patterns.
    - Who is being served?
    - Which grade levels?
    - Which departments?
    - Which curricular subjects?
    - Who is not being served?

Sample Collaboration Log Summary Page

During the school year, the teachers and the library media and technology specialists agree that the following units were successful collaborations, i.e., the learning was enhanced because the several partners exploited the resources and technology of the LMC and/or computer lab.

Social Studies	***LMS/TS Time***	***#Students***
Our Local Elections - grade 6 (Smith)	*2.6 hours*	*24*
Family Trees - grades 3 and 4 (Albright and Faire)	*3.6 hours*	*45*
Reading		
Newbery Novel Unit - grades 5 & 6 (Crane & Finch)	*1.5 hours*	*47*
Science		
Environment of the School Grounds - entire school (Principal, LMS and Dwight, leaders)	*15 hours*	*465*
Simple Machines - grade 3 (Truett)	*1.4 hours*	*27*
Nutrition - grades 5 and 6 (Handford and Zigler)	*2.8 hours*	*48*
Integrated Units		
Local Environmental Hazards – Social Studies and Science. gr. 4 (Todd and Lark)	*4.5 hours*	*43*
Labor Movements - SS and Art, grade 6 (Jones and Gregg)	*3.7 hours*	*49*
Totals	*35.1 hours*	*748*

Ideas:

- Create a summary chart similar to the one above that details collaborative units taught. Use a single sheet of paper for this summary page. This becomes the first page in the collaboration log.
- Create a graphic that summarizes the above list for use in the report.
- Enlarge the chart to poster size, use a transparency, or create a PowerPoint presentation when reporting collaborative efforts to the faculty, administration, and the community.

Note to the library media specialist: How many collaborative activities were there? What is the dispersal of collaboration among the faculty, grade levels, and subjects taught? How could I as the instructional leader encourage more and better collaboration? Which of the collaborative activities deserve recognition from the community? How would I assess the effectiveness of increased student learning?

(Collab4) Joint Assessment During Collaboration (Teaching Unit Level)

How do you know whether a collaboratively planned learning experience is superior to one done in the classroom alone? The answer is through the assessment activity, an important strategy of collaboration. If we wish to know what a learner knows and is able to do, then we must plan to assess the important qualities we expect.

Traditionally, for a collaborative unit, the library media specialist furnished materials and technology but left learning goals and the assessment of learning to the teacher. In an assessment-based world, that role is no longer enough, since it provides no evidence that the library media program made any difference in learning.

Remember, both students and teachers value what is assessed. If nobody cares, then why bother to exert myself? This is true unless I am a motivated and interested life-long learner.

The technique suggested here is identical to InfoLit1. It asks the teacher and the library media specialist to create a joint assessment combining both parties' agendas – often using a joint rubric. This allows the teacher to assess content items and items connected to state standards and the library media specialist to assess information literacy, the amount read, and the contribution of technology.

If the library media specialist could only capture 10 points of a 100 point assessment, then the contribution of the LMC program would be worth the difference between an A or a B. In a number of learning strategies such as I-Search in language arts or project-based learning in almost any discipline, process – or what we contribute – would be worth more than ten points.

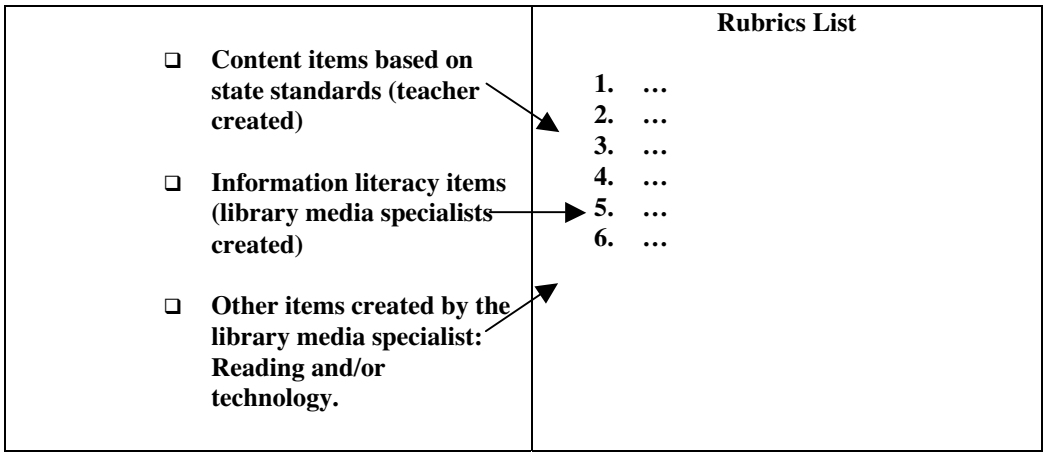
Rubrics or other assessments should contain four aspects:

- Content knowledge
- Information literacy skills mastered
- The amount read
- The contribution of Technology to learning

At first glance, the teacher might be interested only in the first and the library media specialist in the other three. However, a deeper analysis will conclude that both parties benefit when all four aspects are mastered by a student during a particular learning experience. Such a discovery might not be made by the parties the first time joint assessment happens, but repeated experience is very likely to spur this conclusion.

The Joint Assessment / Rubric

During the unit planning process, the teacher/LMS team first identifies what state standards are to be achieved. Then together, they create a rubric that covers the teacher's concerns and adds the library media specialist's concerns for information literacy, reading and technology as illustrated below:



For students, the team may wish to create a self-assessment rubric to be completed by students or learning groups. This rubric can be the same as the above rubric or adapted.

The number of items on the rubric and the number of points assigned to each category will vary depending on the nature of the learning experience.

Other Collaboration Measures to Collect and Report at the Learner Level

Assessment

(Collab5) Standardized assessment and collaboration (Learner Level)

- Do an analysis of the standardized tests given in your school and district to see what information literacy skills, reading, and technology is assessed. This might be a cooperative task of a committee of library media specialists at the district or even state level. Base many of the LMC goals for collaboration on this information since achievement will be gauged by these tests. See measure InfoLit5 in this book for other details.

  Analyze enough individual learner's scores until you have a reasonable idea about why students fail or achieve based on information literacy skills, how proficient they are at reading, and how well they use technology as a learning tool. For example, a group of library media specialists were examining the Texas state test at various grade levels recently. At one grade level, almost 50% of the items were process items giving support to the emphasis of information literacy at that level. At another grade level, content items predominated indicating that lots of reading would help kids build background knowledge about a variety of subjects. Such information is extremely valuable when teachers and library media specialists consider state standards and the assessments that measure them during the collaborative planning of units.

  Provide evidence that the collaborating partners have taken assessments and standards into consideration as they design and carry out learning experiences. For example, last year, after analyzing a number of individuals, we noticed these problems… This year, after an analysis of state standards and the probable assessment, the third grade teacher and I designed our collaboration with X factors. We then looked at individual scores again for a comparison of last year's third graders with this year's third graders. We found that we had chosen wisely for our year-long collaborative push to integrate…. (lots of reading, better use of technology, or focused information literacy skills).

(Collab6) Local assessment and collaboration (Learner Level)

- Beyond the high stakes testing looming on the horizon, both teachers and library media specialists are looking for a wide range of factors that help students be successful in school. Rubrics or other assessments are designed to provide feedback about learner progress. What do we want Susan to know and be able to do? And, will our assessment of the LMC-based unit tell us how she is doing?

  As a unit draws to a close, plan to examine the performance of a few individuals as representative types: a learner who speaks and reads English

poorly, a gifted student, a student with disabilities, an average student. What can we do differently for Susan and well as other students like her?

Report the fact that you do some individual student analysis on a regular basis to guide your collaboration with a particular faculty member.

(Collab7) Memorable learning experiences (learner level)

- Ask learners to rate learning experiences. They exhibit many signs during a learning experiences that they are engaged, learning a great deal, having fun, and going beyond the minimum assignments. Cathy Marriott in the video "We Are Information Literate!"[6] compared student engagement skills in the "pick a pet" project collaboratively planned and a "normal" unit. Her figures reported 255% more homework time, and like percentages for before and after school work plus all the participation time. Such a report must have impressed someone since it along with other like messages got a bond issue passed. Students in her video being interviewed as fifth graders could easily recall their kindergarten research and could tell all kinds of details about it. In short, it was a memorable learning experience. Engaged students read more, are motivated, love the challenge, and expend much effort. We wish we had a "memorable measuring thermometer." We might measure what Cathy measured. We might also just ask kids to rate at the semester memorable units – ones they like the best or ones they feel they learned the most from. We could also ask them to rate units on a boredom scale if we could stomach the results. Kids know when they have been engaged and challenged. Perhaps we just need to tap into their network.

(Collab8) Deep learning vs. surface learning (learner level)

- Gauge deep learning within a content area. Jay Leno has great fun interviewing people on the street about the most mundane of facts such as "Who is the current president of the U.S.?" and broadcasting only the stupid answers he receives. His point is, like E.D. Hirsh, that Americans have very poor surface knowledge or common knowledge about most subjects. Hirsh publishes the series "What Every ___ Grader Needs to Know" and has made a fortune touting surface learning which, is of course, what textbooks are full of and what many standardized tests measure. You memorize your states and capitals, math facts, the first ten Ammendments to the Constitution…

Critics point out that in-depth knowledge such as a kid mesmerized by dinosaurs, or video games, or pop culture, responsible for most of the world's progress. It's the expert mind that gets us ahead in most instances whether in science, law, history, or medicine. Collaboration provides students a break

[6] Marriott, Cathy. *We are Information Literate! The Video*. Hi Willow Research and Publishing, 2003.

from constant sponge memorization to fill those brain cells with deep understanding. Library media centers are perfect places to build such depth. LMCs can be used to gather the facts to be memorized, but on-beyond-the-textbook, is our specialty.

How do we know when a student has become a mini-expert? We rely on many assessments: debates, panel discussions, written essay tests, lengthy term papers. No Jeopardy games here – no true false or multiple choice. We want evidence beyond the surface.

During a collaborative unit, design assessments that will test both surface learning and deep understanding. Activities that promote lots of reading, investigating, data handling, problem solving, graphing and other information transformation will produce more thinking and thus more deep understanding. The assessment then rewards that effort and we individually praise Joe or Juan or Anita for obvious expertise. How many individuals within a class could we label as deep learners? What activities stimulate such an effect on a higher percentage of the class? Relevance? Real problems? Issues?

The problem with deep learning is time. Teachers feel that if they come to the LMC, deep learning will occur but what about the other "stuff" they have to cover? A balance of well-assessed surface and deep learning program over time will teach us the appropriate mix.

Possible Collaboration Measures to Collect and Report at the Teaching Unit Level

The use of collaboration logs, the measurement of time spent collaborating and the move from "bird units" to higher quality learning experiences, are all measures at the teaching unit level (see Collab1-3). Thus, this section is rather brief.

(Collab9)Assessment, collaboration, and rubrics (Teaching Unit Level)

- Analyze the success of the class as a whole for units of instruction done collaboratively. Using whatever assessment has been done, how do collaborative units stack up against units done in the classroom alone? What percent of the learners achieve the state standard? What percent score high on rubrics or other measures? What is the average student grade for a collaborative unit vs. a non-collaborative one?

  If the LMC unit has been a "bird unit," it would be rare to see a positive difference in learning. However, by putting two heads together and designing something with higher expectations and more depth of learning, the likelihood that positive results are achieved is excellent. The message

to report would be something like: When we re-designed six learning experiences from textbook/lecture to high level learning experiences in the LMC, the class average for meeting state standards was ___ compared to a comparable six non-collaborative units.

(Collab10) Teacher-pupil ratio (Teaching Unit Level)

- Show the difference in the teacher-pupil ratio when collaboration occurs. Did you know that in the Lance studies, the impact of the library media program shows up stronger than teacher-pupil ratio? Many groups consider teacher-pupil ratio to be a key element because of all the extra time and attention that can be given to individual learners. It is strange, then, when the teacher wants to leave during a LMC activity. The teacher-pupil ratio is cut in half when both partners are in the harness. This is one carrot to dangle in front of a faculty who is struggling to raise scores – give me your tired and poor units – those struggling learning experience yearning to breath free – and together we will transform them and see that every learner succeeds. Along with other collaboration data, this is a key element to show when linked to improved student performance for a learning experience.

(Collab11) Collegial and trusting relationships (Teaching Unit Level)

- Report the difference that collaborative planning in having in the role and relationships experienced by LMC staff. Persons reporting to David Loertscher in the Spring of 2003 for a *School Library Journal* article (see Appendix A), reported that when their rubric items joined the rubric items a teacher passed out in class, an amazing change occurred. Not only did students consider what they did in the LMC of equal importance to classroom work, but teachers began viewing the library media specialist as a collaborating partner rather than a support person. In other words, the ripple effect of a simple change in assessment had major implications for the LMC program and its position in the teaching/learning process. It is worth noting and reporting.

(Collab12) The role of the LMC program and state standards (Teaching Unit Level)

- Report the extent to which the LMC program initiative is linking teaching units into state standards. During collaboration, if the library media specialist insists on beginning planning sessions with a consideration of state standards, then topics, activities, and assessments are likely to be affected. Teachers who are struggling to manage the incredible load of expectations on their shoulders will appreciate a second head during the planning process to connect standards, local expectations, rules and procedures into a learning experience. Library media specialists will gain expertise in this technique simply because they will work with a cross section of faculty and in the normal flow of events will see who successfully handles standards and those who are still challenged. Reporting the attempts and the success rate at standards integration is

worth consideration. Administrators and boards should know that the LMC program in pushing the agenda of the school and the district.

(Collab13) Collaboration and reflection (Teaching Unit Level)

- When collaboration partners reflect at the end of a learning experience, what happens to further opportunities to collaborate and the improvement of collaboration experiences? When partners are honest with each other it is easy to predict that benefits for the future will accrue. Its worth reporting as it happens.

Possible Collaboration Measures to Collect and Report at the Organization Level

How the organization encourages a collaborative atmosphere and makes policy and pushes strategies to see that it happens is critical. Library media specialists around the country blame organizational restrictions on the amount and the quality of collaboration. Whose at fault for such limitations is not always clear, but it seems a barrier that many struggle to cross.

As this author talks to administrator groups, the problem seems to be ignorance as much as anything. Many administrators do not know what they don't know. It is not that they are unwilling or threatening, it is that their experience level gives them little to go on. That is why I keep encouraging library media specialists to set up showcase collaborations to demonstrate to administrators so they can get a glimpse of what we are talking about. It seems to require "show me" rather than "tell me."

The Joyce Valenza[7] technique is as good as any. Overhearing teachers complain about the amount of plagiarism going on, Joyce selects a history teacher and collaborates with him to teach information literacy in his major research project. When the project is a spectacular success, she and the teacher showcase it to the principal. The principal is so enthusiastic that an information literacy action plan is presented and accepted by the leadership team and then announced to the school. Teachers know that their performance evaluation of the year will contain an item linked to their implementation. Joyce is off and running. Running!

(Collab14) Administrators and collaboration (Organization Level)

- Document the administration's support of collaborative planning by actions as well as word. First, document understanding, then enthusiasm and actions. A thirty second brag about a principal who "gets it" is an important part of any presentation to a board or parent group. And if the principal never get it, and can't be taught, there are only two alternatives:

[7] As reported by Joyce and her principal at the ISTE conference in Seattle, Spring, 2003.

move to a school with an understanding principal, or get the principal fired.

(Collab15) Staff size and collaboration (Organization Level)

- Document the size and expertise of the LMC staff as collaboration builds, stays steady, or declines. Let's face it. As long as logic is on the table, the size of the LMC staff can be justified based on the amount of collaborative planning with its attendant impact. To become indispensable is critical. To produce a slate of elevated successful learning experiences is an enviable track record. The size of the LMC staff is predictive of the amount of collaboration possible. Chart that amount against staffing over time. Be prepared to significantly increase the amount of collaboration should staffing increase. Do it and report it. If some other program has suffered because staff was diverted to the LMC, evidence of impact will be critical. Numbers of collaborations and the dispersal of those collaborations throughout the faculty should help.

(Collab16) Professional development and collaboration (Organization Level)

- Document the number and extent of professional development sessions for the faculty on the topic of collaborative planning with the LMC program. Just assume that no teacher receives training in how to use a LMC during their pre-professional education. If they do, don't faint. With the advance of theory in our field about collaboration, information literacy and technology, we have had difficulty as a group keeping up, let alone expecting the school community to come along with us. We will have to teach behaviors we expect to happen. It could be with a single person, a small group or the faculty as a whole. When Doug Achterman at San Benito High School in California discovered that all teachers were expected to do a summer professional development session, he threw his hat in the ring and had 18 people sign up. His topic: reading in the content areas using the LMC. Oft times it is as simple as being at the right place at the right time. The new principal of the school, a supporter of literacy, joined the group several times and expressed solid support.

(Collab17) School schedules and collaboration (Organization Level)

- Document the scheduling atmosphere of the school as it either promotes or discourages collaborative planning. Those affected most by school scheduling seem to be the elementary school library media specialists, many of whom, are locked into planning periods. Breaking that organizational pattern requires creativity, administrative support, and the ability of the LMC staff to implement a rich collaborative program. It is the chicken and the egg. You can't get support without a collaboration track record and you can't get a track record without support. All library media specialists can showcase one, two, three or more learning experiences that demonstrate what collaborative planning is all about.

Showcase those, report them, have teachers testify about them. It provides the ammunition to make organizational change. If your job, however, exists because of planning periods, have students assigned to the LMC do LSSR (library sustained silent reading) while you are working collaboratively with another teacher in another part of the LMC. If there is no way to demonstrate collaborative planning, change schools.

Finding an Evidence Thread in the LMC Collaboration Program to Measure and Report

This chapter has provided a list of factors dealing with collaboration that would be candidates for measurement. This list was followed by a variety of possible measures that might be done at the learner level, the teaching unit level, and the organization level.

The task of the library media specialist is to decide which aspects of the current collaboration program could be measured, what program goals should be instituted and measured, and what combination of measures can be integrated into daily practice. The following evidence plan worksheet might help in making both measurement decisions and also might shape changes in the library media program.

The worksheet is followed by a sample worksheets where a library media specialist has decided to measure a collaborative goal of the LMC program.

Collaboration Evidence Plan Template

Detail in the appropriate box possible measures to be used in your collaboration program to measure its impact on achievement.

Goal:

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*			
Indirect Measures**			

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

Collaboration Evidence Plan Example

Goal: With the principal as partner, the library media specialist has banned bird units from the LMC and wishes to document the transition to higher-level learning experiences and their spread through the faculty during the current school year.

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*	• (Collab4) Put a joint rubric in place for each collaboration so that both the teacher and the LMS will have evidence of impact on learning.	• Collab2) Document each learning experience where both teacher and library media specialist agrees that the new unit increased student learning. • (Collab1) Measure the time spent collaborating with individual teachers on transformed bird units.	• (Collab3) Document on a collaboration log/calendar, the transformed units and chart their spread across the faculty during the year.
Indirect Measures**			• (Collab16) Document the professional development sessions on collaboration conducted with the faculty before school begins in the Fall and at the beginning the second semester when the principal and I will give an interim report.

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

4

The Contribution of the LMC Program to

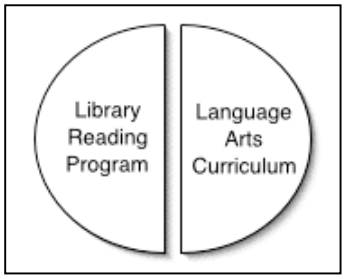
READING

and Evidence-Based Practice

It is difficult to overstate the case for reading as a major thrust of the LMC program. Historically, this has been the major - and sometimes the only - thrust of the LMC program and it produces results in achievement simply because reading scores are highly correlated with results on standardized testing. Thus, reading scores have been used as the dependent variable in almost every research study linking school library media programs to achievement.

For as long as there have been school librarians, these professionals have had a main target of building enthusiastic, avid, capable, and interested readers. Tried and true practices in the library world endure, no matter what controversies rage in the "teaching reading" community.

Some people ignore or dispute the power of the LMC's legacy since its research base is more anecdotal than scientific. Yet it is widely accepted across communities, parent groups, and learners of all ages.



The challenge for the library media specialist is to preserve the legacy of reading while integrating its aims with those of the language arts curriculum. The library media program is larger in scope in the 21st century than it was 30 years ago. Other agendas such as collaboration, enhancing learning through technology, and information literacy have taken a prominent position in LMC programs. How can the LMC staff preserve the best of the past while pushing toward today's world? One answer is that like the little Dutch boy with his finger in the dike, school library media specialists "plug the holes" of whatever skills-based reading program is in place. There is no perfect way to teach reading. All methods have strengths, but none produce 100% results. Library media specialists can compensate for whatever problems exist and target individual readers of all kinds.

While national favor has been extended to the Harry Potter phenomenon, it has been grudgingly given. The federal government has not provided funding for extensive reading collections at the nation's schools. California and Indiana did provide major funding for collections to spur literacy in the late 90s and early 00s, but as budgetary times got tough,

those funds were either eliminated or greatly reduced. Local spending never seems to keep pace with publishing inflation, so library media specialists are left with very limited budgets on which to produce a literacy miracle.

The connection of purchasing books for the library with reading achievement has been demonstrated in a number of studies conducted by Keith Lance (some identification? Credentials?). Large library collections and high achievement seem to be paired as the factors are measured. However, budgets for collections generally depend on a benevolent administrator or board who believes in libraries. The presumptions, assumptions, and anecdotal evidence linking libraries to reading, while "warm and fuzzy," do not sway votes in a scores-based arena. Everyone agrees that school libraries and reading are essential, but when money is tight, financial support often disappears.

To be sure, some of the LMC's own practices in school libraries have not contributed to the image of the school library as a literacy advocate. When children are denied access to books because they owe a fine or are allowed to come to the library media center only weekly, or when librarians are viewed only as caretakers of books, we do not gain friends in the reading community. We do not appear in the national reading literature with any frequency.

Whatever may be popular at state and national levels, what is really important is the centrality of your library media program to the literacy efforts of your school. This has become more difficult as library media specialists devote time to information literacy and technology, yet we ignore reading at the peril of our students.

This section provides a buffet of measures that could be implemented at the learner, teaching unit, and organization levels. There are probably more measures that anyone could attempt, but hopefully enough possibilities to match local emphases. It is certain that reading measures at the organization level have been losing ground, requiring every library media specialist to gauge impact at the other two levels if continued support is to be realized.

Two handout-type pages appear next. The first reminds us of what the research says and the second lists the value-added components we bring to literacy that we might wish to measure.

> Literacy *is* a problem to throw money at, but we have to aim carefully by pouring money into library books and then making sure they get read. — **Stephen Krashen**

Starting with the Research: Reading and Academic Achievement

Research completed by Ann E. Cunningham and Keith E. Stanovich, Stephen Krashen, and Jeff McQuillan plus the latest NAEP (spell this out and put the initials in parentheses if it is appearing for the first time) research from the U.S. federal government link the amount young people read with their scores on academic achievement. The message is clear:

For Everyone: Amount Counts! One hundred years of research support the notion that free voluntary reading (the kind of reading you want to do, not have to do)—lots of it—is the best predictor of seven essential achievement basics:

Comprehension, Spelling, Grammar, Vocabulary,
Writing Style, Verbal Fluency, General Knowledge

For English Learners: Amount Counts! Research also demonstrates that the fastest way to get anyone—child, teenager, or adult—to learn English is to have them read a lot in English! (P.S.: This approach also works for anyone learning a foreign language. If you read a lot in that language, you will learn it faster.)

Reading vs. Television and Adult Conversation. Consider this: 1) Children's books contain 50% more rare words than adult prime-time television, and 2) Popular magazines have roughly three times as many opportunities for learning new words as prime-time television.

The Sources and Must Reads:

- ***The Power of Reading*** by Stephen Krashen (Libraries Unlimited, 1993).
- ***The Literacy Crisis*** by Jeff McQuillan (Heinemann, 1998).
- "**What Reading Does for the Mind**" by Ann E. Cunningham and Keith E. Stanovich (*American Educator*, Spring/Summer, 1998, p. 1-8).
- ***The Nation's Reading Report Card: Fourth-Grade Reading 2000*** by the National Center for Education Statistics, The Center, 2000 (Known popularly as the "NAEP Report").[1]

NAEP Results 2000

Fourth graders in the United States do better academically when they:

- read more pages in school
- read more pages as homework
- have more books, magazines, newspapers, and encyclo-pedias in their homes
- report that they read for fun every day
- discuss what they read

[1] The NAEP report is available on the Web at http://nces.ed.gov/nationsreporrtcard/sitemap.asp or by doing a Web search for the "naep report 2000"

Value-Added Components of the LMC Reading Program: Candidates for Measurement

Learner Level

- Access to as much reading material as each learner can possibly handle in the LMC, the classroom, and the home.
- Encouragement to read across the genres and for curricular pursuits.
- Encouragement to build a life-long reading habit.
- Involvement in conversations about reading.
- Personal reader's advisory.
- Enjoyment of literature for literature's sake (no book reports, no tests, no critical analysis).
- Encouragement to participate in reading celebrations, events, initiatives, projects, and challenges (as opposed to prizes, rewards, contests, competitions).
- Individualized help for learners – particularly for those not doing well in classroom reading programs.

Teaching Unit Level

- Access to reading materials both for teaching units and recreational reading.
- Collaborative teaching of language arts including appropriate information literacy skills and technology.
- Support of whatever skills-based reading program is in place; compensation for whatever weaknesses the program contains.
- Collaborative reading motivation both for free reading and contents reading.
- Reading aloud and storytelling both for fun and in connection with teaching units.
- SSR (sustained silent reading) program both for fun and in connection with teaching units.
- Numerous booklists and booktalks for fun and in connection with teaching units.

Organization Level

Access

- Easy access to reading materials children and teens want to read:
    - From the LMC.
    - From the classroom (rotating from the LMC).
    - In the home (as supplied by the LMC).
    - In the preferred language.
    - At desired reading level.
    - Matching both curricular needs and personal interest.
    - Constantly rotating to stimulate interest (as in bookstores).
    - Available for whatever device is owned by patrons (cell phones, PDAs, wireless laptops).

- Pleasant places to read (inviting facilities, ambience, posters, banners, comfortable chairs, bathtubs, reading lofts).

Program

- Participate on or head the leadership team of motivational reading programs and events such as state young reader awards, local initiatives, reading challenges, and projects.
- Link to reading and literacy efforts in other libraries and in the community.
- Keep students and teachers apprised of what's new in publishing and in the collection.
- Connect with authors and illustrators.
- Create booklists and do booktalks.
- Sustain an SSR program.

Materials

- A large and evolving collection of materials young people want to read.
- Materials to read in all formats: print, multimedia, and digital.

The Library Media Center Reading Program
Ripple-Effect Measures[2]

Goals

LMC Agenda	Reading Agenda
• Capable and Avid Readers. • Learners who read a lot (amount counts). • Learners who like to read.	• Skilled readers. • Learners reading at grade level or above. • Taught using scientifically-based methods.

Pebbles to Measure

1. Access to a plentiful supply of materials learners want to read:
    a. In the Library Media Center.
    b. In the classroom.
    c. At home.
    d. Over digital networks.
    e. As implemented in organizational policy.

2. The amount read (individuals, classes, the entire school):
    a. Free voluntary reading.
    b. During topical unit studies.

3. Students' attitudes about reading: do they like to read.

Justification:

The Krashen/McQuillan research review of 100 years strongly supports the idea that the amount counts and that students who read a great deal score higher in comprehension, grammar, spelling, writing style, and have high general knowledge.

Demonstrate through research and practice that:

- Access to library materials is increasing and new materials are commonplace.
- The amount students read is increasing and voluntary reading is becoming a personal habit.
- The number of students who report they like to read is increasing.

Report:

- Steady improvement over time.
- Improvement related to an initiative.
- Success is already high and is remaining constant.
- Improvement related to organizational policy shifts.

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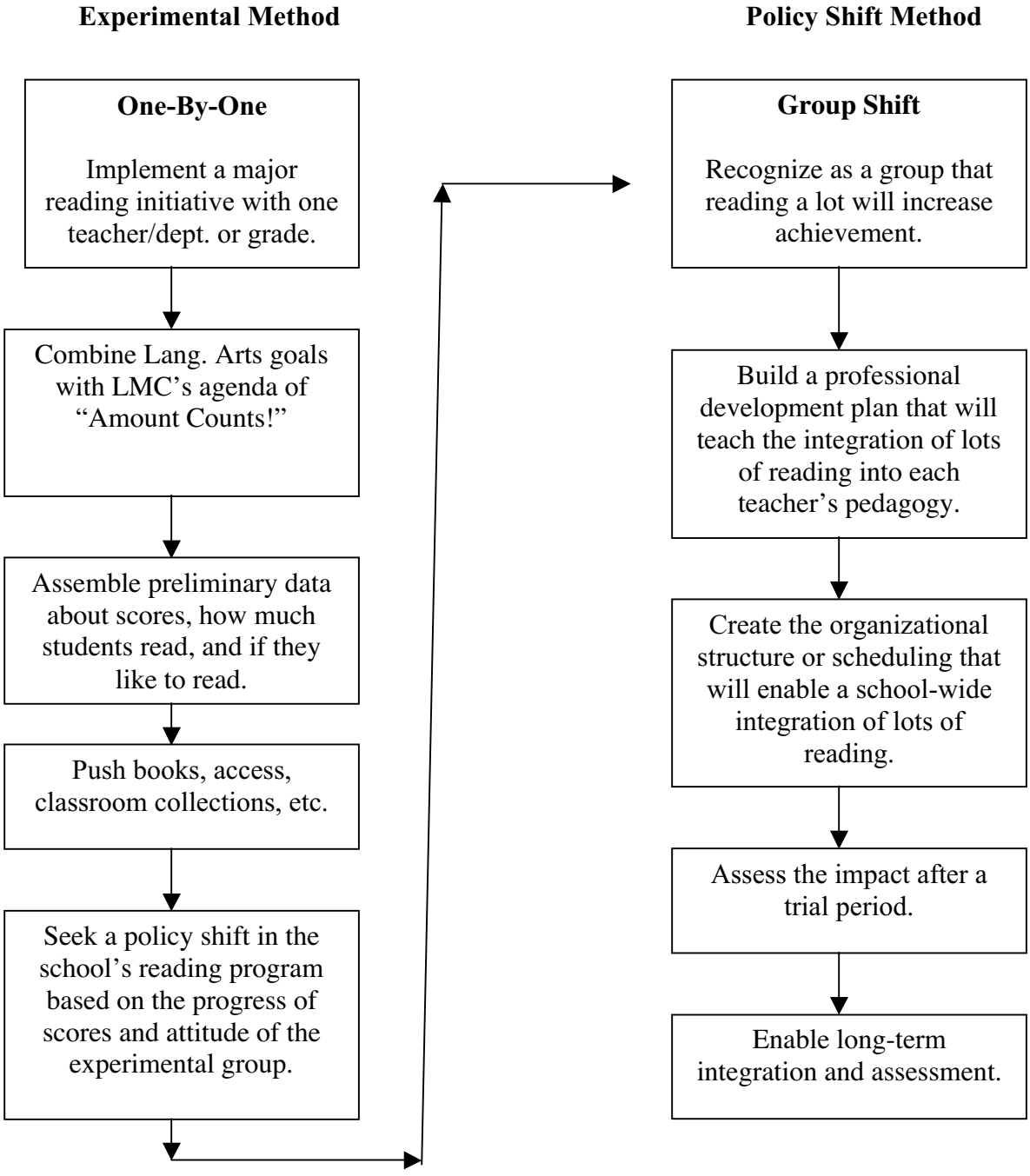
[2] Ripple-effect measures refer to significant measures that are most likely to produce results in achievement and indicate maximum teacher collaboration and organizational effectiveness. Because you have these data, a ripple effect occurs, like throwing a pebble in a pool, triggering many other organizational practices and policies.

Two Ways to Succeed in Evidence-Based Practice: Reading



(Read1) Document Access to Reading Materials for Individuals (Learner Level)

Document the fact that users can and do take unlimited amounts of reading materials from the collection – as much as each individual can responsibly handle. Historically, school libraries allowed one book to be checked out once a week. The author has been unable to document it exactly, but during the 1960s most school librarians doubled that number to allow two books per week – and there it seems to have stuck. Many librarians decided that two books per visit was all that most children could handle yet declared that students had unlimited access to reading materials since they could visit the library as often as they liked. Such limitations are inconsistent with the needs of literacy and the research that says emphatically that "amount counts."

It is difficult to claim true support of literacy when any kind of limitation on reading is imposed. Responsibility is often the key issue discussed ("If I allowed them to take all the books they wanted, they would lose them"). Or, the size of the LMC collection is blamed for restrictions ("If I let them take all the books they wanted, there would be no books left on the shelves. That may sound bad, but would really not be a major catastrophe!)

All organizations promote their own interests over the interests of their customers. Janitors hate folks walking on their clean floors. Grocery store stockers complain of customers messing up the shelves. Public libraries open only when it is convenient for the workers (usually 10 am, to 9 p.m.) without regard to users' needs at other times. Closed libraries are useless. Thank heaven for digital access! Reference collections, magazines, and newspapers at last are accessible electronically whenever patrons have a need.

With the need for literacy and the need to leave no child behind, how can any need of the library organization be more important than the needs of the individual? Recently, the author conducted a book bag program in a dysfunctional neighborhood of a very large city. Kindergarten children were allowed to take home two books a day, which would cause concern in many minds. But at the end of the year's experience, the most books lost from any classroom was **three**. Case closed. To be sure, literacy backed by mountains of reading materials requires a redesign of traditional circulation patterns. We're smart enough to do that!

The following question bank could be used to survey students on their perception of the accessibility of library materials. The questions could also be used by an outside person doing a lunchroom test by sitting down at random tables during the lunch hour and asking students some of the questions. Such strong evidence from patrons tests the awareness of policies and their true implementation.

Measuring student perception of access is a **direct measure** at the **learner level**, the **teaching unit level** (if results are looked at by class), and at the **organization level** (if tallied for the whole school). The Krashen review of research shows that access is a predictor of how much students read. We can also predict with certainty that limited access or no access would adversely affect the amount read unless parents intervened to buy books or make frequent trips to the public library.

Reading Question Bank

At Home

- How many books would you say are available in your home for you to read?
- How many of these are books from the school or public library?

From the LMC

- Do you check out all the books you want from the school library?
- How often do you go to the school library to check out books?
- Where do you find materials you want to read in languages other than English?
- Does the school library have a wide variety of books you want to read at your reading level?
- For which topics does the school library have a lot books? Very few?
- What do you wish the school library had more of?
- Do you find new books that beg for your attention?
- If you must read more about a subject you are studying in the classroom, does the school library usually have several choices for you?

In the Classroom

- How many books would you say are in your classroom library?
- Do the books in the classroom library change often enough that there is usually something new to read?
- Do you take books from the classroom library home?

From the Community

- Do you check out all the books you want from the public library?
- How often do you go to the public library to check out books?

Over Digital Networks

- Does the school library supply digital books you can read on your computer, laptop, or PDA?
- Do you read the digital books in preference to the print copies?

Sample questionnaire using question variants:

- How many items can you check out from the school library at a time? (None, one, two, three, all I want)
- How many items can you check out from your classroom library at a time? (none, one, two, three, all I want) (new paragraph follows—some new text)
- How many items can you check out from the public library at a time? (none, one, two, three, all I want)
- How many books do you have at your bedside to read now? (none, a few, a lot)
- Do you have a bed lamp? (yes, no)
- How often do you read yourself to sleep? (never, sometimes, almost every night)
- At home, do you have a comfortable place to read? (yes, no)
- At home, do you have a safe place to store the books you check out from libraries? (yes, no)
- Can you check out all the books you want from the LMC as long as you are responsible? (Yes, no)
- Do you always seems to have something you'd like to read close by? (yes, no)
- During summers and vacation periods, can you check out a lot of books to read from the school library? (yes, no)

(Read2) Do a Classroom Reading Audit (Teaching Unit Level)

Many classrooms are quite stark places – bare of interest and obviously tailored only to a textbook and lecture atmosphere. Other classrooms are jungles of bulletin boards, posted student work, fun and excitement. But does the classroom environment encourage literacy with something to read at every elbow?

Once a month, the library media specialist might join forces with a teacher to do a classroom audit of accessibility to reading materials. Such an audit might be a part of a school-wide movement to encourage literacy in every learner.

The set of questions on the next page might be a starter list for ascertaining whether the classroom is reading-friendly. For both students and visitors, the ambience of the room should make a literacy statement – the room should be a cog in the wheel of a school-wide literacy machine.

Teachers have often prided themselves on building a personal library, which they share with their students. These collections are rarely large enough and they become uninteresting to students after the first few weeks if no new titles are added.

Rotating classroom collections from the library media center provide the missing key to a fresh and vibrant reading environment in the classroom, and the display of these materials in the room often dictates how much use they will get. Jim Trealease, (I would suggest some credentials here) suggests installing inexpensive rain guttering so the books in classroom libraries can be shelved face out.

Whatever restrictions the library media center places on rotating collections (such as responsibility for loss) can be addressed and solved. Students can be taught to manage the rotating collections, thus relieving teachers of that responsibility.

This technique produces **indirect evidence** of the impact of accessibility on how much students read. Certainly students would not increase the amount they read with no reading materials available. This technique looks at the **teaching level** and, if done in a number of classrooms on campus, also provides evidence at the **organization level**.

Possible Classroom Reading Audit Questions

When the library media specialist and the classroom teacher audit the reading environment in the classroom, the following questions might stimulate analysis, discussion, and planning.

- Is the classroom filled with a wide variety of print resources?
  - Newspapers
  - Magazines
  - Novels representing a wide range of reading levels
  - Interesting non-fiction
  - Student writing

- Do these resources circulate from the classroom?

- Are these resources constantly revolving from the LMC collection so that there are new and interesting titles always available?

- Are there digital collections of reading materials accessible on the classroom computers?

- Do students help manage the classroom collections?

- Is the classroom collection large enough to handle student reading levels, demand, and interest?

- Are there better ways of handling reading materials (display, storage, arrangement, repair, circulation, etc.)?

- Would a casual visitor to the classroom sense an ambience conducive to reading?

(Read3) Document Online Access to Reading Materials (Organization Level)

The digital school library has been growing for the last decade. It is now common for a school library to have a Web page linking students to instructional resources. Mostly, links provide access to databases and Webographies (often called directories) linking the "best of the Web."

Through projects such as Project Gutenberg (http://promo.net/pg/) and the International Children's Digital Library (http://www.icdlbooks.org/), an increasing amount of children's and young adult literature is available both for free and fee. Most of the classics, some with the original illustrations, can be downloaded (Alice *in Wonderland*, for example, has many versions available.). Or try downloading all 2100 pages of The *Complete Works of William Shakespeare!* Several companies such as Audible.com provide audio books that can be downloaded as one would download music. .

The obvious advantage to books on the Web is that they are available 24 hours a day, 7 days a week and can be downloaded or used wherever there is a connection. There is little need to have 20 copies of *Macbeth* on library shelves when every student can download a copy and keep it for as long as desired. With an increasing number of computers and portable devices available, accessibility is likely to grow exponentially.

If you are beginning such a collection (and you should), your patrons should be aware of the service and you should meter this service to gauge its impact. In fact, as we move more and more toward the digital school library, counters should be set up to measure how often students access what we put there for them.

The question bank on the next page might be used in a survey or group interview to test students' awareness of reading resources in the digital school library. As mentioned, automatic counters on the library Web site could corroborate what is learned from any questionnaire given to patrons.

Circulation measures, including counters on Web sites, are **indirect measures** at the **learner level**, **the teaching unit level** or the **organization level.** They are recorded and reported with some interest, but we still do not know whether students actually read a book they check out. And for many reasons, we may be interested in a count of items an individual accessed, but not a detailed record of what titles were accessed.

Question Bank for Access to Reading in the Digital School Library

Create a questionnaire for students or a list of questions to ask in a group interview to test students' awareness of reading materials available in the digital school library.

- Do you know how to download music from the Internet?
  - Yes
  - No

- Could you help another person download reading materials or files from the Internet if needed?
  - Yes
  - No

- When you need something to read for schoolwork, what online sources help you? (Check all that apply.)
  - The digital school library
  - The digital public library
  - The Internet

- When you want something to read for fun, what online sources help you? (Check all that apply.)
  - The digital school library
  - The digital public library
  - The Internet

- When you'd like to hear a book read to you (an audio book), what online sources can you download these books from? (Check all that apply.)
  - The digital school library
  - The digital public library
  - The Internet

- Which do you prefer?
  - To read a book on paper
  - To read a book on screen (computer, PDA, other personal device)

- If the same book were available in a variety of choices, which one would you prefer?
  - Printed book
  - Digital book on a computer, PDA or other personal device
  - Audio book on cassette or CD

(Read4) Document Organizational Access Policies to Reading Materials (Organization Level)

Organizational needs always conflict with customer needs. Janitors complain that students mess up the halls. Bus drivers complain about riders' behavior on their routes. Librarians complain too: (new paragraph added for each complaint)

"If it weren't for those patrons, our shelves could be straight, there would be no fingerprints or marks on the books, the books would not wear out, and the computer networks would WORK!" "If we allow patrons to take out only one book, perhaps we can keep up with the shelving. I if we let them take all they want, they will, and then who will shelve them?"

"If we allow students to take all the books they want, we will not have any on the shelf!

On and on go the excuses because patrons and customers make demands on the organization and the temptation is to build rules that restrict access in favor of organizational performance. It happens in all organizations.

The author has been in schools where kindergartners could never check out a book from the library. Or, there is the other extreme: "Our students can check out all they want – it's just that they must do it two books at a time. They can come as often as they like." ("In reality they don't, and we are glad because the load would be too heavy.")

Successful business owners know that customer relations is everything? Policies governing access to reading materials must not only be defensible as stated, but also in practice the policy must serve the demands of literacy. For example, if a child lives in poverty, has no books in the home, and cannot get to the public library because it is located across a gang territory line, the school library is that child's only hope for literacy.

This measure asks the library media specialist to set realistic policies that actually encourage literacy and to back those policies with evidence that they are in force and they are working for the benefit of every student. If asked about access policies, all the students would report that they had unlimited access to reading materials.

This measure is **indirect evidence** at the **organization level.** However, if access can be tied to the testimony of enough individual students who are flourishing, then the behavior of the organization is actually stimulating the amount read, and becomes **direct evidence**. For example: "We had a policy shift last year lifting restrictions on the number of books students could borrow. Circulation increased 300%, and 89% of the students reported on a questionnaire that they could check out 'all they wanted' from the library." I in this case the change in policy could be tied **directly** to an outcome.

Documentation of Reading Access

Provide not only the policy document but also evidence that the library media center maximizes access to every individual in the school.

- Unlimited access to the LMC collection is available to every student and faculty member (and perhaps parents).
- Regular rotating classroom collections are supplied by the LMC.
- Rotating home collections for students are supplied by the LMC (there is always something waiting to be read at the bedside or bookshelf).
- Materials are plentiful in the preferred or assigned language (foreign language instruction).
- Plentiful materials available for all reading levels of the students as well as the teachers.
- Displays and collections are constantly rotated to stimulate interest (as in bookstores).
- Plentiful reading materials available for various electronic devices owned by patrons (cell phones, PDAs, wireless laptops, or any other device where reading can be displayed or heard).
- Collections are large enough to support massive access policies.
- Budgets keep the collection fresh and large so that every student can find new and exciting titles on a regular basis.

(Read5) Gauge Free Voluntary Reading (All Levels)

Free voluntary reading is the kind you don't have to do. It's reading billboards, cereal boxes, the comics, series books, sports magazines, and best sellers. Done regularly, free voluntary reading helps students develop a reading habit. And reading then becomes its own reward.

If we were to predict what Stephen Krashen might say about measuring how much students read, he'd probably say, "Forget it. Just flood the students with lots of stuff they want to read and it will happen automatically."

We wish there was a way to measure how much a learner reads, because it is so predictive of how well they achieve. Traditionally students kept reading logs or wrote book reports. Now they earn points on electronic reading programs such as Accelerated Reader or Reading Counts.

We can use any of the measures listed on the next page, or we can ask students to estimate how much they read.

Having students report how much they read is a **direct measure** at the **learner level** that can be tallied at the **teaching unit level** and at the **organization level** as a measure of the health of the reading community.

Reading Gauges

Traditional:

- Paper chains
- Yellow brick roads
- Footprints
- Leaves for a tree
- Golf tees in a pegboard
- Credit for every book report submitted
- Contests with prizes
- Oral reading conference
- Reading records
- Young reader award programs
- Challenges ("If we read 1,000 books, the principal will kiss a pig.")

The latest:

- Accelerated Reading or Reading Counts points.

And the ultimate?

- There ain't one.

So?

- Combine all the ideas above and do the best you can to be inventive.
- Avoid contests and prizes.
- Use challenges. (Everyone can contribute to the goal and everyone wins)
- Be inventive. (Do reading logs on databases?)

Question Bank

- How often do you read just for fun? (never, once a week, several times a week, every day)
- How many minutes a day would you say you spend reading for fun? (none, 10 minutes, 20 minutes, more than 20 minutes)
- How often do you read yourself to sleep? (never, once a week, several times a week, almost every night)

(Read6) Have Learners Keep Reading Logs for Special Purposes (Learner Level)

At the learner level

During a collaborative unit between the classroom teacher and the library media specialist (such as a study of insects, California Missions, states of the United States, etc.), the library media specialist could suggest that the amount the students read be added to the rubric for the unit. Thus, the student would be rewarded for reading beyond the textbook chapter. The reading log found on the next page would reward three types of reading:

- Browsing or skimming to build background,
- Easy but informative reading, and
- Substantial reading on the topic.

The points generated from the log would be added to the total rubric score for the unit as administered by the teacher. The library media specialist might score the logs for the teacher once or twice until the technique is integrated into the normal teaching routine. Points could be required to get an A or could be for extra credit. In any event, the notion supported by the Krashen/McQuillan research is that the more reading learners do on a given topic, the more they retain and the higher they score if tested on the topic. The library media specialist would concentrate on providing each learner with a broad number of choices from the print, multimedia, and digital collections. Highly pictorial items, good children's books (even for high school students), and informative and attractive non-fiction in any format would be encouraged so there would be numerous choices for readers at all levels.

The library media specialist would report success of such a technique for various types of learners with the focus being on reluctant readers or readers who would benefit the most. Follow-up interviews with various types of learners would give clues about collection building, when and how to introduce additional reading, the provision of choice, and the impact of additional reading on content learning success. Reading logs are **direct measures** of the amount a student reads.

At the teaching unit level

Examine individual reading logs for a topical unit the class has completed. What patterns are apparent? Use this analysis as the basis for a conference with the class about additional reading. Why is it important? What can the teacher and library media specialist do to make it a better experience? Are there implications for the reading collection? Were the types and level of books, Web sites, or other reading materials adequate? "Getting it right" for both individuals and groups will spur a change in the reading climate towards acceptance of--and perhaps even enthusiasm for--wide reading. Reports by groups might focus on acceptance of additional reading as a part of a normal topical unit. Depth of knowledge might also be documented as assessments elicit ideas beyond the textbook, the workbook, and the lecture. The analysis of reading logs at the classroom level is a **direct measure** of the amount read and thus a strong predictor of achievement.

My Reading Log for _____ (topic of research/assignment/personal exploration)

1. Things I scanned (quick look/read)
- ❑ Books
- ❑ Magazines
- ❑ Web sites
- ❑ Online databases
- ❑ Video/multimedia sources

Time I spent:

What types of reading helped introduce me to the topic?

2. Easy reads that helped me understand more about the topic (could list fiction or nonfiction)

Rate each Item:

* Not worth the time I spent

** Somewhat helpful

*** Quite helpful

****Everyone should read this; it's that good

3. Items I had to read slowly and carefully because they were important or assigned.

Rate each Item:

* Not worth the time I spent

** Somewhat helpful

*** Quite helpful

****Everyone should read this; it's that good

(Read7) Ask Who Likes to Read (Learner Level)

Avid readers score high!

Kids who read, succeed!

Is this a pipe dream in the day of television, video games, and a hundred other distractions? Perhaps, but achievement scores and reading scores are so highly correlated that they are interchangeable in many research studies. The simple fact is that students who don't like to read don't. And while there are some readers who are alliterate (they can read but don't), the great preponderance of readers who read well enjoy it.

How can we gauge who is an avid reader? Probably just ask them.

The question bank on the next page is a simple one. It can be asked orally or in a survey. It can be asked by almost anyone during a lunchroom test. It can be asked in the halls, in the LMC, on the street, or even on an airplane. Surprisingly, parents worry about this as much as anyone but often don't know what to do if their child is not reading regularly.

Be brave enough to ask. It is a **direct measure** at the **learner level**. Collected for a classroom, it is a **direct measure** at the **teaching unit level** and the percentage of students who claim to enjoy reading is a measure at the **organization level** of the health of the reading community.

Ask regularly. Ask before a reading initiative and at the conclusion of an initiative. Ask at the beginning of the school year. Ask in the middle. Ask at the end. Most of the time, students will tell the truth.

Question Bank

Do You Like to Read?

Variants:

- Do you enjoy reading?
- What's your favorite book?
- Could you recommend a good book to your friend Jorge?
- Who is your favorite author?
- Have you read *Harry Potter* 5?
- Did you read the book before or after you saw the movie?
- What's the best book you ever read?
- What book are you reading now? Would you recommend it?
- What did you think of the Newbery winner this year?
- Could you help choose a few graphic novels for our teen shelf?

Other Possible Reading Measures to Collect and Report at the Learner Level

Assessment

Standardized Assessment in Reading (Learner Level)

- **(Read8)** Analyze the reading scores of an individual student and use the information in the development of an individualized reading program. Such a measure might also be used to mark progress of an individual as both the teacher and the library media specialist work with parents. Used ethically, anonymous individual progress of various types of students (low income, English-learners, struggling) might be used as anecdotal evidence of the impact of various initiatives in a library media program.

Local Assessment in Reading (Learner Level)

- **(Read9)** Numerous tests of reading are often woven into various reading activities through the year that are not part of the major "test" or standardized assessment. These can be useful to mark progress weekly or monthly if they are used judiciously. These tests might not be paper and pencil, but observations made as a reader responds over time. The teacher and the library media specialist might target a certain type of learner for a particular reading initiative and use these check tests to monitor progress or regression. For example, after a month of allowing kindergarten students to take home library book bags every night, both the teacher and the librarian notice that one student has learned how to care for a book, realizes that pages are read left to right, and has increased her attention span during read-aloud and storytelling time. The kindergartner is also beginning to pick up books out of enjoyment. Coupled with check test data, major progress is charted. Another student, a reluctant reader, has been caught in the web of Harry Potter—reading all five volumes in an amazingly short period of time. The teacher and the library media specialist plan to introduce this reader to other fiction and nonfiction at the conclusion of the Harry Potter journey and are pleased that a reading habit has begun. Check tests begin to show steady progress—a victory privately celebrated by parents, teachers, and the library media specialist and reported with permission as an anecdote in a school board report.

Cornwell's Independent Reading Rubric (Learner Level)

- **(Read10)** The use of an individualized reading rubric can provide an assessment of where a reader is in terms of development--from just a skilled reader to an independent one with a fully developed reading habit. Linda Cornwell (see next page) has developed a rubric that can be used by classroom teachers, reading teachers, and library media specialists to score an individual reader and use that score both as a progress chart over time and as an indicator for developing individualized objectives. The library media specialist could report the progress of these rubrics and their effect on individuals rather than groups.

Independent Reading Rubric: A Learner Level Assessment

By Linda L. Cornwell[3]

An essential key to becoming a proficient reader is independent reading practice. Research suggests that it is the volume of reading that students do that enhances their reading achievement. The following rubric is divided into four major categories: materials selection, engagement/ attitudes, reading behaviors, and accountability.

MATERIALS SELECTION

Developing	Progressing	Proficient
▪ Rarely selects materials at his or her independent reading level.	▪ Frequently selects materials at his or her independent reading level.	▪ Consistently selects materials at his or her independent reading level.
▪ Limits reading choices to a narrow range of topics or a single genre.	▪ Reads beyond favorite topics, genres, and authors.	▪ Reads a wide variety of genres, authors, and topics.
▪ Often has difficulty in selecting appropriate independent reading materials without assistance.	▪ Occasionally needs assistance in finding appropriate independent reading materials.	▪ Finds appropriate independent reading materials without assistance.

ENGAGEMENT/ATTITUDES

Developing	Progressing	Proficient
▪ Often complains about reading and fails to exhibit pleasure in independent reading.	▪ Generally exhibits a positive attitude toward independent reading.	▪ Frequently expresses pleasure regarding independent reading.
▪ Does not exhibit confidence as a reader.	▪ Generally exhibits confidence as a reader.	▪ Consistently exhibits confidence as a reader and sees himself/herself as a reader.
▪ Fails to set reading goals and reads a minimal amount during the allotted time.	▪ Sets realistic reading goals and usually achieves those goals during the allotted time.	▪ Sets high reading goals and reads the maximum amount during the allotted time.
▪ Rarely finishes the material chosen for independent reading.	▪ Finishes most selections chosen for independent reading.	▪ Rarely abandons an independent reading selection before finishing it.

READING BEHAVIORS

Developing	Progressing	Proficient
▪ Seldom has material available and ready to read.	▪ Generally has material available and ready to read.	▪ Consistently has material available and ready to read.
▪ Is unable to sustain focus or read without interruption for the allotted time.	▪ Usually sustains focus and reads without interruption for the allotted time.	▪ Reads continuously without interruption for the allotted time.
▪ Continuously seeks peer or teacher assistance in reading the material.	▪ Self-corrects before seeking peer or teacher assistance and requires a minimum amount of help from others in reading the material.	▪ Rarely requires peer or teacher assistance in reading the material.
▪ Uses reading time inappropriately: disrupts others, daydreams, doodles, wanders about the room, doesn't read.	▪ Generally uses reading time appropriately.	▪ Consistently uses reading time appropriately.

ACCOUNTABILITY

Developing	Progressing	Proficient
▪ Rarely completes the reading log after independent reading.	▪ Generally completes the reading log after independent reading.	▪ Consistently and accurately completes the reading log after independent reading.
▪ Rarely reflects upon and/or shares thoughts about what he or she has read.	▪ Generally reflects upon and shares thoughts about what he or she has read.	▪ Consistently reflects upon, shares thoughts about what he or she has read and makes connections to self and others.
▪ Rarely recommends reading materials to others.	▪ Frequently recommends reading materials to others when asked.	▪ Voluntarily and continuously recommends reading materials to others.

[3] Originally printed in *NetWords*, Spring, 2002, p. 7 (Middle Grades Reading Network); revised by the author, Oct., 2002.

Rubric Points for Additional Reading (Learner Level)

- **(Read11)** An alternative method for those employing electronic reading programs such as Reading First or Accelerated Reader would be to focus individual learners on points to be given for topical reading during a unit. If tests for topical materials were not available, tests could be written by readers or the systems overridden to add points to an individual learner's tally. The teacher and the library media specialist would analyze the results by individual and by type of learner to gain insight on how to maximize the amount read during a topical study.

The focus here is on the individual rather than the group. Have any individuals discovered a new reading hobby such as dinosaurs, astronomy, jungle animals, or politics as a result of the reward for additional reading? Any indications that such an initiative affects career choices? Any evidence that a previously reluctant reader is more willing to read? Does a struggling English reader or a reader who cannot read the textbook chapter score higher on content learning because the library collection responded with a wide variety of reading at the reader's interest or skill level? Targeting a few readers as a collaborative topical unit begins might be a way to keep focused on results and the spirit of leaving no child behind.

Self-Assessment in Reading (Learner Level)

- **(Read12)** Help individuals chart their own progress toward becoming avid and capable readers. A teacher might have an individual learner chart progress on both high level and low-level assessment tests. These can be charted and graphed by the learner and might be done as a collaborative project with the library media specialist. Learners should know that they are learning a lifetime skill with major benefits in every aspect of schooling. For the library media specialist's role, the reader should understand that the library media program fosters the love of reading rather than just the skill of reading. Through interview or questionnaire, the reader might respond to the following points:

    - I take advantage of the access to books in the LMC, the classroom, and the home.
    - I am a responsible user of print materials from the school and the LMC.
    - I realize that to build skill in reading and learning English, a lot of reading is the best thing I can do.
    - I realize that what I like to read helps build reading skills (sports, hobbies, magazines, Web sites, comic books).
    - I have a reading habit (I read at least 20 minutes every day for fun.)
    - I read widely. That means that I read both fiction and nonfiction across many topics.
    - I have special topics that I really enjoy reading, such as science fiction, fantasy, romance, adventure, astronomy, poetry, or fairytales.
    - I give recommendations to my friends about what I have enjoyed and listen to them when they recommend something I might enjoy.

- I log the books I read in a journal or database just to see how much and what I have read.
- I enjoy talking about the things I read.
- When I encounter words I don't know and can't figure out what they mean, I look them up in a dictionary or on my computer.
- I like to read.

Observation of Readers (Learner Level)

- **(Read13)** In the normal course of encountering readers of all kinds, the library media staff might document those readers who have been referred to reading specialists, counselors, mentoring programs, community agencies, or other experts and who may have fallen through the cracks in the normal reading initiative.

Encouragement and Motivation to Become Avid Readers (Learner Level)

- **(Read14)** Document efforts by individuals discovered browsing in the library stacks or referred by teachers to build a healthy reading habit. This might be a personal mission on the part of any LMC staff member, whether professional, support or volunteers--- including student assistants. Some reportable items to document (client count, case study) might include:

  - Encouragement to read across the genres and for curricular pursuits.
  - Encouragement to build a life-long reading habit.
  - Involvement in conversation about reading.
  - Personal reader's advisory.
  - Encouragement to participate in reading celebrations, events, initiatives, projects, and challenges (as opposed to prizes, rewards, contests, competitions).
  - Points earned on electronic reading programs (Reading Counts, Accelerated Reader).
  - Individualized help for learners – particularly for those not doing well in classroom reading programs.
  - Enjoyment of literature for literature's sake (no book reports, no tests, no critical analysis).
  - The provision of reading lists, staff recommendations, Web-page listings/reviews – these often created by individual student experts in a genre or reading topic.

Possible Reading Measures to Collect and Report at the Teaching Unit Level

Assessment

Standardized Assessment in Reading (Teaching Unit Level)

- **(Read15)** Many administrators share the results of standardized testing with classroom teachers for individuals in their classrooms as well as their combined classroom results. As the pressure on teachers to produce results increases, opportunities may ensue for conversation between the teachers and specialists in the school– notably reading specialists and library media specialists. Natural comparisons will emerge but will have to be used very carefully. For example:
  - Compare teachers who use or don't use the following LMC services:
    - Teachers who have rotating classroom collections vs. those who don't.
    - Teachers who implement the book bag program (or other LMC initiatives) vs. those who don't.
    - Teachers who read aloud daily vs. those who don't.
    - Teachers who encourage unlimited checkout from the LMC vs. those who don't.
    - Teachers who allow many individual and small group visits to the LMC every week vs. those who don't.
    - Teachers who award points for reading beyond the textbook (and work with the LMC staff to do so) vs. those who don't.
  - Chart progress made by teachers who have embraced LMC initiatives to increase the amount each student reads.

Local Assessment in Reading (Teaching Unit Level)

- **(Read16)** Using check tests of various kinds throughout the year has the advantage of marking progress along the way rather than relying on one test at the end of the year. As an LMC initiative takes place in a classroom, be it increased access, reading challenges, or encouragement to read more during topical studies, the teacher and the library media specialist should watch for results in a positive direction and try to determine why an initiative does not produce the expected movement.

- **(Read17)** Ask and document what type of learner does not respond to either classroom or LMC reading initiatives. What plans can be made to counter this

lack of response? Document the success you have had with other teachers to transform their classrooms and methods into a more LMC-connected program.

- **(Read18)** Document the progress of the class with check tests and the standardized testing over a year as the class focuses on reading widely and in large amounts. Chart the average class progress. In theory the students should have gained a full year of progress since the standardized test the previous year. Any class progress greater than one grade level would be praised and reported. Progress less than one year would be analyzed for probable causes and targeted for additional planning.

Rubric Points for Additional Reading (Teaching Unit Level)

- **(Read19)** Examine individual reading logs for one of the topical units studied. What patterns are apparent? Use this analysis as the basis for a conference with the class about additional reading. Why is it important? What can the teacher and library media specialist do to make it a better experience? What are the collection implications? Are additional types and levels of books, Web sites, or other reading materials needed? "Getting it right" for both individuals and groups will spur a change in the reading climate towards acceptance of--perhaps even enthusiasm for-- wide reading. . Reports by groups might focus on the acceptance of additional reading as a part of a normal topical unit. Depth of knowledge might also be documented as assessments elicit ideas beyond the textbook, the workbook, and the lecture. This paragraph is the same as the final paragraph of "Read6".

- **(Read20)** Document the results of a reading challenge (not a contest) for a topical unit, an author visit, a special event, a reading initiative, or other project. Since more in-depth knowledge of the topic is the result, a visiting expert, an advanced conversation, a debate, a panel discussion, or other culminating activity should provide evidence of depth rather than surface knowledge. Report such experiences as a part of anecdotal evidence. Assessments will pick up on some of this depth but will be difficult to parse out from textbook or lecture information.

Self-Assessment in Reading (Teaching Unit Level)

- **(Read21)** In a class reflection, chart group progress of self-assessment measures at the learner level without singling out individuals. Is the class making progress and reading more and thus building competence? How can teachers and library media specialists help? Report progress class by class as part of general reports to administrators, departments, and the faculty as a whole when literacy is discussed.

Encouragement and Motivation to Become Avid Readers (Teaching Unit Level)

Numerous motivational efforts often focus on the classroom – building paper chains or yellow brick roads for every book read, participation in state book award programs, or promoting local reading initiatives. Too often such initiatives turn into contests with negative results. For example, the author's grandson was recently recognized for getting the most AR points for the year. I was happy for the recognition, but Grandpa had stacked the deck in his favor by supplying him with hundreds of books from the time he was born. But what about Joe, or Mary, or Juan in his class who gave up competing because they knew my grandson would out-read them? I call that recognition counterproductive because it actually discouraged reading. My grandson doesn't need recognition for reading. Reading is its own reward for him, and he is already hooked. Challenges where everyone participates as much as they can to help the group achieve are superior in encouraging reading. We don't want any "losers"!

Here are some suggestions for measuring and reporting group results.

- **(Read22)** Report the length of the yellow brick road or paper chain (one book/one footstep or chain per book read).

- **(Read23)** Aim for a class total of electronic reading program points, which will lead to an end-of-the-semester pizza party complete with a storytelling festival. (No individuals singled out – everyone who reads, wins).

- **(Read24)** Announce circulation totals for booktalks given by the class.

- **(Read25)** Schedule a class interview with an author after everyone has heard one of the author's books read aloud and class members have read at least one other of the author's works. (Perhaps the class voted for a book on the state award list that did not win, but the class interviewed the author they voted for anyway.

- **(Read26)** Have class members forward notes of their conversation about a book to the mayor of the city who asked everyone to read the Mayor's Reading Challenge title.

- **(Read27)** Send a letter to the city council documenting the class-wide reading done on a local issue and the class's conversations with various experts about the issue.

4. Results of Classroom Reading Initiatives (Teaching Unit Level)

- **(Read28)** Report the success of an SSR initiative classroom by classroom, including the reasons for success or failure in individual classrooms.

- **(Read29)** Analyze and report the success of a classroom book bag initiative. Would the teacher do this again next year? What worked? What could be revised

for next year? What percent of the children who participated in this class are ready for the next grade level in their reading? How does this percentage compare with the children in classes that did not participate in the book bag program?

- **(Read30)** Report the number (by discipline or grade level) of collaborative units where a "reading" component was present. Report the extent to which both fiction and nonfiction materials were integrated into collaborative units.

- **(Read31)** Evidence that the LMC reading program and the language arts goals were integrated in a collaborative unit.

- **(Read32)** Evidence that the library media staff intervened or made a difference in an electronic reading program. Did the library media staff "fix" abuses and turn free voluntary reading into a real ally of the skill-based program?

  For example: Suppose an individual teacher or the entire school uses point-driven computer packages designed to stimulate the amount read. The library media specialist may be asked to participate. After analysis, the library media specialist decides to concentrate on two aspects: designing rewards to turn a competition into an "everybody who reads, wins" initiative and directing her efforts toward individual students who are not doing well in the program. Every book, magazine, and Web page becomes part of the program (points are awarded whether a computerized test exists or not) and individualized reading programs are designed for students in trouble. Measure: The number of students in trouble who can participate without the confining rules of a machine. Second measure: The number of individuals at or beyond grade level in reading. Measures:

  - The number of students who report they enjoy reading. Measure: The number of students who say that their point totals are based on what they "want to read."

  - The flexibility of the faculty to work with the LMT to design an individualized reading program beyond the accepted computer application in place.

  - A comparison between classrooms on or off the reading program.

  - A comparison of classrooms where **access** to a plethora of reading materials in the classroom and from the LMC is maximized and where to be a reader is "cool" vs. classrooms where an electronic computer program is in place. In other words, do you really need an expensive computer program to get good results?

Teacher Competence in Reading (Teaching Unit Level)

- **(Read33)** Document the one-on-one teaching of teachers about the contribution of library media centers to reading. Teachers are often schooled and schooled and schooled in the latest skills-based reading program and may feel like a tennis ball being batted about. Regardless of the current "perfect way to teach reading methodology," the library media staff needs to educate every teacher that our solution – "amount counts"-- works, no matter what else is happening. Documentation might include the teaching of a professional development session; the one-by-one method of convincing one teacher, then another; or the experimentation of "amount counts" in an individual classroom. If the reading skills advocates are insistent, then the library media voice must not be timid.

Support for Willing Teachers Who Include the LMC Reading Program (Teaching Unit Level)

- **(Read34)** Document support from the administration, departments, or other organizations that help individual teachers implement the "amount counts" philosophy into their classroom and work with the library media staff to build the love of reading:

    - Time for professional development with the library media staff.

    - Budgetary support so there are always new materials students want to read.

    - Book lists, conversations, booktalks, reading ideas, reading activities, and motivational ideas from the library media staff.

    - Support for reading aloud and SSR in the classroom every day.

    - Opportunities to plan, implement, and evaluate the LMC/classroom reading partnership and the inclusion of reading as a part of teaching units.

    - Markers of progress during normal supervision and evaluation of teaching.

Support of the Language Arts Curriculum (Teaching Unit Level)

- **(Read35)** Provide evidence of support for the language arts curriculum as it is constituted in the school and as it evolves over time. The library media program can provide many services and activities including technology and information literacy into the language arts curriculum. During a planning session, create a worksheet like the one below and negotiate the specifics of how the programs can benefit from one another.

Worksheet:

List of Major Language Arts Standards and Elements	How the Library Media Program Can Respond

List of the Major Library Media Center Program Elements	How the Language Arts Program/Teachers Can Respond
Collaboration:	
Reading:	
Technology:	
Information Literacy:	

Possible Reading Measures to Collect and Report at the Organization Level

Collecting evidence at the organization level concerning the LMC reading program has been common for many years. The intent is to ask what organizational support is or is not in place that triggers an impact on reading.

For 20 years, the state of California spent less than one dollar per student per year on purchasing books for its children and teenagers. Responsibility for providing books rested at the local level, but the state did not supply enough funding to any school for "frills" such as library book purchases. Thus, the entire responsibility for supplying reading materials came upon the library media specialist to fundraise, begs, borrow, scrounge, cajole, and praise when someone responded. The result was a disaster for most schools simply because along with little funding, there were few library media specialists to do the fundraising. When state funding finally appeared in 1998, the first action taken by many librarians was to weed hundreds of thousands of books from the neglected shelves. Some communities were upset with the destruction of valuable public property, but the books that were discarded were considered unsuitable because of such things as gender bias (books that sent the message: "Boys can become doctors, girls can become nurses." and other innocuous messages of the past)

Because reading scores in California were at all-time lows, many attributed the cause to the use of whole language as the skills-based technique. Few noticed that children did not have books to read. For example, in a school where there was a high poverty rate, where few students spoke English fluently, where there were no books at home, and where the public library was across a gang territory line, the school library held very few volumes, many of them inappropriate for the students attending there. No one seemed to realize that the lack of access to reading material was to blame for the low reading scores.

In the area of providing a print-rich environment for children and teens, the idea of local control has not produced results worth emulating. While many people give lip service to libraries and talk about how wonderful books are, when the checkbooks come out (or don't), the rhetoric results in nickels and dimes. This is because schools and school districts begin with must-spend budgetary items:

- If we don't put gas in the school buses, they stop.
- If we don't pay the light bill, we cannot conduct school.
- If we don't pay teacher salaries, school must close.
- But, if we don't spend on the library, somehow it just keeps running!

In this section, a wide variety of measures are listed and discussed briefly. Together, they constitute a measure of a healthy organization. And the many Lance studies have indicated that organizational measures are indicators that provide a barometer of potential success with achievement scores.

LMC Staff and Achievement (Organization Level)

- **(Read36)** Compute the size of the LMC staff (professional, technical, and clerical). The technical and clerical staff will keep the operation functioning. The size of the professional staff will predict the impact of the LMC on achievement (see the Alaska study[4]) The Lance and other research often computes this figure in terms of the number of professionals per 100 students and the number of total staff per 100 students. Such figures will work for comparisons in all but small schools (fewer than 300 students). Check local, state, and national figures to compare your school with others.[5]

- **(Read37)** Compute the percentage of the day that the LMC staff focuses on reading. Choose a typical week and have all staff members track their day in 15-minute increments (they can record once every hour or school period). Estimate the amount of time volunteers (students, parents, community groups) spend promoting reading in a typical week. This will provide data on the total staff effort pointed at literacy – one piece of the reading puzzle.

Budgeting as it Affects the Reading Program and Achievement (Organizational Level)

- **(Read38)** Compute the budget spent to support the reading collection. This is somewhat difficult to do because curricular and recreational reading items mix with research resources. To create an estimate, you might tally expenditures on fiction, pop periodicals, popular nonfiction (such as the dinosaur collection, sports, teen poetry) – although these resources are also used in curricular areas as well. Consider whether you wish to add school, district, and state allocations that go directly to the LMC, monies spent on classroom collections, grant funds, PTA funds, or special project funds pointed at the reading collection. You might chart all these sources regularly to show the rise and fall of support for the reading collection over time. Then:

    - **C**hart how many books per year can be purchased with the available funding (compute this using the average cost of either a hardback book, a paperback book, or a combination of the two). Show that there is a direct correlation between money spent and the numbers of new titles added (this seems obvious, but sadly, it is necessary).

    - Chart the net loss or gain to the reading collection considering factors such as book loss, wear and tear, and normal weeding and pruning.

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[4] Find under "research" at http://www.davidvl.org

[5] Marilyn Miller and Marilyn Shotz do surveys of school libraries for *School Library Journal* almost annually. Check periodical indexes or their web site.

- Chart spending on the reading collection over time and compare it to the rise and fall of new titles and copies added. This chart is best done over a long enough period of time to show shifts in spending. For example, in California, one year the spending by the state was less than$1.00 per student, followed by four years of spending $28.00 per student per year, followed by one year of spending less than $3.00 per student, followed by a year of spending less than $1.00 per student. A line graph of the money spent can demonstrate to any audience the dramatic variation in support. Then superimpose on this graph another line showing the numbers of titles added to the reading collection each year, a line showing circulation data, and a line showing the rise and fall of reading scores. There will be a clear message in this line graph. It is very effective to use transparencies with the first line presented, followed by the superimposition of the second line for audience consideration, followed by the next and the next.

  For example, Indiana researchers charted state support of the reading collection at the middle school level as the state legislature alternately pumped in money and then withdrew support. They charted the impact on circulation, and it became apparent that as money and new titles were being added, circulation rose, and as money was withdrawn, circulation decreased. The connection was obvious, as was the possible effect on reading scores. What would happen in a bookstore if no new titles were available for sale for a couple of years? The same thing happens to a library when the titles don't change.

- Compare spending on textbooks and materials for the skills-based reading program with spending on library materials that support reading over time. Since the two support one another, and the library reading collection helps correct the failures of the skills-based program, what can you learn and present that makes sense?

- For some children, more spending on skills-based materials is counterproductive; an LMC collection is really their only hope to become literate. These are children who have no books at home, who cannot read the textbooks, or who struggle with English. Another group who benefits greatly from an LMC program are those who can read so well that the textbooks are not challenging, or those who fight the prescribed text but thrive on reading in their interest area. If our aim is to "leave no child behind," the conclusion is obvious that an LMC program is at least as vital as a skills-based program.

- Compare spending on supplemental materials in textbook adoptions with spending on LMC reading collections. Some textbook companies offer and promote workbooks, charts, computerized drills, etc., which have little or no value to many students. Compare usage, flexibility, usefulness over time, student interest, etc. Which investment produces the greater impact

on the amount read? (This study could be the basis for a major study or doctoral dissertation.)

- According to Loertscher,[6] it takes the purchase of one book per student per year (in schools with 500-1,000 students) to adequately fund a reading collection. And this expenditure must be as consistent year to year as is gasoline for school buses, otherwise a disruption in the literacy program will occur! Compute and chart how your school's spending for reading compares to this standard.

- According to Loertscher's experience,[7] when you begin with a collection of 10,000 books in an elementary school of 500 children and allow those children to check out all the books they want, in three years you will have exhausted the collection for almost every reader. What will you do for the next two years the students are in your school? Loertscher recommends that schools seriously dedicated to literacy (particularly schools in poverty areas or with a high number of English-challenged students) begin with a collection of 30,000 volumes. This may sound excessive and expensive, but it is actually a very inexpensive literacy program. Now the reader will immediately ask where they would store such a large collection. Here is how it can easily be handled. On the first day of school, check out 50 books per student for a rotating home library, 500 books for every classroom's rotating classroom collection, and 100 books for every teacher's personal rotating bedside table library. You will find you have too few books on your shelves.

  Since we have never seemed to be able to deliver reading material in the amounts required for literacy using print volumes, perhaps we should just reinvent the LMC collection and subscribe to 30,000 digital volumes (e-books) which would be accessible 24 hours a day, 7 days a week, 365 days a year to students with a personal computer, PDA, cell phone, or other digital device. (Just a question—is this a half-serious suggestion? How helpful would this be to the poverty and English-challenged students you expressed concern for? Wouldn't it completely eliminate them?) I pray for the day when we have made reading so irresistible and so available for every child and teen that there really is no excuse for illiteracy. Providing reading material is so inexpensive in comparison to any skills-based reading program on the market. What would happen to reading scores if a school leased 500 digital copies of *Harry Potter #6* (1100 pages predicted), downloaded them at midnight on release day, cancelled school for two days to get them read, and spent a third day discussing it? (Again,

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[6] Use my name if it will make any difference to anybody for any reason.

[7] This is the result of Loertscher's experience in his first elementary school in Elko, Nevada during the 1960's. How many elementary schools with 500 children have 10,000 volumes even today let alone 30,000?

what about the students with no electronic access? Another question: could most elementary or middle school students read 1100 pages in 2 days? Maybe I'm underestimating them.) Would I get rid of print volumes? Absolutely not! Our users would gravitate to their favorite format.

- Chart money for reading collections based on dollars per child and dollars per classroom and compares this to the cost of a typical book. Use this comparison to show net gain or loss in collection size (allow for deletion of materials for normal wear and tear, weeding, or loss. Do any significant facts appear?

- Compare budgetary support for reading collections across schools in the district and across schools in the state or nation. Can these figures be used to show that we need to "keep up with the Joneses?"

- Compare spending on reading collections and reading scores in schools similar to yours. Do high spending on library materials and high reading scores appear together? Almost all the Lance studies link large collections to high achievement.

Assessment and the Library Media Reading Program (Organizational Level)

- **(Read39)** Create a picture of assessment results in the school related to the library media reading program. Use data indicating scores at the building level as indicative of data you have already collected at the learner level and the teaching unit level.
  - Is there any consistency across teachers?
  - If there are major differences across teachers, could there be any factors affecting scores based on teacher use of LMC reading program components?
  - Are there any groups of students for whom LMC reading initiatives are producing excellent or spectacular results across classrooms?

- **(Read40)** Create a profile of teachers who successfully use LMC program components vs. those who do not. Rate teachers on the following scale: Do the teachers:
  - Have a rotating classroom collection from the LMC?
  - Have a regular SSR time?
  - Read aloud daily or regularly?
  - Participate in LMC reading initiatives?
  - Collaborate with the library media specialist to boost the amount read in topical units?

- Model reading for their students? (Do students know that their teacher is a reader?)
- Encourage budgets for the reading collection to remain consistently high?
- Allow and encourage individual students to come to the LMC frequently to check out books? (more than once a week)

Add up each teacher's score (one point for each characteristic) and rank the teachers by their LMC reading score. In a second column, add their class's reading test score or other assessment score. Is there any correlation? Compare the teachers with the 10 highest achievement scores and the teachers with the 10 lowest scores. How does their "library score" correlate with their achievement scores? It is unlikely that there will be any teacher whose class is excelling who doesn't have a high LMC score.

Access to reading materials (Organizational Level)

- **(Read41)** Document that in the school, access to reading materials children and teens want to read is easily available:

  - From the LMC.
  - From the classroom (rotating from the LMC).
  - In the home (as supplied by the LMC).
  - In the preferred language.
  - At desired reading levels.
  - Matching both curricular needs and personal interest.
  - Constantly rotating to stimulate interest (as in bookstores).
  - Available for whatever device is owned by patrons (cell phones, PDAs, wireless laptops).

  If surveyed, would students and teachers know that the above statements were true? Would they actually be participating in such access policies or would they be unfamiliar or reluctant to claim as much access as policies might indicate? It is not enough to say, "If they would ask for such access, we would provide it." If someone were to visit the school lunchroom and ask random students, would they know about the liberal lending policies and be making use of them?

- **(Read42)** Document how patrons are educated about responsibility as access is increased. How are the literacy needs of young people satisfied when their materials handling skills are less than desirable? Document participation by patrons in organizational problems created by increased circulation beyond the ability of the LMC staff to handle increased loads.

- **(Read43)** Document the fact that users can and do take unlimited amounts of reading materials from the collection – as much as each individual can responsibly handle.

- **Read44)** Document and report efforts to increase digital access to reading materials over networks 24 hours per day for all students, not just the affluent.

- **(Read45)** Document that the LMC has pleasant places to read (inviting facilities, ambience, posters, banners, comfortable chairs, bathtubs, reading lofts). Are there other places in the school (especially classrooms), where the LMC staff has promoted the addition of reading nooks or other comfortable spaces?

- **(Read46)** Is wireless access available in these spaces to download and enjoy digital reading materials?

Documenting access at the organizational level combines not only statements of policy but evidence collected from the teaching unit level and the learner level. We collect the evidence and reorganize routines until every teacher, every student, and every parent knows that the LMC reading program is at the center of the school's literacy program. It's what folks talk about when they consider the LMC the "heart of the school."

Encouragement and Motivation to Become Avid Readers (Organizational Level)

- **(Read47)** Document participation and leadership in various events, projects, initiatives (local, state, and national) to increase interest in reading. It is fairly easy to describe, count hours, record resources spent, or otherwise document school-wide reading initiatives such as state children's or teen book awards. It is much more difficult to document the impact of those efforts on the amount students read, their attitudes toward reading, and especially their achievement levels. Do you load tests for state award candidates onto electronic reading programs and for three days have only those tests available and allow those who pass the tests to vote? (Vote on what?) Then do you compute the percentage of participants? Do you survey students one week after a book fair to see how many have read and enjoyed their purchases? Do you survey how many read the mayor's reading challenge? Do you load brief questionnaires onto the LMC Web site and encourage everyone to respond?

  Without some sort of feedback from students, it is impossible to know that the time invested in reading initiatives produces results – or at least leads to more reading, which in turn contributes to achievement. We may find that our favorite initiative, although fun, was really not worth the time and effort when translated into the amount students actually read. Simple questionnaires or

even the raising of hands in a few participating classrooms result in some useful feedback.

- **(Read48)** Document efforts to build a life-long reading habit. What efforts are faculty and staff making to make reading "cool" or part of the school culture – something that is an accepted part of everyday life? Is building this attitude on the literacy team's agenda? Does the school administration model being readers and pass this attitude on to faculty, staff, and students? Do readers have stature in the school culture? Why? How?

- **(Read49)** Document efforts to conduct regular conversations about reading: Harry Potter events, brown-bag lunch clubs, small group discussions of various titles read for a topical study, movie-book tie-in discussions, TV tie-in discussions, current events book discussions, favorite genre discussion clubs, discussion blogs about books on the LMC Web site – any venues for conversation. How many are there? With what frequency do they take place? What percent of students are engaged?

- **(Read50)** Document efforts to spread the word about good books to read:

    - Reading lists
    - Web-based reading lists
    - Student reviews on the LMC Web site
    - Students' reading lists of their favorites posted on the LMC Web site.
    - Students as critics of books, movies, and movie-book tie-ins posted on the LMC Web site
    - The publication of student work (essays, poetry, short stories, etc.) on the LMC Web site
    - Web links to the best on the Internet

    Using counters on this section of the Web site to monitor how often these sites are read will provide data about student interaction in "the conversation."

- **(Read51)** Calculate other simple organizational measures:

    - The number and percent of learners participating successfully in school-wide reading initiatives.
    - The number and percent of readers who participate in SSR time.
    - The number and percent of readers at or above grade level on reading scores.
    - The annual budget for reading materials for the LMC reading program.

- The number and percent of teachers reading aloud every day to learners.

With emphasis on collaborative planning, enhancing technology, and information literacy, library media specialists have limited time each day to concentrate on reading. The LMC staff must take a leadership role and organize helpers rather than take on the whole responsibility. Document that leadership team-- what it does, how it helps, what impact it has, and who is involved.

Finding an Evidence Thread in the LMC Reading Program to Measure and Report

This chapter has provided a list of factors dealing with reading that would be candidates for measurement. This list was followed by a variety of possible measures that might be done at the learner level, the teaching unit level, and the organization level.

The task of the library media specialist is to decide which aspects of the current reading program could be measured, what program goals should be instituted and measured, and what combination of measures can be integrated into daily practice. The following evidence plan worksheet might help in making both measurement decisions and also might shape changes in the library media program.

The worksheet is followed by several sample worksheets where a library media specialist has decided to measure several aspects of the LMC reading program.

Reading Evidence Plan Template

Detail in the appropriate box possible measures to be used in your reading program to measure its impact on achievement.

Goal:

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*			
Indirect Measures**			

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

Reading Evidence Plan Example #1

Goal: To increase exponentially every student's access to books they want to read in the LMC, the classroom, and the home.

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*	• (Read1) Through questionnaire or interview, the student should agree that access is at is maximum. • (Read1, 4) Evidence that students actually take advantage of maximum access. • (Read12, 43) The student's parents, teacher, and the library media specialist, along with the student, agrees that responsible behavior is equal to the maximum access allowed.	• Students would agree that when they need to read for schoolwork topics, there is almost always a wide variety of material to choose from. • (Read6) Assessment of an individual student's reading log is required as part of a unit of instruction to see that access was maximized. • (Read35) The behavior of a teacher toward access issues pushed by the LMC program is positive.	• (Read35, 40) The behavior of almost all the faculty members toward access issues pushed by the LMC program is positive. • There is documentary support by administrators for the access issues of the LMC reading program.
Indirect Measures**	• (Read4) Policies relating to access by individuals are in place to allow maximum access. • (Read23) Abuses in the use of electronic reading programs (or any other initiative) are solved for the individual reader.	• (Read2) A classroom audit has resulted in positive changes in access for students in a particular classroom. • (Read2) A particular classroom has a rotating classroom collection and it is working.	• (Read4) There is an ample budget for the reading collection to support the needs of expanded access. • (Read4) Access policies for the entire school are in place and make provision for both groups and individuals. • (Read3) Digital access to reading materials is ubiquitous. • The physical environment of the LMC is conducive to access.

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

Reading Evidence Plan Example #2

Goal: To provide evidence that the new LMC reading initiative has actually increased the amount students read. The initiative could include access, a motivational program (see Read8), or an electronic reading program. Plan:

1. Take a measure before a major initiative is begun to serve as the basis for comparison.
2. Implement the initiative, measuring during and after it is completed.
3. Judge the impact of the initiative.

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*	• (Read5, 7) Build a questionnaire to ask students how much they read and whether they like to read before, during, and after the initiative. • (Read6) Measure the amount of reading on reading logs connected to a topical unit before, during, and after the initiative. • (Read12) Measure reading competence with checktests before, during, and after the initiative. • Record the number of points earned on electronic reading programs (influenced by the LMC). • (Read8) Monitor standardized reading scores for an individual student before and after the reading initiative. (This is assuming that the initiative was planned as a long-term program.)	• (Read8, 9) Look at any of the measures done for individuals at the classroom level before, during, and after the initiative.. • (Read5) Document the amount read by a class for a specific initiative via logs, special counts, reader logs, circulation of physical items, and hits on certain websites.	• (Read8, 9) Look at any of the measures done for individuals at the school level before, during, and after the initiative.
Indirect Measures**	• Defend counting systems set up to measure the amount read by each student during a special initiative.	• Defend counting systems set up to measure the amount read by each classroom during a special initiative.	• Defend counting systems set up to measure the amount read during a special initiative for the school as a whole. • Document efforts to spread the word about good books to read during whole school initiatives. • (Read5) Document the number and percent of learners participating successfully in the initiative.

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, and make change in direct measures over time. Indirect measures point to an action as the probable stimulus of change.

5

The Contribution of the LMC Program to

INFORMATION LITERACY

and Evidence-Based Practice

For the past 15 years, the library media profession has been undergoing radical change. In times past, information available to children and teens was quite restricted in the sense that one had to visit a library to explore the world of information. Most youth had access to relatively small school and public libraries. Students were lucky, after having copied 20 citations from the *Reader's Guide,* to be able to retrieve one or two articles for a report. We now remember those days as an information-poor environment compared with the information-rich environment experienced by most young people at present. Consider this:

Today's adults learned card catalog skills.	Today's youth are faced with numerous online indexes with differing interfaces and search engines. Many have never seen a card catalog.
Today's adults scratched for anything they could find linked to an assigned topic.	Today's youth drown in data they can access almost instantly by pushing a few keys on the computer.
Today's adults learned a few searching skills.	Today's youth must not only learn new techniques of finding and sorting but also a vast range of information handling skills.

The trouble is that while adults are aware of the changes in the information world, many teaching activities involving information remain static. "Write a three-page paper on … using three sources of information – and don't use an encyclopedia." Or, worse, "Choose a topic you are interested in and write a ten-page paper." Such assignments invite wholesale copying. It's the "cut and clip" generation as someone has noted. Broad assignments cause many to download articles, research papers, or documents from the Internet and turn them in as if something had been learned.

Equally devastating for young people is the notion that the Internet contains everything they want or need and Google is the way to find it. With this debilitating notion, a new generation of researchers bypasses libraries totally, or they do not make any distinction about the sources of information they pull up from the computer.

In an information-poor environment characterized by a lecturing teacher plus a textbook, students need many skills: attentive listening, recording of major ideas as they take notes, the ability to digest salient points from text and lecture, and the ability to repeat back either in whole or part of what has been "covered." Usually, a healthy dose of "drill and kill" is accompanied by a "review" in which the teacher prepares the class to unload the content of their sponge brains onto the exam. After the tortuous test, the students squeeze their sponges (brains) to prepare their short-term memories for the next round of content. In some circles, this is known as "direct teaching." Professor Binns of *Harry Potter* is a prime example. Harry notes that Professor Binns, who died one day, but went right on lecturing, could bore any class in ten minutes and in five minutes if the weather was warm. Professor Snape, on the other hand, uses the "hands on" technique after his lectures, requiring the students to practice what is described. Recipes for a potion magically appear on the board and each student tries to follow the recipe very closely. Neither Ron or Harry get it right without much practice, but Hermione always gets it right on the first or second try. It is not difficult to predict who will pass O.W.L.S. and who may just barely squeak by (both Harry and Ron have got to pass, since there's going to be another book). To be sure, there is a library at Hogwarts, but the librarian is the usual "caretaker," and is certainly not in any central educational role. Yet, when the chips are down and real learning (the solution to problems) is at stake, our famous trio is as likely to find key information in the library as anywhere else (not with the help of the librarian, we might add).

Education for content is as old as education itself, and certainly holds the most prominent place in education world-wide. Libraries in a content teaching world hold a peripheral position in spite of the fact that content and collection is one of the main library roles. Library content seems to be valued only for short enrichment safaris. And the more pressure there is to succeed on the O.W.L.S. test, the less safari time will be available. This is because the central content has been pre-determined by state standards, the textbook, and the lecture. We presume that the teacher will cover that content in the classroom. Set a student free in a print library or on the Internet and they are sure to stray from the path!

Realizing that the world of information is changing everything, school library media specialists have now been on an *Information Power* agenda for fifteen years. Adopting and building on the concept of process education, the profession has adopted the philosophy that in an information-rich world, learning how to learn is as important as learning content. By integrating process learning with a rich body of information, students will be much more prepared for the real world. School library media specialists in Canada, the United States, New Zealand, and Australia are leading this effort, mounting a campaign designed to bring the LMC into a central position in education. They seek not to provide young people with fish (content learning), but fishing poles (process learning or what we call information literacy).

In an information-rich world, learners create fascinating questions, search for quality information in a muddy lake of data; consume, think about, manipulate, and coalesce what they find; create a product or make decisions; communicate the ideas; and reflect

about what they are doing at every step of the way. But we also try to add a bit of "Columbus" to the mix – encouraging learners not just to parrot back what everyone else thinks about an issue but to begin thinking outside the box.

In the next section, value-added components of the LMC information literacy program are covered. At the learner level, *Information Power*[1] published by AASL has information literacy standards in a giant matrix of nine standards with multiple indicators of success. The author considered reproducing those standards, but when comparing them with common information literacy models most often used in schools, found a number of ideas missing or inferred. Thus, for our chart at the learner level, the author rearranged the standards and indicators in the order of an information literacy model with AASL standards in Roman type and additional aspects in Italics. This order follows the major review of the research on information literacy done by Loertscher and Woolls[2] and the Koeschlin and Zwaan[3] guide for teaching these skills.

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[1] AASL and AECT. *Information Power*. ALA, 1998.

[2] Loertscher, David V. and Blanche Woolls. *Information Literacy: A Review of the Research*. 2nd ed. Hi Willow, 2002.

[3] Koechlin, Carol and Sandi Zwaan. *Build Your Own Information Literate School*. Hi Willow, 2003.

Value-Added Components of the LMC Information Literacy Program: Candidates for Measurement

Learner Level (Items in Roman come from AASL information literacy standards; Items in Italics have been added; The entire list is arranged in order of an information literacy model)

- ❑ Questioning
  - o Recognizes the need for information.
  - o Formulates questions based on information needs.
  - o *Understands that great questions have often been the basis for advancement in many fields.*
  - o *Understands the difference between a good and a poor question.*
  - o *Predicts possible answers to the question formulated.*
  - o *Revises questions as research proceeds.*
  - o *Understands that answers often lead to new questions.*

- ❑ Finding and Sorting
  - o Prelude
    - ▪ Recognizes that accurate and comprehensive information is the basis for intelligent decisionmaking.
  - o Finding and Searching
    - ▪ Identifies a variety of potential sources of information.
    - ▪ Develops and uses successful strategies for locating information.
    - ▪ Accesses information efficiently and effectively.
    - ▪ Seeks information from diverse sources, contexts, disciplines, and cultures.
  - o Sorting
    - ▪ Evaluates information critically and competently.
    - ▪ Determines accuracy, relevance, and comprehensiveness.
    - ▪ Selects information appropriate to the problem or question at hand.
    - ▪ Seeks information related to various dimensions of personal well being, such as career interests, community involvement, health matters, and recreational pursuits.
    - ▪ Pursues information related to personal interests.
    - ▪ Identifies inaccurate and misleading information.

- ❑ Consumes and Absorbs (reading, viewing, and listening)
  - o Appreciates literature and other creative expressions of information.
  - o Is a competent and self-motivated reader.
  - o *Understands skimming and scanning through text structure.*
  - o *Can pick out the main ideas from any form of media (text, video, lecture, digital) while reading, viewing, or listening.*
  - o *Can read and study carefully to understand challenging text and ideas.*
  - o *Can take notes of important ideas while reading, viewing, or listening.*

- ❑ Thinks and Creates (analysis)
  - o Distinguishes among fact, point of view, and opinion.
  - o Identifies inaccurate and misleading information.
  - o Applies information in critical thinking and problem solving.
  - o Organizes information for practical application (*charts, graphs, concept mapping, timelines)*
  - o *Can sort, compare, classify, and identify patterns and trends.*
  - o *Recognizes cause and effect or trends.*
  - o Derives meaning from information presented creatively in a variety of formats.
  - o Respects others' ideas and backgrounds and acknowledges their contribution.
  - o Thinks outside the box.

- ❑ Summarizes and Concludes (synthesis and decionmaking)
    - o Integrates new information into one's own knowledge.
    - o *Experiences the "Ah Ha!" of learning when pieces of the puzzle come together.*
    - o *Forms a point of view, opinion, conclusion, or supportable argument based on solid evidence.*
    - o *Makes decisions or takes action based on the best information available.*
- ❑ Communicates
    - o Uses information accurately and creatively.
    - o Designs, develops and evaluates information products and solutions related to personal interests.
    - o Develops creative products in a variety of formats.
    - o Produces and communicates information and ideas in appropriate formats.
    - o Shares knowledge with others.
    - o Acknowledges others' contributions.
    - o Respects intellectual property rights.
- ❑ Reflects on Process and Product
    - o Strives for excellence in information seeking and knowledge generation.
    - o Assesses the quality of the process and products of personal information seeking.
    - o Devises strategies for revising, improving, and updating self-generated knowledge.
- ❑ Throughout:
    - o Group work
    - o Participates effectively in groups to pursue and generate information.
    - o Collaborates with others, both in person and through technologies, to identify information problems and to seek their solutions.
    - o Collaborates with others, both in person and through technologies, to design, develop, and evaluate information products and solutions.
    - o Attitudes and behaviors
    - o Recognizes the importance of information to a democratic society.
    - o Respects the principle of equitable access to information.
    - o Practices ethical behavior in regard to information and information technology.
    - o Respects the principles of intellectual freedom.
    - o Uses information technology responsibly.
    - o *Can follow the guidelines of an information literacy model to conduct a research project.*
    - o *Can develop control over self-learning by creating a personal information literacy model.*

Teaching Unit Level

- ❑ Discovering information literacy skills within content objectives/state standards
- ❑ Adding to existing unit goals appropriate information literacy skills.
- ❑ Identification of or adopting an information literacy model as the scaffold of the teaching unit.
- ❑ Building rubrics for the unit that include and reward mastery of information literacy skills taught.
- ❑ Teaching a teacher to include process learning even when we are not collaborating.

Organization Level

- ❑ Teaching teachers through professional development the principles of information literacy and how to incorporate them into teaching.
- ❑ Adopting a school-wide or discipline-wide information literacy model.
- ❑ Integrating information literacy models/programs into state standards.
- ❑ Setting policies for the inclusion of information literacy in the curriculum and the methods by which it will be integrated.
- ❑ Organizing the LMC program in such a way that there is time to work with a wide cross section of teachers on information literacy.

The Library Media Center Information Literacy Program
Ripple-Effect Measures[4]

Goals

LMC Agenda	Curriculum Agenda
• Integrated teaching of info. lit. • Each learner information literate. • Process learning a part of the school's curriculum.	• State standards met. • Achievement test scores high. • Learners at or above grade level. • All the above inclusive of process learning.

Pebbles to Measure

1. Build a joint rubric (teacher and LMS) for an LMC-based unit. Learners realize that information literacy is an integral part of LMC learning experiences. (InfoLit1)
2. Have learners complete research logs for critical points or extra credit. (InfoLit2)
3. Learners should begin the process of internalizing their own information literacy model. (InfoLit3)
4. Assess information literacy happens as it is taught. (InfoLit4)

Justification:

Content learning without process learning (information learning) gives learners only fish – not fishing poles. Learning <u>how to learn</u> is a life-long gift. The Lance studies all report the connection between the teaching of information literacy and achievement.

Demonstrate through research and practice that:

- ❑ Information literacy is integrated into the curriculum.
- ❑ Learners are becoming more sophisticated over time in their information literacy skills.
- ❑ Information literacy skills are part of an entire assessment of learning package.

Report:

- ❑ Success with a single teacher and/or learner; and another and another…
- ❑ Steady improvement over time.
- ❑ Improvement related to an initiative.
- ❑ That success is already high and is remaining constant.
- ❑ Improvements related to organizational policy shifts.

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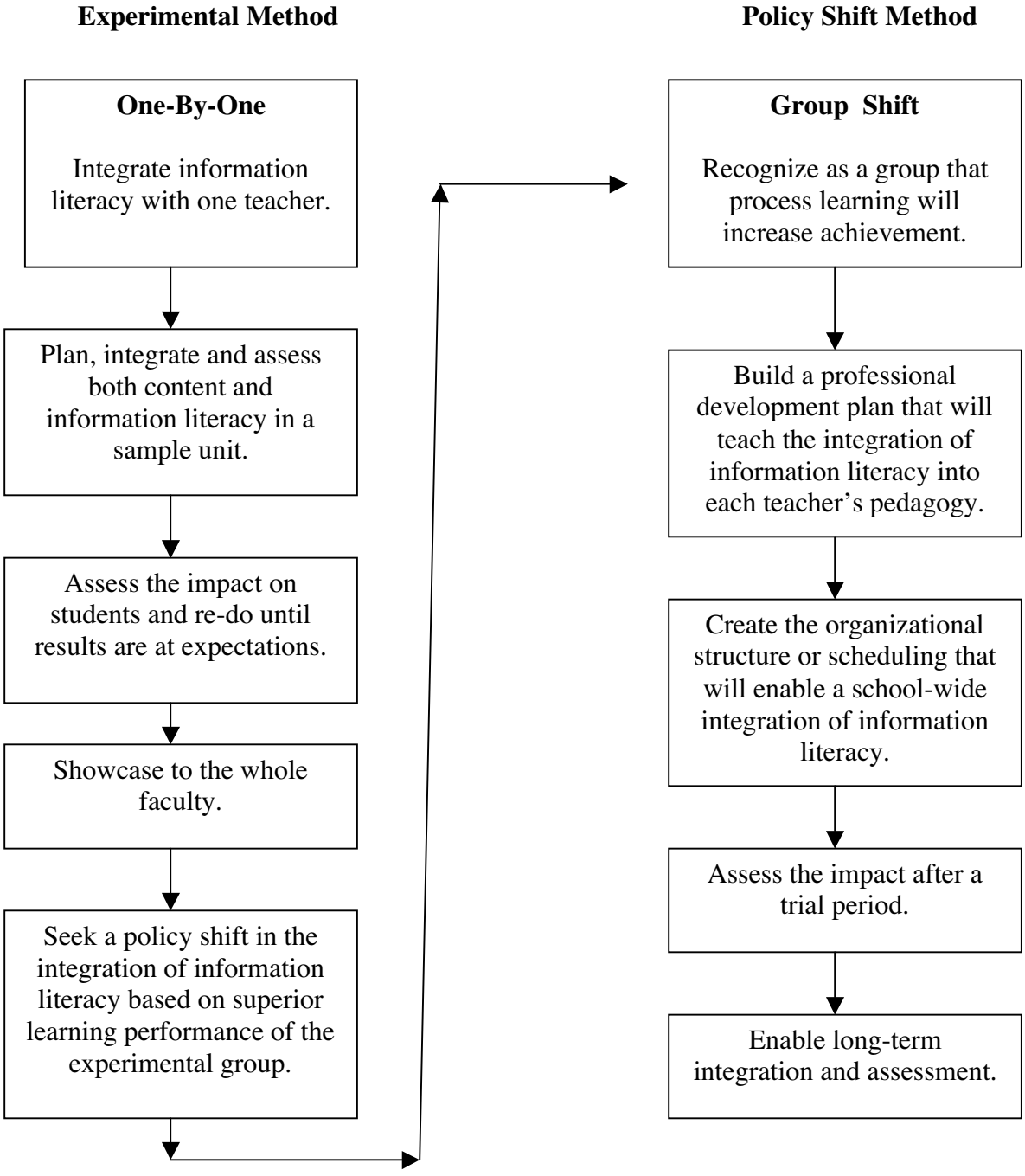
[4] Ripple-effect measures refer to significant measures that are most likely to produce results in achievement and indicate maximum teacher collaboration and organizational effectiveness. Because you have these data, a ripple effect occurs, like throwing a pebble in a pool, triggering many other organizational practices and policies.

Two Ways to Succeed in Evidence-Based Practice: Information Literacy



(InfoLit1) Build a Joint Teacher/LMS Rubric for an LMC-Based Unit (Teaching Unit Level)

An amazing pebble to throw in the pool for a ripple effect is the joint teacher / library media specialist rubric constructed as a part of a library media center-based unit of instruction. Appendix A contains an account of this technique as used in a wide variety of library media centers across the United States.

The technique is rather simple, but may be a challenge to implement at the beginning. Here is how: During the planning stage of the unit, build with the teacher a rubric for students that will:

- Cover the content or skills required by the state standards governing the topic.
- Measure the information literacy skills the students need to demonstrate for this particular unit.
- Measure the amount read by the students and any technology skills that both the teacher and the library media specialist expect. (The more a learner reads about a topic on beyond the lecture and the textbook, the smarter they will be, and, the technology should assist learners in accomplishing their tasks).

What you are really asking the teacher to do is to consider all work done in the classroom and in the library media center to be contributing factors to the success of the learning experience. For some teachers, this may be a major shift in teaching strategy, but really a necessary one. If a student's total grade comes from what happens in the classroom and what happens in the LMC is, in fact, irrelevant, then the teacher would be better off staying in the classroom and saving the time and effort of the library media specialist.

Users of this technique throughout the country report amazing results. Once a teacher accepts the fact that LMC learning is co-equal to classroom learning and allows rubric items to measure both efforts, a major ripple effect happens:

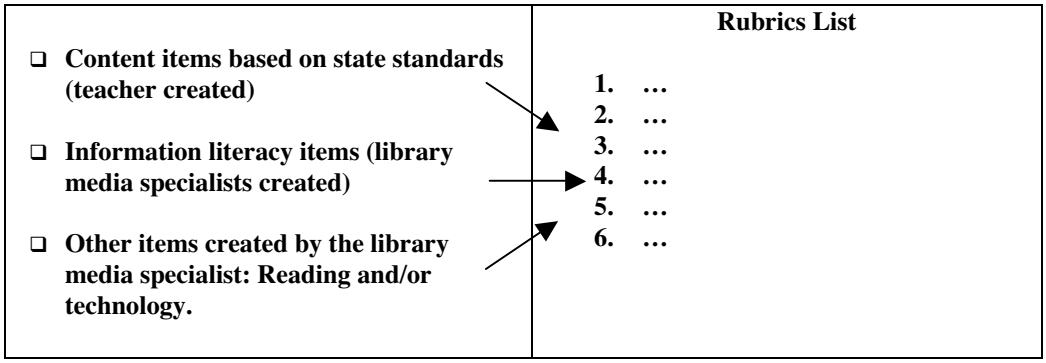
- Both the teacher and the library media specialist agendas will be covered. (content and process learning)
- Learners will immediately understand that classroom and LMC learning are connected. (They will behave differently).
- The two professionals can help each other achieve each other's goals – thus building a true partnership in teaching.

The tough thing at first is to get the teacher to accept your items on a project's rubric. If this is not an acceptable practice in your school, a model or demonstration project is in order that could be tested first and then modeled to the faculty.

Let us say that a project is usually worth 100 points. If the library media specialist could capture just 10 of the 100 points or have 10 extra credit points that could be awarded, an amazing change would occur. The LMC rubric items would count for the difference between an A and a B or at least an A- and an A; a B and a B+. Students who did well on our process items could raise their grades! Ten points; it's all we want and need to effectively measure our impact and change teaching and learning.

The Joint Rubric Technique

During the unit planning process, the teacher/LMS team first identifies what state standards are to be achieved. Then together, they create a rubric that covers the teacher's concerns and adds the library media specialist's concerns for information literacy, reading and technology as illustrated below:



For students, the team may wish to create a self-assessment rubric to be completed by students or learning groups. This rubric can be the same as the above rubric or adapted for self-rating. As an example, suppose the library media specialist wanted to teach and assess **analysis** as part of a history timeline project. The following two rubric items might be on the joint list:

3	Historical events our group gathered were checked and rechecked for placement on our timeline.
2	We did some checking of the facts on our timeline, but ran out of time.
1	We did not have time to check any of our facts on our timeline.

3	During the checking of our historical facts, we found that one/several sites had bad information so we eliminated all information from that source on our timeline.
2	We noticed that some Internet sites had conflicting information from other sites. We did not have time to check which were right so just guessed at which facts to include on our timeline.
1	We used information for our timeline from any source we accessed on the Web.

For scoring, the library media specialist might score the information literacy items and the teacher the teacher-created items. This might happen several times until the teacher understood how to rate all the items at which time the library media specialist would pass off the assessment responsibility to work on another project with the same teacher.

This technique produces **direct evidence** of the impact of information literacy instruction upon student learning at the **learner level**. It is an effective and reportable piece of evidence. Furthermore, as you know how individuals perform based on your teaching, you will discover the most effective techniques of teaching and integrating information literacy into instruction. It is a vital component of evidence-based practice.

(InfoLit2) Research Logs: Writing and Learning About Research and About Me (Learner Level)

In the Short Term:

How can we get good at anything in our lives without reflective practice? We can't. Sports skills, piano playing, and research skills are all in the category that requires reflective practice to see genuine improvement. With new emphasis on writing in the national curriculum, it strikes us that writing about what we are researching will not only help us reflect, but with guidance, will help us get better.

In case you have not noticed, students spin their wheels during the research process so much during the time they think they have to devote to research, that they often grasp at straws when deadlines are looming. The goal of reflective practice would be to build an individual's efficiency (one of the definitions of information literacy).

Research logs provide a way for both the learner, the teacher, and the library media specialist to peer into the world of research in a unique way so that coaching, guiding, and teaching all zero in on individual needs.

Have learners keep a log of their research with the rubric for the research project printed as a thumbnail on the log. Have the log accompany the final project and then score the log for the appropriate number of points to add to the student's total. For a teacher who has never experienced this type of logging, the library media specialist would need to score the log and have discussions with the teacher until the teacher could score the logs and the library media specialist move to other projects with that teacher.

In the Long Term:

Collect research logs after projects are complete and file them under a teacher's name. When students have completed two or three project logs, pass them out toward the end of the school year. Students should arrange them in chronological order from left to right on their desk in front of them. Have students write a reflection:

> Am I making progress as an organized investigator and researcher over time?

Have students attach their final reflection to the logs (still in order chronologically) and pass them in. Use these reflections to look not only to look at patterns of individual student success and failure but across classes and finally the school. This reflection could be done orally in an interview or as a reflection session with an individual or with a class. During a report to faculty, administrators, or boards, show what percentage of learners claim to be making progress as organized investigators vs. your own assessment of their progress. What type of individual seems to be making the most progress? The least?

This measure is **direct evidence** at the **learner level**, the **teaching unit level** and the **organization level** and is a powerful predictor of the impact of information literacy on learning.

Logging and Assessing the Investigative Experience: A Sample Form Learner Level

During a major research project, have learners track their progress and evaluate themselves on the rubric created for the assignment. Create a form for your own learners.

My Research Log

My name: _____ Assignment title: _____
(Make a list/log of what you did first, next, next, etc. Include comments about problems you had.)

Self-Assessment Rubric (Am I an organized investigator? And, am I making improvement?) ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ **_____My Score**	**Comments**	**Teacher/LMS Rubric** Your work will be judged on the following rubric criteria: ▪ ▪ ▪ ▪ ▪ ▪ ▪ **_____ Your Score**

(InfoLit3) The Clincher: Life-Long Learner (Learner Level)

It's in the literature; it's in our vocabulary: we can help learners become life-long learners if only we could teach them information literacy. Are you as a reader a life-long learner. When did you come into command of your own learning? What motivated you to become a life-long learner? And, if you bumped into a life long learner, how would you describe that person?

Cathy Marriott in the video "We are Information Literate!"[5] interviews kindergartners about their "Pick a Classroom Pet" project and then shows the results to her school board. Wow! Five years later, she re-interviews these same children about their progress in the research process. Their confidence as researchers who have done projects every year in the LMC is nothing short of spectacular. Such documentation is extremely persuasive, simply because it demonstrates what information literacy really is and what confident learners know and act like. After viewing the Marriott video, how could you document similar results?

If learners never think about their progress as an information literate learner, they may develop research skills in their lives, but won't be able to intelligently discuss them. Carol Kuhlthau did here dissertation study many years ago with a group of high school researchers reflecting on the research process and their progress as researchers. Each ten years, she hunts these kids down for a reflective talk session now that they are in their chosen careers.

How would we develop such reflective, life-long learners. First, stop talking about it and get started. Then we can develop techniques that work. Here is one suggestion:

Have students draw their own information literacy model. The ultimate information literate student or adult is one who has taken command of their own learning within their own learning style. Such ownership requires the learner to advance past the scaffolding of a popular information literacy model used in a school and to personalize that model into something that guides their own life-long learning. Students must realize that information literacy is a fishing pole for life and that pole, beginning to form as a child or teen will grow, develop, and hopefully become more sophisticated as time passes. To get students to do this, have them log a research project as previously illustrated but at the conclusion, ask them to transform their words about the research process into a picture. Give them a few examples, encourage them to be creative, and they are likely to surprise you with their mental pictures of how they learn best. This exercise is known as metacognition and is one of the highest and most sophisticated learning we do, and it is also a very satisfying process. For reports to administrators, faculty, or boards, show examples of information literacy models students draw ranging from simple to complex.

Such a technique is **direct evidence** and can be reported at the **learner level**, the **teaching unit level** (What percent of the class can draw their own information literacy model?) and at the **organization level** (Are we making progress with all the learners in our sphere?).

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[5] Marriott, Cathy. *We Are Information Literate! The Video.* Salt Lake City UT: Hi Willow Research & Publishing, 2003. Available at http://lmcsource.com

Logging and Assessing the Investigative Experience: A Sample Form
Learner Level

During a major research project, have learners track their progress and sketch the information literacy model they created to accomplish their research. Create a form for your own learners.

My Research Log

My name: _____ Assignment title: _____
(Make a list/log of what you did first, next, next, etc. Include comments about problems you had.)

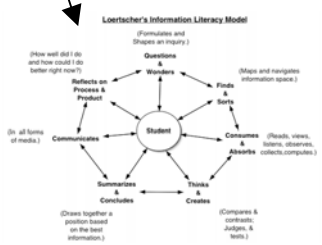
Self-Assessment Rubric
(Am I an organized investigator? And, Am I making improvement?)

-
-
-
-
-
-

___ My Score

A Drawing of the Information Literacy Model I Used:

The class used this model:



(InfoLit4) The Measurement of Individual Information Literacy Skills (Learner Level)

For years, the professional literature has taken the stance that Information literacy should be integrated into the curriculum rather than being taught as a course of instruction. Such an approach requires that during collaborative planning, the library media specialist analyzes the appropriate state standards and the teacher's objectives to identify the information skills needed by the learner to accomplish the task. The appropriate information skills would then be taught "just in time" for the students not only to learn but to practice them. Assessment of the particular skill is measured as a part of the unit as a whole.

In an excellent book titled: *Create an Information Literate School*,[6] Koechlin and Zwaan give us a feel for integration of information literacy as they recommend assessment of individual information literacy skills. Examples:

- **Synthesize**. "We need to ask students to articulate how the graphic organizing tool helped them put their thoughts and ideas together. They should be able to describe how the spaces, prompts, arrows and flow of a graphic organizer helps them to build personal understanding and creative thought."
- **Making Connections**. "As you debrief, students should begin to discover not only the contributions of individual artists but the contributions made collectively, as a group, by these artists."
- **Classification.** "Learners must create/use an effective organizational tool that demonstrates the system they have applied for classification. Groups should be able to explain how they sorted and tested ideas to develop their system of organizing."
- **Compare**. "In primary grades, students may begin with very basic comparisons where they look at two simple things and make general comparisons, e.g., a crayon and a marker."
- **Skim, Scan, Consider**. "Observe students as they work. Conference with each team during their searches and assess their search plan and their methods of analyzing the sites they are reviewing. Have teams review each other's sites."

On the following pages, each step of a generic information literacy model has been listed with numerous suggestions for assessing whether a particular skill has been learned and applied correctly. Individual skills are best assessed at the time of use and then followed up as further opportunities to use those skills arise. The measures here constitute **direct evidence** that can be reported at the **learner level**, combined during a research project for a view from the **teaching unit level**, and by combining data across experiences begins to form a picture of progress at the **organization level.**

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[6] Koechlin, Carol and Sandi Zwaan. *Build Your Own Information Literate School*. Salt Lake City UT: Hi Willow Research & Publishing, 2003. Available at http://www.lmcsource.com

Questions and Wonders

Steps in Information Literacy	Ideas for Assessment
○ Recognizes the need for information. ○ Formulates questions based on information needs. ○ *Understands that great questions have often been the basis for advancement in many fields.* ○ *Understands the difference between a good and a poor question.* ○ *Predicts possible answers to the question formulated.* ○ *Revises questions as research proceeds.* ○ *Understands that answers often lead to new questions.*	○ Since children come to school naturally curious, we can recognize that curiosity as it arises and reward it. ○ Reward students who pursue sensible questions. ○ After teaching the difference between good and poor questions, have students develop questions for your scrutiny. ○ Teach the process of developing sensible questions and reward learners who go through the revision process until a "possible" query has been created. ○ Give rubric points for poor to good questions. ○ On personal research reflections, look for individuals who struggle with their questions and revise them in favor of better questions.

Finds and Sorts

Steps in Information Literacy	Ideas for Assessment
○ Prelude ▪ Recognizes that accurate and comprehensive information is the basis for intelligent decisionmaking. ○ Finding and Searching ▪ Identifies a variety of potential sources of information. ▪ Develops and uses successful strategies for locating information. ▪ Accesses information efficiently and effectively. ▪ Seeks information from diverse sources, contexts, disciplines, and cultures. ○ Sorting ▪ Evaluates information critically and competently. ▪ Determines accuracy, relevance, and comprehensiveness. ▪ Selects information appropriate to the problem or question at hand. ▪ Seeks information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational pursuits. ▪ Pursues information related to personal interests. ▪ Identifies inaccurate and misleading information.	○ Finding information is the most often taught and tested information skill. Many check tests use a scavenger hunt approach varying the topic of each question or mini-search. A better solution is to test the topic being taught in the classroom – limiting teaching and assessment to the content at hand. The check test will not only assess but will be linked to content. For example if children are researching animals, then all info lit. tests should be using that topic. Concentrating all information literacy instruction/assessment on the topic at hand will have carryover in building background knowledge and vocabulary. ○ As individuals become more sophisticated in finding skills, they should demonstrate their abilities as the topic switches from one discipline to another and becomes more complex across databases, catalogs, indexes, and the Internet. ○ Sorting information is not so often tested but has taken on immense importance. Using a pre-selected range of information sources, test an individual's ability to recognize any of the qualitative factors that are essential in the topic at hand. By "stacking the deck," you can control for level of sophistication. For example, students might have to arrange six pre-selected articles across an opinion spectrum. Again, these articles should reflect the topic at hand since the test itself will contribute to content knowledge.

❑

Consumes and Absorbs (reading, viewing, and listening)

Steps in Information Literacy	Ideas for Assessment
○ Appreciates literature and other creative expressions of information. ○ Is a competent and self-motivated reader. ○ *Understands skimming and scanning through text structure.* ○ *Can pick out the main ideas from any form of media (text, video, lecture, digital) while reading, viewing, or listening.* ○ *Can read and study carefully to understand challenging text and ideas.* ○ *Can take notes of important ideas while reading, viewing, or listening.*	○ Use the reading log described on page ___ to assess how much and at what level the student is reading beyond the textbook. Reward reading of all types connected to the topic at hand since it will contribute to vocabulary and background knowledge. For example, on a history unit, reward historical fiction, non-fiction, videos seen, dramas connected to the period, reading original resources, looking at picture books about the period, reading accounts from differing cultural perspectives, the reading of original sources or biographies – the list seems endless. ○ There are many helps in the study skills literature for assessing skimming and scanning techniques and reading for the main idea. One easy way to see if student are picking up the important ideas is to have them use the text structure of a pre-selected article on the topic at hand to create an outline, a graphic organizer, or a marked-up version of the article with the main points highlighted. Individuals might make more progress if they compare their own work with that of others in a group and having them defend/adjust their work.

Thinks and Creates (Analysis)

Steps in Information Literacy	Ideas for Assessment
○ Distinguishes among fact, point of view, and opinion. ○ Identifies inaccurate and misleading information. ○ Applies information in critical thinking and problem solving. ○ Organizes information for practical application (*charts, graphs, concept mapping, timelines)* ○ *Can sort, compare, classify, and identify patterns and trends.* ○ *Recognizes cause and effect or trends.* ○ Derives meaning from information presented creatively in a variety of formats. ○ Respects others' ideas and backgrounds and acknowledges their contribution. ○ Thinks outside the box.	○ Use graphic organizer software not only for students to transform or summarize what they read, but to test what they read. ○ Test the ability of students to arrange data you supply (carefully selected) on the topic under study to create charts, graphs, timelines, or any other data analysis technique. By pre-selecting data, individuals can compare their work to that of others. ○ Reward creativity in analysis (unique ways to visualize data using the tools at hand). ○ Reward analysis when individuals spend the time to learn a new analytic tool and do it well (for example, the student learns a new graphing package and produces some clever new insight into data). ○ Reward students who can use the same data to chart varying interpretations depending on point of view, culture, or perspective. For example, students who can chart perspective of Arabs and Israelis over an issue to demonstrate perspective, would be rewarded.

Summarizes and Concludes (Synthesis and decionmaking)

Steps in Information Literacy	Ideas for Assessment
○ Integrates new information into one's own knowledge. ○ *Experiences the "Ah Ha!" of learning when pieces of the puzzle come together.* ○ *Forms a point of view, opinion, conclusion, or supportable argument based on solid evidence.* ○ *Makes decisions or takes action based on the best information available.*	○ Reward students for being able to demonstrate how they systematically can use evidence to draw a conclusion or come to a position. ○ Reward students for being able to defend the positions they take and the conclusions they draw based on the evidence they have collected. ○ It is impossible to stick a thermometer in a mouth to see if an "Ah Ha!" has been experienced, but certainly praise can be used when signs of such a phenomenon occur. If an Ah Ha has occurred, however, an instant change in test or performance results will occur and can be noted and rewarded.

Communicates

Steps in Information Literacy	Ideas for Assessment
○ Uses information accurately and creatively. ○ Designs, develops and evaluates information products and solutions related to personal interests. ○ Develops creative products in a variety of formats. ○ Produces and communicates information and ideas in appropriate formats. ○ Shares knowledge with others. ○ Acknowledges others' contributions. ○ Respects intellectual property rights.	○ Use a rubric or other point system to score a student product for the characteristics you have determined in advance (and for which students were informed in advance). ○ Using a rubric, have students do a self-evaluation of their product and presentation skill. ○ Reward the content of the presentation or product over the glitz. ○ Divide the content score of the presentation from the presentation skill/use of technology. ○ Reward creativity or unique presentation formats, technologies used over and above content factors but not in lieu of. That is, always award content points as the central element (thinking, learning, mastery). ○ Reward correct acknowledgement of other's intellectual property.

Reflects on Process and Product

Steps in Information Literacy	Ideas for Assessment
○ Strives for excellence in information seeking and knowledge generation. ○ Assesses the quality of the process and products of personal information seeking. ○ Devises strategies for revising, improving, and updating self-generated knowledge.	○ Long ago, Pitts and Stripling in their book *Brainstorms and Blueprints* had it right: students should be required to reflect and receive rewards for reflecting after each step of the research process. This can be done as a point system, rubric items, or just through reflective conversation. It was the most difficult thing they instituted with teenagers, but they never ceased trying. ○ Have students turn in a reflection with their research logs. ○ Use the technique described earlier of having students create their own information literacy model. ○ Ask students to reflect over time whether they are getting better at the research process.

Throughout:

Steps in Information Literacy	Ideas for Assessment
○ Group work ▪ Participates effectively in groups to pursue and generate information. ▪ Collaborates with others, both in person and through technologies, to identify information problems and to seek their solutions. ▪ Collaborates with others, both in person and through technologies, to design, develop, and evaluate information products and solutions. ○ Attitudes and behaviors ▪ Recognizes the importance of information to a democratic society. ▪ Respects the principle of equitable access to information. ▪ Practices ethical behavior in regard to information and information technology. ▪ Respects the principles of intellectual freedom. ▪ Uses information technology responsibly. ▪ *Can follow the guidelines of an information literacy model to conduct a research project.* ▪ *Can develop control over self-learning by creating a personal information literacy model.*	○ Many teachers give points for working effectively with groups. Much dislike of the group process occurs when one person does all the work and others get credit for it. Some say that having students rate each member of the group's contribution helps. Search for other ideas. ○ Punish plagiarism. However, teach students what it is and how to handle other's intellectual property. ○ Conference regularly with individuals and groups on how to be responsible users of information networks. Many set up instant punishments for infractions. But the best strategy is to build a community of "we all help keep it running." Track and report your program for doing just that. ○ Have students help in setting up rules for behavior while using technology. Be fair about punishing individuals who violate the rules. ○ Reward students who can argue both sides of an intellectual freedom case. ○ Reward students who are taking responsibility for their own learning as opposed to doing less or exactly what is expected of them.

Tracking the Information Literacy Skills Taught

One of the challenges of integrating information literacy into teacher's units. Is that the curriculum will govern what skills are taught and when. Such an approach will produce a patchwork quilt of skills across the grade levels and across teachers. Is that worrisome? Not really if there is a steady stream of collaborative units all with integrated information skill components. Three methods of tracking are recommended here that might help look at patterns across the school to affect practice:

Track what's taught

Two things could be tracked on a single columned sheet for each teacher during the year:

1. Units where the entire information literacy model was presented and practiced by the learners.
2. A checklist of individual skills integrated "just in time" as required by students to accomplish a learning task in the classroom or the LMC.

Such an approach would simply "let the chips fall where they may" and assume that sooner or later, regular integration will get around to the critical tasks at some time.

Track against a grade level matrix

Many states have continuums of information literacy skills that students should be taught at specified grade levels. Using this approach, the library media specialist uses the target skills at a grade level to look for opportunities to integrate throughout the year. Planning with a grade level team across a year, this checklist would be used to analyze what has been taught and what is left to teach.

Use computerized tracking software

At the end of each collaborative experience with a teacher, use computer software to track what was taught to whom, when, what content standards were achieved, what information literacy skills were mastered, and any other useful information such as teacher, and grade level. Nancy Miller's *Impact!*[7] is one software package using an Excel template that can do some very sophisticated tracking with amazing reports being generated for presentation to faculty, administration, and school boards.

No one way of tracking is recommended as superior, however, not tracking would be a disaster. Evidence-based practice requires tracking, assessing, and reporting if improvement is an important part of the program. Such tracking need not be time intensive, but it needs to be informative and should stimulate reflection.

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[7] Miller, Nancy A.S. *Impact! Documenting the LMC Program for Accountability*. Salt Lake City UT: Hi Willow Research & Publishing, 2003.

Other Information Literacy Measures to Collect and Report at the Learner Level

Assessment

(InfoLit5) Standardized Assessment in Information Literacy (Learner Level)

- Do an analysis of the standardized tests given in your school and district to see what information literacy skills are evaluated. This might be a cooperative task of a committee of library media specialists at the district or even state level. There will not be a section of any standardized test listed as "information literacy," but there might be a "study skills" section that contains a few items. If, for example, after a test is over, items 13, 26, 33, 55, 78, and 81 were determined to be a group of items of interest. An individual student could be rated on those items independent of machine scoring (or, perhaps there is a printout of individual results on each test item). Such an analysis could not be done for every student in the school, but some individuals of interest could be analyzed. For example, because lessons had been designed all year long with struggling English speakers in mind, several "cases" could be selected to see how well individuals performed.

  The problem with all standardized tests is that they do not cover all the concepts library media specialists would like tested. National testing bodies would respond to some of our concerns if we strong-armed them as a profession. One positive prospect is that some tests are getting better at trying to measure process learning rather than just content learning. This is a topic that state and national organizations of library media specialists should explore.

  If no analysis at the learner level takes place, the library media specialist will have only perception data about how well students are performing. Data about what was taught when and to whom is insufficient evidence in today's assessment world. Groups who are successful at looking at segments of standardized testing should share their experiences with the rest of us in the profession. It is one of those frontiers too long ignored.

(InfoLit6) Local Assessment in Information Literacy (Learner Level)

- Do partial-investigations where information literacy skills to be tested are practiced. While concentrating on "teaching to the test," is not advocated, one brush with information literacy skills during one project during the year is hardly enough practice to cement process skills. Skills to be practiced several times during the year might come from state standards at a given grade level, information literacy skill continuums, and competencies known to be tested at a particular grade level. For example, if reading graphs and charts is a common thing tested on standardized tests, have students create graphs and charts as products of their

information searching. Students can learn to cut and clip data, then manipulate that data in tables or spreadsheets from which charts, graphs, or concept maps can be created. Such culminating activities (on beyond dull reports by students) can provide the big picture for students, practice in creating a data-filled chart/graphic, and practice in interpreting trends or seeing the big pictures. Students accustomed to creating graphs and charts with LMC-retrieved data will do well when confronted with data interpretations on tests. It's something to document and report.

- Ask teachers to include process items on normal examinations or exercises they use in a unit of instruction. As teachers begin to understand your agenda of process (information literacy) take an old test they have given to students and just label each question C=content, or P=process. What patterns do you and the teacher observe? What proportion of content to process would be a good measure of what that teacher's student know and are able to do? What proportion of items on standardized tests in that teacher's discipline cover content vs. process? Are there ways to incorporate in teacher's testing patterns items that can predict how students will do on major exams? Perhaps the trick here is to test less often but use "smarter tests" of what we really want students to understand and perform. Teachers only test what they value. If no process items are on the test, then the value is evident or sometimes process items are assumed skills not needing assessment. Whether by ignorance or miscalculation, the library media specialist can claim major victories when process and content are normal parts of assessment practice.

  For example: After teaching website evaluation and allowing students to practice their *Boolean* searching to identify and evaluate websites, they might be given a check test the next time they come to the LMC. Using three websites on the topic being researched that the students are not likely to have seen before, have them ask probing questions such as:

  - WHO is saying this to me?
  - WHY are they saying it?
  - How RELIABLE is this information?
  - How CURRENT is this information?
  - Is this on my LEVEL?

  The items should match whatever you had taught so that you can assess whether individuals are skimming and scanning their sites looking for quality characteristics as they sort and select information. In our example, using sites on topic for the check test would serve two purposes – to test their sorting ability and also to introduce them to good sites or sites on the topic to avoid. Throwing in some clunker sites on purpose would be good examples to discuss. What type of student makes good or poor judgments about web site evaluation? The answer to that question will help stimulate better teaching strategies both for you and for the teacher.

Possible Information Literacy Measures to Collect and Report at the Teaching Unit Level

For many years, library skills and now information literacy have been concentrated at the classroom level. School library media specialists either taught a course in library skills to classes visiting the LMC weekly or they learned how to integrate their teaching into units of instruction that were collaboratively planned. For at least a decade, the professional literature has disdained the first approach and applauded the second. The first is alive and well.

Groups across the country, including state school library association groups, school district committees, and individuals have created information literacy documents describing which skills should be taught at which grade levels. The better documents are aligned with state standards in one or more curricular areas. This integration has been done to encourage collaboration with teachers in the teaching of information literacy (we cannot do the job alone).

One popular approach has been to adopt an information literacy model and use it at any or all grade levels to teach and re-teach the research process. Used as a scaffold numerous times, it is hoped that somehow the process will be internalized by the students. However, to sit and listen to the same model being presented over and over somehow strikes one as both repetitive and boring. If classes are tracked so that sophistication is added as repetition and maturity happens, there is a better chance at succeeding.

Koechlin and Zwaan have adopted a different approach. They advocate that the library media specialist should:

- Analyze a state standard.
- Extract from that standard an appropriate information skill.
- Add a corollary information skills as appropriate.
- Teach that information skill at the appropriate sophistication level of the learners.

Such an approach, if tracked to see which classes have received which topics and when, seems to hold great promise in doing two things:

- Integration holds the highest promise of teaching information literacy most effectively.
- Integration is the easiest way to train teachers in information literacy so that they include those skills in their teaching on a regular basis – whether or not we are by their side.

This approach is not antithetical to library skills continuums at each grade level – it merely turns ultimate authority of what will be taught over to the content curriculum. The continuum is used as a guide rather than a curriculum itself.

No matter what approach to information literacy the library media specialist is taking, the following items may provide some ideas for evidence-based practice.

Program

Track the Teaching of Information Literacy (Teaching Unit Level)

- **(InfoLit7)** Create a matrix showing what information literacy skills are taught to what classrooms and when throughout the year. Use this as the basis of a report to administrators, the faculty as a whole and in other reports. Such a record is commonplace and its advantage is that it shows efforts to "teach" information literacy, but it does not document whether students learned what was taught.

Compare the Teaching of Information Literacy to Achievement Scores (Teaching Unit Level)

- **(InfoLit8)** If you have client teachers who not only collaborate on the teaching of information literacy but incorporate those skills into their teaching even when you are not present, you then have a group in the faculty who are "doing it right." Looking at achievement scores for their classes as compared with teachers who really don't collaborate or emphasize process learning would be instructive. If you had five teachers who were the "info-stars" group, then select five teachers who have quite different ideas about information literacy, collaboration, and process learning. Compare the scores from a standardized test for these two groups. Is there any difference? If so, you will not be able to say that information literacy is the "cause" of the difference, but it would be one more indicator among others. Let us say that there was a sizeable difference. You probably are measuring better teaching against poorer teaching in general. Suppose there is no difference. You will have to dig deeper.

Local Assessment in Information Literacy (Teaching Unit Level)

- **(InfoLit9)** Any of the measures suggested in the previous section at the learner level could be tallied for class groups. Thus you might want to know:
    - What percent of the students in a class mastered the task at hand after being taught?
    - What percent of the class can pass a pre-test of information literacy skills previously taught in preparation for the teaching of a new skill?
    - What percent of students followed an information literacy model as a guide during a research project?
    - What percent of learners logged their way thorough a research project and drew their own information literacy model?
    - What percent of the faculty could be categorized as successful integrators of information literacy into learning?
    - How many units of instruction during a semester that contained information literacy could be said to have "contributed to learning?"

Teacher Competence in Information Literacy (Teaching Unit Level)

- **(InfoLit10)** Document the one-on-one teaching of teachers about information literacy, how to incorporate it into a collaborative unit, how to assess it, and how to include these items as a normal part of any assignment made in the classroom. Make a list of teachers who have mastered information literacy skills so that they are able to help during a LMC project and are quite capable of and do incorporated information literacy into their normal teaching. In much of the English-speaking world where there are no professional library media specialists, some feel that the only hope for information literacy is to have teachers be trained through professional development to include these skills in their teaching. This approach is the same as: "we can't afford art, music, or PE teachers so we will train teachers in all these disciplines in hopes that the substitute will be as good as specialists being present." Let us suppose that a single professional at a district level did a massive professional development of teachers in information literacy. Would such an effort ever lead to professional library media specialists in the schools? If there is any evidence of this ever happening, that would be great news indeed. The author has talked to a number of principals who welcome a professional development session because they either can't or won't face the challenge of increased staffing for specialists in the school. A few years ago, Los Angeles Public Schools had a proposal before the Board with the votes to pass, that every elementary school would have a library media specialist. A few days before the vote, the shootings at Columbine High School took place and suddenly the money for library media specialists was diverted to security. Such is life.

Standards and Information Literacy (Teaching Unit Level)

- **(InfoLit11)** Track and report efforts to use state standards / district curriculum, etc. as the source for extracting information literacy skills to students.

- **(InfoLit12)** Show what additional information literacy skills have been added to those extracted from standards and defend why.

Support for Willing Teachers Who Include Information Literacy (Teaching Unit Level)

- **(InfoLit13)** Document support from the administration, departments, or other organizations that help an individual teacher learn how to integrate information literacy into instruction including:
  - Time to learn
  - Opportunities for individualized professional development.
  - Opportunities to plan, implement, and evaluate units of instruction collaboratively with the library media staff.
  - Markers of progress during normal supervision and evaluation of teaching.

Possible Information Literacy Measures to Collect and Report at the Organization Level

During the last 15 years as practitioners have been converting from teaching library skills to information literacy there have been no research studies (that I am aware of) that compared students who learned the old skills set vs. those who have learned the new. One reason is that there is no standardized test of information literacy and we are very reticent to recommend that one be constructed in the current tested-to-death environment. Information literacy items to appear scattered through various tests, but no major national analysis has been done (doctoral dissertation, anyone?).

Certainly at the building level, all library media specialists should have documented the shift to teaching information literacy and if it has not been done with the attendant fanfare both at the school and district level, it should. And if attention has not been drawn lately to the info. lit. curriculum, perhaps a totally new "unveiling" should occur like the introduction of a new model car to the public.

One of the biggest challenges for library media specialists in this area has been not only the "what" (content of information literacy), but the "how" (integrated vs. traditional course-like teaching), and the "when" (only when a collaboratively-taught unit appears, or some sort of systematic presentation).

The following suggested measures approach these and other issues.

LMC Staff and Achievement (Organization Level)

- **(InfoLit 14)** Compute the size of the LMC staff. (professional, technical, and clerical) The size of the technical and clerical staff will keep the operation functioning. The size of the professional staff will predict the impact of the LMC on achievement (see the Alaska study[8]) The Lance and other research often computes this figure in terms of number of professionals per 100 students and the number of total staff per 100 students. Such figures will work for comparisons in all but small schools (below 300 students). Check local, state, and national figures for comparison of your school with others.[9]

- **(InfoLit 15)** Compute the proportion of the day that the LMC staff focuses on information literacy. Choose a typical week and have all staff members track their day in 15 min. increments (they can record once every hour or school period). Estimate the amount of time volunteers spend (students, parents, community groups) on information literacy in a typical week. This will provide data on the total staff effort pointed at information literacy – one piece of the impact puzzle.

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[8] Find the Alaska study along with others in the research section of http://www.davidvl.org

[9] You will need to find out from colleagues where local and state figures are published. Federal statistics for school libraries are published by the Dept. of Education on occasion.

Teacher Progress in Information Literacy and Achievement (Organization Level)

- **(InfoLit16)** Present the current state of using assessments with the faculty as a whole. Using documentation in the previous section at the teaching unit level, create a picture of the progress of the entire faculty over time as they learn to incorporate and assess information literacy items in their units of instruction.

- **(InfoLit17)** Document school-wide efforts to institute information literacy as a normal part of the curriculum. This might include the collaborative launch of an information literacy program jointly by administrators and library media specialists, professional development programs to teach the implementation of information literacy, and the use of information literacy as an item used for a teacher's annual performance review by administrators.

- **(InfoLit18)** Document the adoption of an information literacy model for the school as a whole or at least at the department level in high schools.

Information Literacy and Achievement (Organization Level)

- **(InfoLit19)** Keep an eye on achievement scores for the entire school. The Lance studies have indicated that the teaching of information literacy is one factor among many that will make a difference. One can be certain that effective teaching of information literacy can make a difference to both individuals and to teachers, but trying to make a cause and effect between this one factor and school achievement scores is futile. If you demonstrate with direct evidence that both students and teachers are benefiting, at some point, information literacy becomes a part of the culture and curriculum of the school.

Information Literacy and School Culture (Organization Level)

- **(InfoLit20)** Question students and faculty at random to see if they both recognize what information literacy is and that it is a normal part of the school's curriculum and has emanated from the library media program. This measure could be done as a part of interviews, lunchroom tests, brief questionnaires, or reflections held randomly. Trigger words such as "information literacy, research process, information literacy model, or inquiry" should match in these questionings the terminology used by the library media staff in the school.

- **(InfoLit21)** Provide evidence that the school administration not only understands what information literacy is, but has participated in its implementation as a part of the school's curriculum. As an example, Joyce Valenza, a library media specialist from Pennsylvania and her principal made a presentation at a national conference in Seattle (ISTE, 2003) about information literacy in their school. It was apparent

that the administration was very articulate not only about information literacy, but could describe efforts to make it a part of his school's culture and curriculum. He could recount the birth of the initiative, progress among faculty members, and was keeping an eye on student performance in this area.

- **(InfoLit22)** Document efforts by the library media staff to make information a priority in the school's curriculum and culture.

Finding an Evidence Thread in the LMC Information Literacy Program to Measure and Report

This chapter like all others in the book, has provided a list of factors within information literacy that would be candidates for measurement. This list was followed by a variety of possible measures that might be done at the learner level, the teaching unit level, and the organization level.

The task of the library media specialist is to decide aspects of the current information literacy program could be measured, what program goals should be instituted and measured, and the mix of measures that can be integrated into daily practice. The following evidence plan worksheet might help in making both measurement decisions but also might shape changes in the library media program.

The worksheet is followed by a sample worksheet where a library media specialist has decided first to test a pilot program of information literacy with a single teacher complete with an assessment strategy as a prelude to presenting an information literacy program to the entire faculty.

Information Literacy Evidence Plan

Detail in the appropriate box possible measures to be used in your information literacy program to measure its impact on achievement.

Goal:

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*			
Indirect Measures**			

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

Information Literacy Evidence Plan Sample

Goal: To demonstrate the integration of information literacy into one teacher's research agenda in order to serve as a pilot project for an information literacy initiative. Below are the measures that will be used to assess the impact on the teacher and the learners.

	Learner Level	Teaching Unit Level	Organization Level
Direct Measures*	▪ Integrate information literacy into three research projects taught collaboratively using increasingly complex skills with each succeeding unit. ▪ (InfoLit4) Use individual assessments of each stage of the research process. ▪ (InfoLit1) Assess the level of info lit. skills learning using rubric items integrated into the teacher's unit rubric. ▪ (InfoLit2)Assess the level of each learner in each of the test research units. Who succeeded? Why? Who failed? Why? Follow-up interviews and reflections by individuals may help. ▪ (InfoLit2) Are there any types of individuals who fail? What might be the causes? What could be changed in units two and three to increase an individual's chance at success?	▪ Document the time spent with the teacher in teaching the principles of information literacy. ▪ (InfoLit14) Document and reflect together on the process of integrating information literacy into instruction. How did we approach this integration? What changes in instructional approach had to be made? ▪ (InfoLit11) Document the change in instruction when the rubric contained both content and information literacy items. ▪ (InfoLit14) What is the teacher's perception of the impact of teaching students process before and after viewing assessment results at the learner level. ▪ (InfoLit14) Would this teacher be willing to continue working on both process and content after our experiment? Why or why not?	▪ (InfoLit21) How were administrators included in this experiment? ▪ (InfoLit21) What evidence is there that administrators came to understand what information literacy was? ▪ (InfoLit21) What support has been forthcoming from administrators during and after the experiment?
Indirect Measures**	▪ What support did the teacher and I have to give to those individual students who were struggling? ▪ Did technology "rise to the occasion" to support each individual?	▪ How did we modify the schedule of the LMC to accommodate this experiment? ▪ What changes in the LMC/classroom facilities did we make to accommodate this experiment? ▪ What arrangements were made for the extra time it took to handle this experiment both for the LMC staff and for the teacher?	▪ What changes would have to be made in the entire school schedule if this experiment were to be expanded to the faculty as a whole? ▪ How would the structure and size of the LMC staff have to be altered to handle a larger number of experiments? ▪ Are there any budget implications other than staffing that would need to be addressed? Professional development opportunities?

*Direct measures would be those so close to actual learning that confidence in an impact could be inferred. We have no thermometers to stick in a learner's mouth to gauge actual learning, but direct measures might challenge doubters to prove no impact.
** Indirect measures provide evidence that actions set the stage for, provide an environment for, give support to, enable, help, give encouragement to, mark progress toward, make change in direct measures over time the probable stimulus.

6

The Contribution of the LMC Program to

TECHNOLOGY

and Evidence-Based Practice

So much money, so much time, and so much effort has been made to equip the nation's school with technology, yet so many questions remain. Never has a tool of change come to education with higher expectations and more money attached. In times of economic downturn the volume of capital has slowed but not the expectations.

Numerous national organizations, government bodies and school districts have set up expectations for this tool. The best known are the NETS standards done by ISTE and regional educational labs such as NCREL. *Information Power* also has a chapter on technology expectations for the school library. First generation expectations and technology plans concentrated for the most part in getting technology in place, hooking it up, and turning it on. The second generation visions for technology look beyond the networks and basic tool skills to include a concern for teaching and learning.

Below are extracts from three well-respected documents for the reader's comparison. It is worth consulting the documents as a whole to get further explanation.

Expectations for Students

NCREL's Phases of Technology Use for Students

- **Phase 1: Print Automation** – technology automates print-based practices with some increase in active hands-on learning.
- **Phase II: Expansion of Learning Opportunities -** Students use technology to organize and produce reports, often using multimedia formats.
- **Phase III: Data-Driven Virtual Learning -** Students use technology to explore diverse information resources inside and outside school and produce information for real-world tasks.

Source: NCREL: Phases of Computer-Based Learning at: http://www.ncrel.org/tplan/cbtl/phases.htm

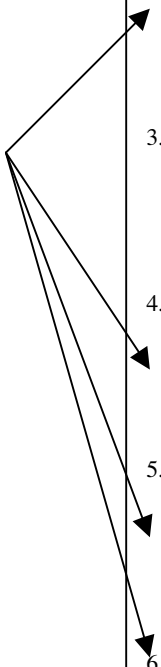
Expectations for Organizations

The enGauge Essential Conditions for Use of Technology to Prepare Students to Learn, Work, and Live Successfully…

- **Forward-Thinking, Shared Vision**
- **Effective Teaching and Learning Practices**
- **Educator Proficiency With Effective Teaching and Learning Practices**
- **Digital-Age Equity**
- **Robust Access Anywhere, Anytime**
- **Systems and Leadership**

Source: NCREL's enGauge web site at: http://www.ncrel.org/engauge/framewk/sitemap.htm

Library Media Specialists are the most interested in:



NETS Technology Foundation Standards for All Students

1. Basic operations and concepts
   - Students demonstrate a sound understanding of the nature and operation of technology systems.
   - Students are proficient in the use of technology.

2. Social, ethical, and human issues
   - Students understand the ethical, cultural, and societal issues related to technology.
   - Students practice responsible use of technology systems, information, and software.
   - Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

3. Technology productivity tools
   - Students use technology tools to enhance learning, increase productivity, and promote creativity.
   - Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4. Technology communications tools
   - Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
   - Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology research tools
   - Students use technology to locate, evaluate, and collect information from a variety of sources.
   - Students use technology tools to process data and report results.
   - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

6. Technology problem-solving and decision-making tools
   - Students use technology resources for solving problems and making informed decisions.
   - Students employ technology in the development of strategies for solving problems in the real world.

Source: ***NETS Standards for Students. See at:*** **http://cnets.iste.org/students/s_stands.html**

To be sure, there has been a backlash against technology for being "oversold" as other educational technologies have been. On the other hand, a new sense of realism has set it: that technology is here to stay and we must come to terms with it both in the classroom and in the home.

Library media specialists have been asked twice in the last fifty years to change their embrace of technology. In the 1960s, it was a flood of audiovisual media and materials that were to join our print collections. In the 1990s, we were asked to stretch to computers and networks. For many, both challenges have seemed impossible.

What is becoming very clear is that print technology alone cannot remain center stage. The competition of information systems at the user level if fierce. To many, Google has

already become the information system of choice. Led to one logical scenario, Google can and may have already replaced libraries of all types in the life of a youngster or a teenager.

It is time to fight back – to re-establish the notion that the library – the school library – is a user's best line of defense to face the onslaught of information overload. We'd like our students to say about the digital school libraries we are constructing: "It is my preferred information system because it is a 'safe, smaller, and very high quality information system.'" "I begin at the digital school library, and if I need something else, I then go to Google."

Thus, in this chapter of *Evidence-Based Practice,"* two focuses seem to demand the attention of the school library media specialist at this time:

1. The establishment of a reliable digital school library (safe, "smaller," and of very high quality)
2. The use of high quality information systems and technology tools to enhance learning both in terms of efficiency, in building deep content understanding, and functioning in the virtual world.

The Library Media Center Technology Program
Ripple-Effect Measures[1]

Goals

LMC Agenda	Technology Plan
• Enhance teaching and learning through technology. • Build and information-rich environment available 24/7. • Build efficient learners.	• Connect every teacher and learner. • Integrate technology into teaching and learning. • Affect teaching and learning positively.

Pebbles to Measure

1. Information systems emanating from the LMC are available 24/7 and are reliable. (Tech1)
2. LMC information systems are available at the elbow (in the LMC, the classroom, in the home, and on any technological device owned by the learner). (Tech2)
3. Learners prefer LMC information systems over full Internet access. (Tech3)
4. LMC information systems and tools add to learner efficiency. (Tech4)
5. Enhancement of learning through technology is a part of teacher assessment of student learning. (Tech5)

Justification:

LMC information systems provide "smaller," safe, and very high quality information intranets to its clients in contrast to the wild world of the entire Internet. The Lance studies all report the connection between LMC technology and achievement.

Demonstrate through research and practice that:

- ❑ LMC information systems are at the elbow.
- ❑ Learner efficiency is being affected.
- ❑ LMC information systems are the first choice with students and teachers.
- ❑ LMC information systems are indeed "smaller," safe, and of very high quality.

Report:

- ❑ Steady improvement over time.
- ❑ Improvement related to an initiative.
- ❑ That success is already high and is remaining constant.
- ❑ Improvement related to organizational policy shifts.

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[1] Ripple-effect measures refer to significant measures that are most likely to produce results in achievement and indicate maximum teacher collaboration and organizational effectiveness. Because you have these data, a ripple effect occurs, like throwing a pebble in a pool, triggering many other organizational practices and policies.

(Tech1) The Digital School Library: Reliability (All Levels)

When systems and networks are as reliable as refrigerators, we've made it. Enough said. Everybody wants instant access with wide bandwidth now. Instant gratification.

There is a computer program that checks every few minutes if the network is up and if not, it emails the system administrator – 24 hours a day, seven days a week. And you can get it to ring your cell phone. Whatever it takes. The systems director in the School of Library and Information Science gets very peeved at us if we say to him: the web site is down. He will say, "It's not the web site it's the California C4 Network over which I have no control!" He's right, any part of the chain can be broken with disastrous results, or the East Coast can go black! That said, it's reliability that counts. There is just so much patience and forgiveness.

The digital school library makes it possible to serve information 24/7/365.

Measure to report:

- Given the goal 24/7/365, the digital school library for X school or X district was up ___ percentage of the time during school hours and ___ percent at other times.
- Report trends over time.
- Do an analysis of down time and for each cause, suggest an improvement together with costs of repair or upgrade.

This measure is an **indirect measure** at all levels: the **learner level**, the **teaching unit level**, and the **organization level.** (One could make the case that when the networks are down, there is a direct impact on teaching and learning since a major blockage occurs.)

(Tech2) The Digital School Library: Accessibility (All Levels)

In real estate, we say, "location is everything." In networks and access to them, "at the elbow" is in. At the moment, the rage is WiFi (wireless access) so that a personal device or computer can sense a signal anywhere in a LMC, classroom, or school facility, or in the home. The goal is to have the digital school library at the elbow of every patron.

The second access measure is the device measure. What devices are you supporting for access to the digital school library?

- Computers attached to networks
- Laptops with wireless cards
- Inexpensive keyboard/semi-computers with Internet access
- PDAs (personal digital assistants such as Palm Pilots)
- Cell phones that have Internet capability
- "X" product that is just on the horizon and will be announced shortly.

Learners who have access to the Internet but not the digital school library find their information systems elsewhere. This is true when the LMC is locked or inaccessible to a student any time during the school day and certainly on nights and weekends. Closed LMCs are zeros!

Collect and report data showing:

Access Where

Access on What

This measure is an **indirect measure** at all levels: the **learner level**, the **teaching unit level**, and the **organization level.** (One could make the case that when a student is outside the signal area, or the digital school library is inaccessible on a student's personal device, that there is a direct impact.)

(Tech3) The Digital School Library: System of Choice (Learner Level)

Which brand of toothpaste or mouthwash, or shampoo, or lotion do you use. Do you prefer them for their quality or because of the advertising hype? Are we absolutely certain that the grocery store we shop at has the lowest prices?

What is on your own computer as its home page? Is there library access on the home page of your own computer? Is there access to Google or your favorite Internet search engine on the home page of your own computer?

Now to the tough questions:

- Is your LMC digital library, information system, portal, displayed on the home page of teachers and students? What percent? Why not 100%?

- If your digital school library is not the home page of a potential user or at least an icon on their home page, what chance do you have of being that user's information system of choice? (Choose one answer: little, or none).

- Should you be in competition?
- Are you in competition?
- How could you get into the competition?
- Is it too late already? (If it is, should we quit our jobs?)
- Are we taking the competition by lying down? NOOOOOOOOOO!

Do a simple survey: Ask students to rate which information systems they would usually access first, second, third, etc. Are you in the top five? Are you top dog? What percent of the users rate you in the top five or as top dog?

Like Colgate or Pepsi, proclaim your presence loud and clear. What's your slogan? (Things go better…in the Washington LMC digital library?)

This measure is an **direct measure** at the **learner level**. If you're top dog with any user, you're in. If you're out, you're out.

(Tech4) The Digital School Library: Efficiency (All Levels)

Do you remember the typewriter? Do you remember the changeover to a word processor? I thought so. And you're not that old! Blanche Woolls typed this author's dissertation. I ran across it recently when I was moving. Every page had to be typed only once and perfectly…and then the committee wanted changes? Horrors.

We say that through the tools available on the digital school library, the helps, the direct access to assignments, the webographies, the forms, the suggestions, the direct access to quality databases, etc., etc., etc., that we increase the efficiency of anyone who clicks our way.

> Come to us.
> *We save you time*.
> We have exactly what you need.
> *We save you time*.
> We make your projects look better.
> *We save you time*.
> You can trust our information.
> *We save you time!*

I know, they don't believe you. Google is always faster and better. Or, is it? One great library media specialist in Massachusetts tells her students: "Do you want to SEARCH or do you want to FIND? Do you want a GOLD MINE or a TRASH HEAP?"

Divide a class in half who are searching for the best articles on the topic at hand. Half will search Google, half LMC databases. What happens? Who gets the best the fastest? I did not say, who got the most the fastest!

The digital school library should be the source of:

- Tools
  - Word processors
  - Databases
  - Spreadsheets
  - Graphing, charting tools
  - Map makers
  - Timeliners
- Databases
  - Ready reference (encyclopedias, dictionaries, thesauruses, facts)
  - Periodical articles
  - Data banks
  - The best of the Web
- Assignments
  - Access to all projects currently being done in the LMC from any teacher
- Helps
  - Advice
  - Books to read

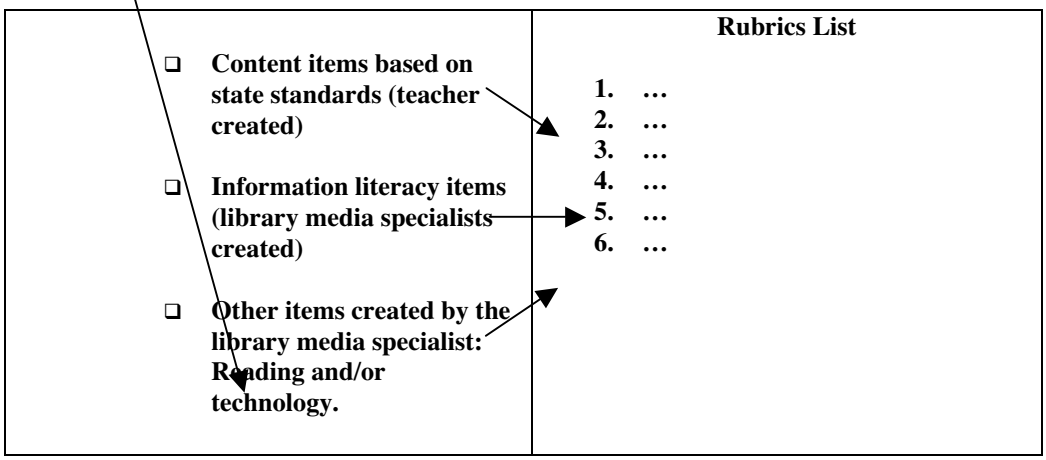
Tally awareness of these. Tally use (counters help). Ask users what they prefer. Ask about the competition. Beat the competition. Brag about beating the competition. This is a **direct measure** at all levels.

(Tech5) Assessment of Learning Through Technology (Learner Level)

We hate to be so redundant, but including rubric items about technology's contribution to a learning experience should be on the joint teacher/library media specialist rubric or other assessment.

The Joint Assessment / Rubric

During the unit planning process, the teacher/LMS team first identifies what state standards are to be achieved. Then together, they create a rubric that covers the teacher's concerns and adds the library media specialist's concerns for information literacy, reading and technology as illustrated below:



For students, the team may wish to create a self-assessment rubric to be completed by students or learning groups. This rubric can be the same as the above rubric or adapted.

The number of items on the rubric and the number of points assigned to each category will vary depending on the nature of the learning experience.

What items might be included on such rubrics?

- Use of the digital school library
- Any of the national standards items for technology listed at the beginning of this chapter (ISTE or enGauge.
- Any items from local technology plans for enhancing learning.
- Items that gauge efficiency.
- Productive use of any of the technology tools available such as graphing software, PowerPoint, word processors, or spreadsheets.
- Use of only the best information from databases and the Internet.
- Interaction with multimedia materials designed to build deep understanding.
- Use of communication tools to gather information from experts or global sources.

Such rubric items and the difference they make in a learner's grade constitute **direct evidence** at the **learner level** with implications at the **teaching unit level**.

Other Technology Measures to Collect and Report at the Learner Level

Assessment

- **(Tech6)** Standardized assessment and technology (learner level) Perhaps we are wrong, but we know of no standardized test that tests technology competence – at least none that is a part of a high-stakes test. In high school, however, students may be preparing to take one or several of the industry certifications such as the series from Microsoft. These tests are often required for employment in industry. Library media specialists can know the ones of most interest and perhaps purchase packages that help students prepare to take the tests. Vocational educators may want to collaborate on various kinds of assessment tools as they prepare students for the job market.

- **(Tech7)** Break through the assumption that adults make that children and teens are highly skilled computer operators. Check tests on both software and hardware can be prepared by students and used to award "drivers licenses for a new piece of equipment of software package. Examples: the digital camera, or Adobe Illustrator 10.0. The library media specialist may have a tutorial available on the digital school library for students to use before they take their check tests, or a student technology team might do the instruction.

(Tech8) Reflecting With Students: A Teaching Unit Level Assessment

Why Reflect?
Frank discussions and reflections with learners can provide a great deal of valuable feedback from learners as they try to use technology to accomplish their assignments. Being a coach rather than a dictator can be quite beneficial as systems are created, maintained, and modified.

Who would conduct the reflection?
A mix of the teachers, administrators, the library media specialist, the technology specialist, plus the learners themselves.

When should the reflection happen?
- After a learning activity where technology, information systems, LMC facilities and resources were a critical part of the learning experience.
- After the grades are in. (Students should feel free to speak up.)
- After an assessment where learners had to demonstrate their knowledge or what they did.

What questions might be constructed to ask during a reflection?
Each reflection will have its own set of questions, but the list below is suggestive of topics to broach and adapt to any grade level:
- Here is the state standard/local expectation that we as teachers had for this learning experience (list those used by all teachers and specialists across the various curricular standards). How well do you feel we did as a group in meeting those objectives?
- How well did a certain technology help you as a learner?
- What information sources or systems seemed to help you the most?
- What problems did you encounter with either a technology or information sources?
- What could we do to make sure that technology and information sources serve us better in our future projects?
- How could you help the process more as learners?

How sophisticated should the reflection be?
Tailor the reflection to the maturation level and student experience using technology.

How much time should it take?
Reflections might be as short as ten minutes or as long as a half hour depending on the complexity of the learning activity, the difficulties encountered, and the sophistication level of the learners.

- What should happen after the reflection?
- Meet with the other adults involved to plan any changes in program.
- Document the reflection as a part of data-driven practice at the learning unit level.

Bottom Line Questions

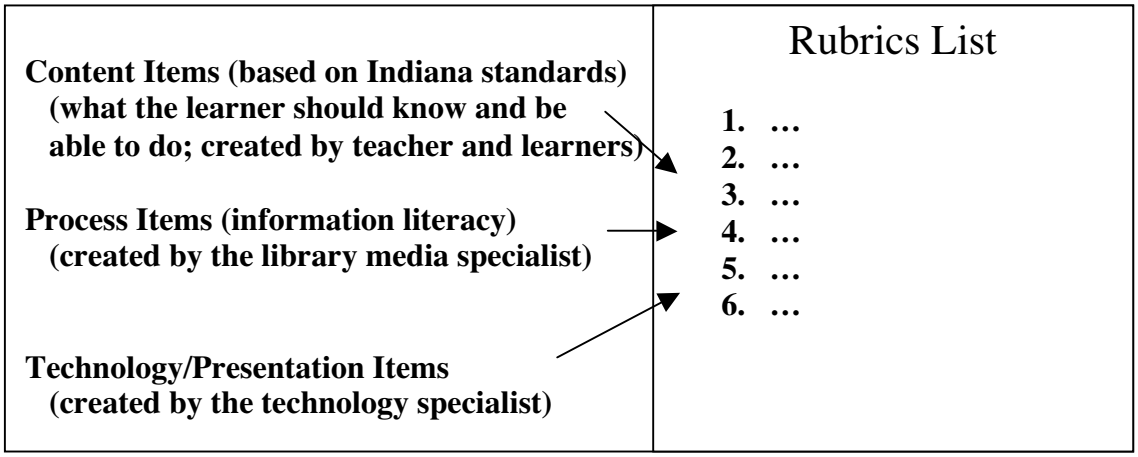
- What is the sophistication level of the students in their use of technology?
- Is the use of technology really enhancing the learning experience?

(Tech9) Judging Glitz vs. Content in Hi-Tech Products at the Learner Level

It is easy to be impressed with the glitz of technology particularly when the student knows more about computers or other high-tech than we do. But glitz is not a substitute for deep learning. Thus the first two commandments of the ten commandments for judging projects for the media fair and for classroom products:[2]

> **1. Thou shalt notice the substance of the product or project first.**
> **2. Thou shalt notice technological expertise later.**

As learners begin projects, the collaborating team constructs a rubric that sets content before format; rewards learning over presentation; process over product.



Rubric generators are available from NCRtec to assist collaboration teams in including desirable elements. For example, a holistic scoring guide for a compare/contrast project resulted in numerous items of which one is listed below. See at: http://www.ncrtec.org/t1/sgsp.index.html

	5 Exemplary	4 Not Quite Exemplary	3 Developed	2 Not Quite Developed	1 Limited
Content Knowledge	The purpose/main point is clearly defined. The student demonstrates strong critical thinking and well integrated ideas, and maintains clear focus and a compelling and original voice. The student compares and contrasts two things using specific examples to support his position. There is evidence of genuine learning - others find work useful and benefit from this product.		The main point is only implied or partially stated. The student shows some evidence of critical thinking and integration, as well as focus, style, and voice. The student compares and contrasts two things but uses few or somewhat unclear examples to support his position. There is new learning but for the student only – not developed or useful for others.		The main point is unclear. There is little or no evidence of critical thinking or integration and a lack of focus, style, and voice. The student does not compare / contrast two things, and uses inappropriate or no examples to support his position. There is no evidence of new learning - nor developed or useful for student or others.

Resource: Simkins, Michael, et.al. *Increasing Student Learning Through Multimedia Projects*. Alexandria, VA: ASCD

[2] What are the other eight commandments, you follow?

Possible Technology Measures to Collect and Report at the Teaching Unit Level

- **(Tech10)** The percent of students who would rate the technology as helpful in completing their assignments during a unit of instruction. After an LMC experience, a simple question either in paper form or vocally would surely elicit comments and no doubt open a conversation of how we could all help make things better in a hi-tech environment.

- **(Tech11)** The number and percent of teachers who would report during a sample month that technology had "contributed to learning" during a collaborative activity in the LMC. If a question like this is asked at the conclusion of each LMC collaborative experience, much good revised planning, spirit of good will, and mutual congratulation would help build not just technology, but its effective use.

- **(Tech12)** The skill each teacher has in incorporating technology into their teaching. When ISTE published its technology standards for **pre-service** teachers we all marveled and wished that every teacher would be thus prepared. The reality is that to meet these standards, much professional development must be in place. While the library media specialist cannot take full responsibility for that training, we can participate on the leadership team, first, by achieving and modeling these competencies ourselves, and second, helping others achieve them. ISTE[3] has published an entire volume that provides extensive rubrics to help judge the competence of each teacher so that documentary evidence is available. We have reproduced the entire standards here for the reader.

Educational Technology Standards
and Performance Indicators
for All Teachers
Performance Profiles for Teachers

Building on the NETS for Students, the ISTE NETS for Teachers (NETS•T), which focus on preservice teacher education, define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. All candidates seeking certification or endorsements in teacher preparation should meet these educational technology standards. It is the responsibility of faculty across the university and at cooperating schools to provide opportunities for teacher candidates to meet these standards.

The six standards areas with performance indicators listed below are designed to be general enough to be customized to fit state, university, or district guidelines and yet specific enough to define the scope of the topic. Performance indicators for each standard provide specific outcomes to be measured when developing a set of assessment tools.The standards and the performance indicators also provide guidelines for teachers currently in the classroom .

I. **TECHNOLOGY OPERATIONS AND CONCEPTS.**
Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education Technology Standards for Students)
B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

[3] *National Educational technology Standards for Teachers: Resources for Assessment*. Eugene OR: ISTE, 2003

II. **PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

Teachers plan and design effective learning environments and experiences supported by technology. Teachers:

A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
B. apply current research on teaching and learning with technology when planning learning environments and experiences.
C. identify and locate technology resources and evaluate them for accuracy and suitability.
D. plan for the management of technology resources within the context of learning activities.
E. plan strategies to manage student learning in a technology-enhanced environment.

III. **TEACHING, LEARNING, AND THE CURRICULUM**.

Teachers implement curriculum plans, that include methods and strategies for applying technology to maximize student learning. Teachers:

A. facilitate technology-enhanced experiences that address content standards and student technology standards.
B. use technology to support learner-centered strategies that address the diverse needs of students.
C. apply technology to develop students' higher order skills and creativity.
D. manage student learning activities in a technology-enhanced environment.

IV. **ASSESSMENT AND EVALUATION.**

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers:

A. apply technology in assessing student learning of subject matter using a variety of assessment techniques.
B. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
C. apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication,and productivity.

V. **PRODUCTIVITY AND PROFESSIONAL PRACTICE.**

Teachers use technology to enhance their productivity and professional practice. Teachers:

A. use technology resources to engage in ongoing professional development and lifelong learning.
B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
C. apply technology to increase productivity.
D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

VI. **SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.**

Teachers understand the social,ethical,legal,and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice. Teachers:

A. model and teach legal and ethical practice related to technology use.
B. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
C. identify and use technology resources that affirm diversity
D. promote safe and healthy use of technology resources.
E. facilitate equitable access to technology resources for all

Possible Technology Measures to Collect and Report at the Organization Level

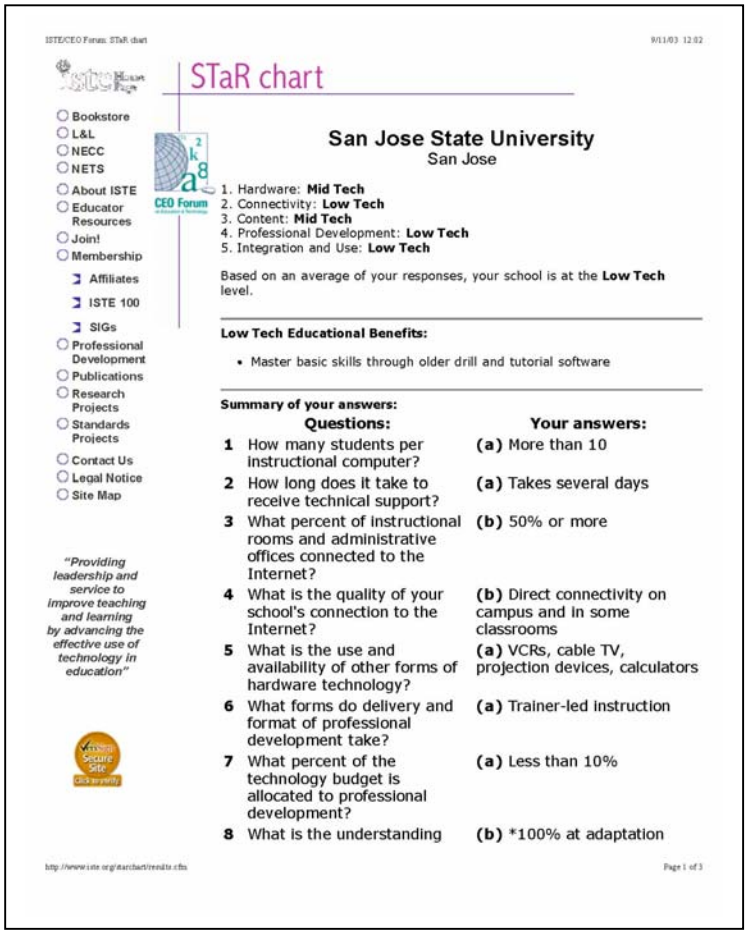
Checklists and Rating Charts (Organization Level)

- **(Tech13)** Rate the sophistication of your technology infrastructure and it use. ISTE provides access to the "CEO Forum's Interactive School Technology and Readiness (STaR) Chart, a self-assessment tool designed to provide schools with the information they need to better integrate technology into their educational process." By answering 20 questions online, you receive feedback on how well your school is doing. "The STaR Chart can help any school or community answer three critical questions:

    1. Is your school using technology effectively to ensure the best possible teaching and learning?
    2. What is your school's current education technology profile?
    3. What areas should your school focus on to improve its level of technology integration?

    The questionnaire is available at: http://www.iste.org/starchart/index.cfm or through the ISTE site generally if they happen to change the url. The result might look something like: this:

Note: the sample is not indicative of San Jose State University and it contains just a few of the questions that were asked.



ISTE/CEO Forum: STaR chart 9/11/03 12:02

STaR chart

- Bookstore
- L&L
- NECC
- NETS
- About ISTE
- Educator Resources
- Join!
- Membership
  - Affiliates
  - ISTE 100
  - SIGs
- Professional Development
- Publications
- Research Projects
- Standards Projects
- Contact Us
- Legal Notice
- Site Map

"Providing leadership and service to improve teaching and learning by advancing the effective use of technology in education"

San Jose State University
San Jose

1. Hardware: **Mid Tech**
2. Connectivity: **Low Tech**
3. Content: **Mid Tech**
4. Professional Development: **Low Tech**
5. Integration and Use: **Low Tech**

Based on an average of your responses, your school is at the **Low Tech** level.

Low Tech Educational Benefits:

- Master basic skills through older drill and tutorial software

Summary of your answers:

	Questions:	Your answers:
1	How many students per instructional computer?	**(a)** More than 10
2	How long does it take to receive technical support?	**(a)** Takes several days
3	What percent of instructional rooms and administrative offices connected to the Internet?	**(b)** 50% or more
4	What is the quality of your school's connection to the Internet?	**(b)** Direct connectivity on campus and in some classrooms
5	What is the use and availability of other forms of hardware technology?	**(a)** VCRs, cable TV, projection devices, calculators
6	What forms do delivery and format of professional development take?	**(a)** Trainer-led instruction
7	What percent of the technology budget is allocated to professional development?	**(a)** Less than 10%
8	What is the understanding	**(b)** *100% at adaptation

http://www.iste.org/starchart/results.cfm Page 1 of 3

- **(Tech 14)** Use a checklist to gauge the integration of information technology into the school as a whole. Here are some sample questions:

Technology and Our School – A Question Bank[4]

When information technology is integrated into the total school community, what might an observer notice by touring the school, the library media center, or special areas of the school?

Student behaviors:

- ❑ Students are interested/engaged in learning projects using technological devices and print resources rather than using those devices for games/recreation.
- ❑ Students who are usually disinterested in school are engaged.
- ❑ Students are pursuing their own interests as a part of learning activities
- ❑ Because students are handling multiple data sources, they seem naturally headed in the direction of a problem-solving mode of learning.
- ❑ Students seem to be at ease using a variety of presentation technologies.
- ❑ Students are more focused on using the technology as a tool to further their learning than to "dress up" their projects or assignments.
- ❑ Other:

Facilities:

- ❑ Technology can be accessed from a variety of locations throughout the school. This arrangement allows for simultaneous use of technology by individual students, small groups, and large groups.
- ❑ Needed technologies are consistently available.
- ❑ Print resources and computer technologies are integrated into library media centers and classrooms.
- ❑ Technology is available to learners and teachers before and after school, and at noon, in addition to the regular school hours.
- ❑ Other:

Adults:

- ❑ Teachers, library media and technology specialists are committed to a technology-rich environment and feel comfortable teaching in that environment.
- ❑ Teachers, library media and technology specialists are coaching learners rather than delivering information.

- ❑ Make use of other NETS standards documents and projects. Looking at the ISTE website and the standards page in particular at http://www.iste.org/standards/ will give an idea of a number of ways to assess the impact of technology in a school or district. For more information, read Don Knezek's article about the use of NETS downloadable from the ISTE website at: http://www.iste.org/standards/

[4] For other items that could be added to the list above, consult *NCREL's enGauge: 21st Century Skills: Digital Literacies for a Digital Age*. Naperville, IL: NCREL, 2002.

Helpful Publications for More Measures to Consider

- *NCREL's enGauge: 21st Century Skills: Digital Literacies for a Digital Age*. Naperville, IL: NCREL, 2002.
- Jones, Beau Fly, et. al. *Plugging In: Choosing and Using Educational Technology*. Oakbrook, IL: NCREL, 1995.
- "Technology in Schools: Guidelines for Assessing Technology in Education." A publication of the National Center for Education Statistics, U.S. Dept. of Education, November, 2002. At: http://nces.ed.gov/
- Johnston, Jerome and Linda Toms Barker, eds. *Assessing the Impact of Technology in Teaching and Learning: A Sourcebook for Evaluators*. Ann Arbor, MI: University of Michigan, Institute for Social Research, 2002.
- *Planning for DET (Data-Driven Decisions About Technology)*. Naperville, IL: NCREL, 1999.
- *Technology Counts* - A yearly report focusing on how technology is changing education. At: http://www.edweek.org/sreports/tc02/
- For more resources on assessment, see the web page for the book *Indiana Learns* at http://www.indianalearns.org and http://ideanet.doe.state.in.us/technology

7

TIPS AND TRICKS
And Other Helps Along the Way

This chapter presents some handout-like tips for doing evidence-based practice measures. Some are thinking pieces, others handy lists of tools, and some present techniques. The final two articles trace the creation of the "joint rubric" technique included in the Collaboration chapter.

- **Backwards Planning in Building Teaching Units** – to be used during collaboration, this planning tip puts assessment second in the teacher/library media specialist planning process, right after deciding what state standard will be covered.

- **Three Evidence-Based Practice Strategies** – suggests how and when data might be collected in the normal course of a day. It also recommends that action research might be a vehicle for evidence-based practice data collection.

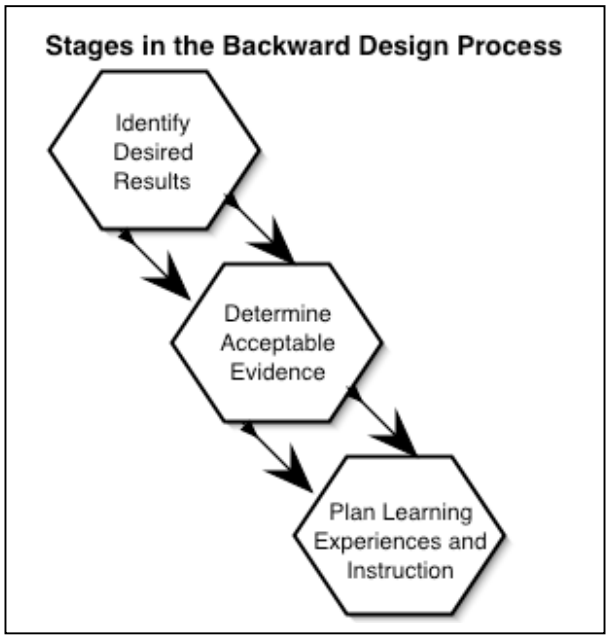
- **Tools to Use** – presents a list of helps in the creation of assessment strategies.

- **Assessment Resources** – concentrates on some national efforts and tools that might help in planning larger assessment programs.

- **Joint Rubrics and the *School Library Journal Experience*** – relates how the "joint rubric" technique came about
    - **School Libraries, Learners, and Assessment** – the rough draft article to *School Library Journal*.
    - **You Need the Library to Meet Standards** – the article as it was finally published in *School Library Journal's Learning Quarterly*.

Backwards Planning in Building Teaching Units

> "To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you are going so that you better understand where you are now so that the steps you take are always in the right direction." (Stephen R. Covey: *The Seven Habits of Highly Effective People*. New York*:* Simon & Schuster, 1989.)



The backward design process is a strategy advocated by Grant Wiggins and Jay McTighe for creating learning experiences.[1] Rather than following the planning model of: set goals, create instructional activities, and assess the results, the two professionals begin at the end – that is, begin with the result, set up evidence of success, and then plan the activities to get there.

Such a model works well with the various state standards documents set out the desired results for every learner and provides the basis for measuring learner progress on high-stakes assessments. To the adults guiding learning, the message is clear: there are a number of ways to achieve the targets and to measure the results, but the state usually expects the standards and the one prescribed measure to happen.

> For example, we could say to learners: "Beginning in Fort Wayne, Indiana and using ground transportation, travel to Evansville, Indiana. Report your mileage using an odometer or mileage listings on a map." The result and the measurement are clear: the routes can be varied. For those not from Indiana, doing this is easy if you start near Chicago and crisscross the state from north to south since there is an Interstate that crosses that direction. However, from Northeast to Southwest is a jagged pattern with many logical options.

If library media specialists and technology leaders are prepared to work with backwards planning and feel at ease with this technique, operating in a evidence-based environment becomes a natural part of instructional planning. Since evidence is expected, professionals can build in data collection tools as a normal part of the everyday routine.

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[1] Wiggins, Grant and Jay McTighe. *Understanding by Design*. Alexandria VA: ASCD, 1998, p. 9

Three Evidence-Based Practice Strategies

As a part of the total school's evidence-based practice, the library media center and technology programs need to contribute their part to ongoing data to assess their impact on student achievement. This can be done using:

- Ongoing data collection instruments (daily, weekly, monthly measures).
- Data from the ongoing data collection to prepare reports or presentations.
- Action research projects (studies within the school or district designed to answer local questions).

Build Ongoing Data Collection Sets and Reporting Procedures

Set in motion various data gathering mechanisms that will monitor operations, program elements, and organizational support for regular analysis and reporting. They can be collected:

- In real time (for example, hits on an online database)
- Periodically (recording collaborations in a log book or database at the end of the day)
- For special projects (a time analysis of various activities on three typical days for a research project)

Evidence-Based Practices at Opportune Moments

There are numerous techniques that allow the professional staff to measure the effectiveness of various program elements as they occur. For example, the use of a special technology to make a new learning experience possible, or student use of online resources as cited in student products, or documenting the amount of learning and success of information literacy strategies in a learning experience. In isolation, a measure may not be impressive, but added to others over time, patterns emerge that provide evidence of impact.

Design Action Research Projects

A more formal approach to data-driven decision making is to conduct actual research projects that address specific questions about the effectiveness of the LMC and technology programs. A school-wide initiative or a grant may require documentation of impact. What we teach learners to do every day can be transformed into action research project design. Note the similarity between a generic information literacy model and an action research project design.

GENERIC INFORMATION LITERACY MODEL	ACTION RESEARCH PROJECT DESIGN
Build a Question	Build a research question; Create a methodology
Find and sort information	Collect data
Consume and absorb the information	Analyze the data
Think and create	Analyze, analyze, analyze
Summarize and conclude	Draw conclusions
Communicate	Report the results
Reflect on process and product	Reflect; Take action

Challenge: Design and carry out a mix of all three strategies as a part of contributing to the entire school's effort for evidence-based practice.

Tools to Use

1. **SurveyMonkey** - a free account allows you to mount a survey up to ten questions but only receive 100 replies. For $20/month, you can have unlimited capacity. Other online survey companies include: Zoomerang; SuperSurvey; Greenfield Online; Infopoll; Perseus; PollCat; Inquisite; Cool Surveys; Survey System; Apian Software; Hosted Survey; SurveyView; StatPac; SurveyGold; Survey Select; InstantSurvey; EZSurvey; Mercator; SurveyCrafter; PollPro; SurveyHeaven; Surveywire; ObjectPlanet; SurveySaid; mantaINSIGHT; Active Websurvey; SumQuest; CustomerSat; StatSurvey; SurveySite; QuickSense; SurveyTrends; LiveSurveys; InSite

2. **Venn Diagram Maker**: http://www.venndiagram.com/ - a free resource to help students create and learn what Venn diagrams are.

3. **Inspiration; Kidspiration**: http://www.inspiration.com/productinfo/index.cfm - This software can be used for assessment as well as all its other units. What do learners really understand after a unit of instruction. They create graphic organizers to demonstrate what they know and understand.

4. **Timeliner; The Graphics Club**: http://www.tomsnyder.com/ - two well-known programs to help students do data analysis and can be used to show library media center data about our programs.

5. **Rubric Builder**: http://landmark-project.com/classweb/tools/rubric_builder.php3 **Rubistar**: http://rubistar.4teachers.org/index.php - both free products can assist teachers and library media specialists in creating joint rubrics.

6. **NoodleTools:** http://www.noodletools.com/ - a group of very useful tools for kids, teachers and library media specialists in the teaching and assessing of information literacy.

7. **TeacherWebQuest:** http://teacherweb.com/TWQuest.htm - – free web quest creation site.

8. **TeacherWeb.com** - a website hosting organization $3.95 per month – one solution to tech problems and policies at school?

9. ***Power Research Tools: Learning Activities and Posters***. By Joyce Kasman Valenza. Chicago: American Library Association 2002. - A companion to *Power Tools,* this toolkit gives an array of devices—including activities, questionnaires, handouts, sample communications, student organizers, and even posters—that will equip library media specialists with tools to teach information literacy.

10. ***Action Research: A Guide for the Teacher Researcher*** (2nd Edition) -- by Geoffrey Mills. Prentice Hall; 2nd edition (April 24, 2002) – A useful book in designing and carrying out action research projects in a local school.

11. ***Impact! Documenting the LM Program for Accountability*** – by Nancy A.S. Miller. Hi Willow Research & Publishing, 2003. This template for Microsoft Excel asks the library media specialist to spend 10-15 min. recording information about each research project in the LMC and then it draws amazing presentation graphics and does many statistical analyses.

12. ***Build Your Own Information Literate School*** – by Carol Koechlin and Sandi Zwaan. Hi Willow Research & Publishing, 2003. This volume not only covers techniques for teaching information literacy but includes hundreds of ideas for assessing those skills.

Assessment Resources

Numerous techniques have been developed to assist in measuring the impact of educational programs and initiatives on learners and learning communities. The variety spans various sophistication levels and research methodologies. The emphasis in recent years has been toward more objective and scientific methodologies. However, human factors and ethical considerations do not allow us to treat learners as laboratory animals in our quest for predictive strategies that work. On this page, a few helpful resources for the more serious researcher are listed.

- Data in a Day (DIAD) is a 24-hour process through which a school can involve their entire community in a self-study. It is flexible and can be adapted for many purposes; it focuses on teaching and learning in the classroom, relies heavily on student voice, and has the potential to involve the entire school community. A complete description can be found in *Look Who 's Talking Now: Student Views of Learning in Restructuring Schools.* (Kushman, 1997) Also at: http://www.ael.org/rel/quest/dataday.htm

- Sagor, Richard. *Guiding School Improvement with Action Research*. Alexandria VA: ASCD, 2000. A guide to building local research studies for higher reliability and to feed sound decision-making.

- *Analysis of Process* – a technique of rating the conditions needed to enhance the organization's impact on teaching and learning. Created by Jim Cox, this technique and instrumentation is available through the Technology Information Center for Administrative Leadership (TICAL) at: http://www.portical.org/d3mtools.html (see "Identifying program elements to improve student achievement" under the Data Driven Decision-Making Tools)

- Porter, Bernajean. *Evaluating Student Computer-based Products: Training and Resource Tools for Using Student Scoring Guides*. Sedalia, CO: Bernajean Porter Consulting, 2001 – Provides extensive assistance in developing thorough rubrics to rate the learning contained in student products.

Joint Rubrics and the *School Library Journal* Experience

When Evan St. Lifer, editor of *School Library Journal* asked Blanche Woolls and David Loertscher to edit an edition of *Learning Quarterly*, their supplement to *School Library Journal,* we were most happy to accommodate. There were to be only four articles in the brief issue and one of them was to connect school librarians directly to student scores.

Not knowing many school librarians that actually assessed student learning at the learner level, David contacted Peter Milbury who was kind enough to put a query on LM-Net. Was anyone out there assessing student learning of library media center research projects using joint rubrics with teachers? The response was quick – over 20 responses from 11 states.

What developed was the joint-rubric technique described in the collaboration chapter of this book – a pebble in the pool – a tremendous asset to the evidence-based practice repertoir.

The technique is a simple one – for any LMC-based project, the teacher and the library media specialist create a joint rubric assessing the agendas of both partners. Both content and information literacy are assessed on a single rating document. These are not separate documents, we must stress, they are put together for a very important reason.

As this technique was developed for this book, it has become apparent that what we want to ask teachers for is just 10 points. We need 10 points of a normal 100 point research assignment – the difference between an A and a B or a B and a C. This is a very powerful addition to assessment – the ability to raise any kid's grade one letter if they do well in the LMC.

The following two articles are supposedly one and the same. The first is a rough draft sent to *Library Journal* giving many quotes from the various respondents. It is reprinted here to give credit to the many who participated, and their comments are indeed instructive. The second article is the edited version that actually was published in *Learning Quarterly*. Quite different, but interesting in its own right.

School Libraries, Learners, and Assessment

A Rough-Draft Article Submitted to *School Library Journal*

By David V. Loertscher

Myths abound about the value and contribution of school libraries: that their function is solely support and supply, that they are baby-sitting facilities, or a place to fill in worksheets – taking a break from the real teaching going on in classrooms.

In a day of assessment and achievement, we cannot afford an expensive program such as library media centers to even hint at such myths. In truth, librarians are responding rather well when called upon to concentrate on learners and learning.

If a teacher moves a learning experience from the classroom into the library, the first benefit to accrue is the move from a relatively poor to a rich information-rich and technology-rich environment. In the day of the uncontrolled Internet – 99% of which is data smog, the move would be very beneficial to the learner. But, there are other major benefits coming to a teacher. The first, of course is a professional partner (assuming a fully credentialed librarian with both teaching and library credentials as required in most states). That person will seek to insert three value-added components to a learning experience within the rich information environment. These three components provide insurance that a standards-based curriculum can be implemented in ways not possible in the classroom alone. Figure one shows the three value-added components of information literacy, enhancing learning through technology, and maximizing the amount learners read.

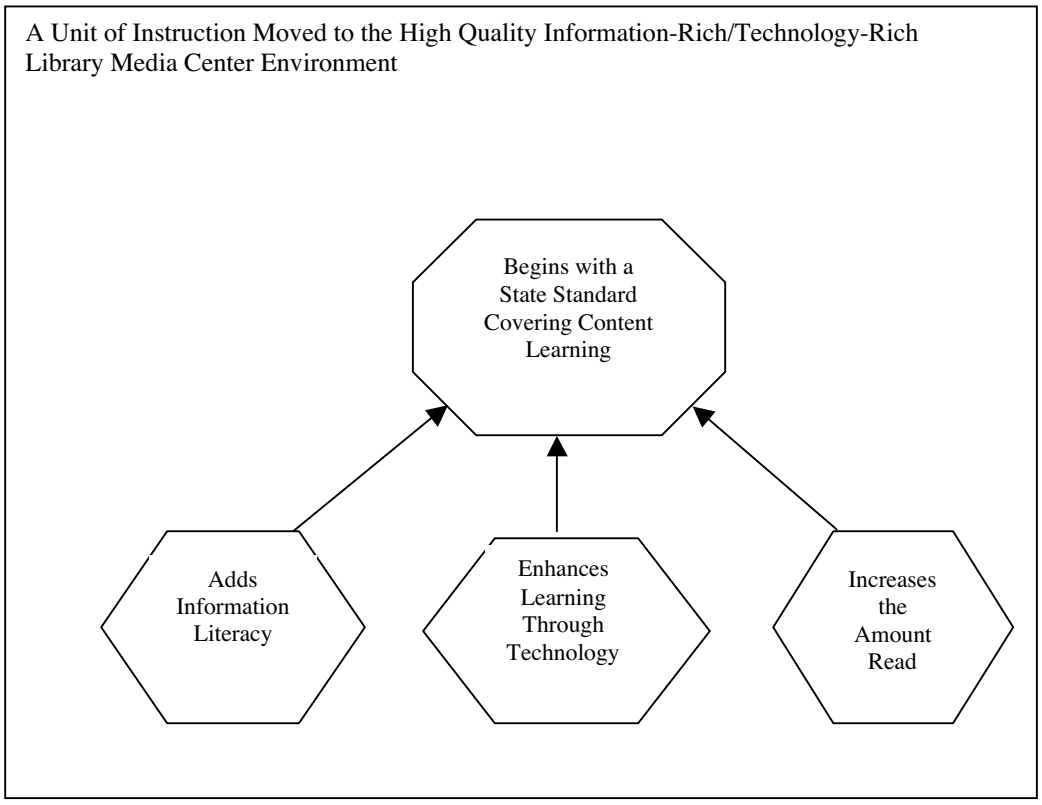

Fig. 1

Instead of concentrating on the teaching of both the teacher and librarian's agendas, what happens when the focus the combined classroom/library turns to the learner? That is, as we lead the "horse to water," instead of concentrating on the water trough full of water, what happens when we begin to analyze how much water is drunk and its benefits to the health and welfare of the horse?

One popular way to do this is to create a set of rubrics for the learner – detailed expectations of what the learner is to know, understand, and demonstrate during a learning experience. Generally, these rubrics are created to measure content knowledge as described in a set of state standards.

We wondered what would happen if the teacher and the librarian enlarged the view of rubrics to include both the expectations of the classroom but also the expectations of the librarian. What would happen to the amount learned? Learner behavior? Teacher-librarian collaboration? Accordingly, the authors put out a national notice asking school librarians around that country to comment on what happens when the focus of the school library media program turns to achievement at the learner level.

Responses came from many sections of the country from seasoned professionals who have moved their focus to learning because their schools as a whole were doing the same. It became obvious to us as we began to read their comments that we had tapped seasoned folks who have seen the gamut of activities in their libraries. They have experienced hundreds of requests to work in the library "just to get out of the classroom;" to provide low-level library worksheets; to provide busy work for "quicky" research reports that really don't count toward the class grade. Those are the bad and the ugly nonsensical requests. Recently, however, many librarians have complained that teachers are not bringing their classes to the library at all because they felt too pressed to meet state standards.

Not to be denied, librarians have risen to the occasion saying clearly that "if you bring your learning experiences to the library, your scores will be higher than if you remain in the classroom." Here are their responses in three critical areas.

1. **If the teacher and the librarian plan a learning experience that begins with the state standard and then creates a rubric that measures: content knowledge, skill in information literacy, how technology contributed, and how much reading was done, what happens to the behavior of the learner?**

    - What is assessed is valued.[2]
    - Learners no longer consider classroom/library work as "blow off" classes.[3]
    - The clever addition of using appropriate technologies increased learner interest and motivation[4]
    - Students could see in advance exactly what they needed to accomplish and how they would be graded.[5]
    - Learners see themselves as successful researchers and active info-seekers on their own behalf.[6]

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[2] Debbie Abilock, Assistant Head, The San Francisco School, San Francisco, CA
[3] Kathy Boguszewski, Wisconsin
[4] Ann B. O'Neill, Franklin High School
[5] Candice Irby, Bakersfield CA
[6] Alice Yucht, Heritage Middle School, Livingston NJ

- Learners appreciate clear tasks and expectations and feel more comfortable with completing the task.[7]
- That both teachers and librarians find the combination of both their agendas a fascinatingly complex and never-ending task.[8]
- Collaboration/assessment allowed the creation of real-world problems that fascinated learners who could then share their findings with an authentic audience.[9]
- Learners loved the fact that new information they discovered raised their image as a "scholar" and this feeling extended beyond those who were college bound into non-academic pursuits.[10]
- Learners could handle "real" tasks (example: the design of a fitness center based on human fitness research)[11]
- A major decrease in procrastination since there were daily benchmarks.[12]
- Learners recognized authenticity and faced their work with increased engagement and seriousness of purpose.[13]
- Learners were dashing into the library with gimmie information! Gimmie information! Books were flying all over the place.[14]
- Rubrics gave the learners focus, they knew how to proceed, and they were more successful and felt more successful.[15]
- Learners discovered they needed a high level of technology and information literacy skills rather than their shallow expertise at emailing and instant messaging.[16]
- The most marked change in our students were from those reading at or below reading level.[17]
- We could and did supply resources for every level of reader both in print and from the web.[18]
- Over time, learner enjoyment and challenge has allowed us to seek improved projects every year using increasingly more sophisticated technology.[19]
- Learners who could write a good essays, but flunked the citation of sources, quickly turned that behavior around.[20]
- Learners began to realize that the library online databases were superior to just using general search engines.[21]
- We found learners more engaged, able to make real world connections, and able to write persuasively (they investigated the school heating system in the school)[22]
- Learners suddenly were able to notice trends using bar graphs, they were comparing data, accepted independent accountability (no looking over at your

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[7] Judy Barnett, Wasson High School, Colorado
[8] Barbara Barrett and Gregory Taylor, Boise Schools, Idaho
[9] Kathy Boguszewski, Wisconsin
[10] Kathy Boguszewski, Wisconsin
[11] Candice Irby, Bakersfield CA
[12] Candice Irby, Bakersfield CA
[13] Debbie Abilock, San Francisco, CA
[14] Debra Balsam, Arlington Public Schools, VA
[15] Dorcas Hand, Annunciation Orthodox School, Houston, TX
[16] Barbara C. Falkinburg, Hereford High School, Baltimore County Schools, MD
[17] Sharon Grimes, Lansdowne Elementary School, Baltimore County School, MD
[18] Sharon Grimes, Lansdowne Elementary School, Baltimore County School, MD
[19] Karen White, Durham, ME
[20] Kathy Pinasco, Liddell Elementary School
[21] Linda Whinnery, Bell Jr. High School, San Diego CA
[22] Dr. Kim Ports and Nancy Reed, Dogwood Elementary school, Baltimore County Public Schools, MD

neighbor's paper) and it all caused the teacher and the librarian to discuss how to make learning experiences even better.[23]

- Learners created more creative and professional products, were aware of the sources they had used, and were critical of the current ness and credentials of the web sites.[24]
- Learners responded to being assessed on the quality of the sources they used rather than the amount.[25]
- A student's time in school is precious and cannot be filled with useless drills.[26]

Longer quotes from the librarians point to the value that joint assessment of learning produced:

> "As a result [of building these kinds of rubrics], when the written component of their project was compared to the Benchmarks that students had completed two weeks prior to the beginning of our unit, eight-one percent of the students reading at or below grade level achieved a significantly higher score. The transition from passive recipient of knowledge to co-users of information to create new knowledge and products in almost palpable."[27]

> "Our school has done action research which showed that by combining information literacy skills, technology, and essential questions, students are more motivated and learn the information more readily."[28]

> "When we measure what a student has or hasn't learned vis à vis an assessment tool, we have fairly objective data as the basis for why and how we do what we do. If students aren't learning, we need to change what we're doing either as individuals or teaching partners. Only if we partake of the assessment process can we ever really know the real outcome of what we do as information specialists.[29]

2. When the teacher has accepted measurements of assessment to include LMC concerns on formation literacy, technology, and reading, what changes in the way a learning experience is designed?

Respondents were very clear that when the assessment changes suddenly the agendas of both the teacher and the library media specialist merge. Here were some of the changes they noticed immediately:

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[23] Jane Scott, Franklin Elementary School, Baltimore County Public Schools, MD
[24] Elizabeth Shapiro, Perry Hall High School, Baltimore County Schools, MD
[25] Becca Smith, Blue Valley West High School, Kansas City MO
[26] Patricia R.Simon, Johnnycake Elementary School, Baltimore County Public Schools, MD
[27] Sharon Grimes, Lansdowne Elementary School, Baltimore County School, MD
[28] Lori Chubb, Library Media Specialist, James H. Harrison, Education Specialist and Jacelyn Smallwood, Second Grade Teacher, Prince Georges County Public Schools, MD
[29] Candice Irby

Patterns Within the Partnership

- The collaboration turned to a partnership rather than teacher and resource person.[30]
- The amount of collaborative planning went up with attendant benefits.[31]
- Caused the teacher and the librarian to develop lessons based on essential questions.[32]
- Both rubrics and resources could be added to the library web page so both students and parents could access them from home.[33]
- It helped teachers realize that information literacy skills could be applied across various subject areas – not just the lesson at hand.[34]
- Allowed the introduction of newer learning activities such as Research Modules and Web Quests.[35]

Patterns of Working with Learners

- Learners could be led to higher quality databases rather than just Yahoo.[36]
- Learners could be taught to recognize bias in sources – that many web sites have agendas.[37]
- It forced both partners to jointly evaluate the success of the learning experience and to plan for future improvements.[38]
- More time was given to each learner or groups of learners to guide them through the experience (two heads were better than one)[39] More learners were reached successfully.[40]
- It resulted in a better student product which in turn equated to better student learning.[41]
- The learning experienced turned student attention to a broader range of learning tasks and they performed in the direction expected.[42]
- Projects were designed and modified in such a way that all the rubric skills could be incorporated.[43]
- The assignments became more authentic causing the learner to understand that learning does not take place in isolation either in school or in life.[44]
- Students could be led to multiple rather than single sources for their information.[45]
- Learners actually gained respect for print sources over web resources at times.[46]

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[30] Ann B. O'Neill, Franklin High School, Baltimore County Public Schools, Baltimore, MD

[31] Sharon Grimes, Lansdowne Elementary School, Baltimore County Schools, Baltimore, MD

[32] Dr. Kim Ports and Nancy Reed, Dogwood Elementary school, Baltimore County Public Schools, MD

[33] Judy Barnett, Wasson High School, Colorado Springs School District Eleven, Colorado Springs, CO

[34] Jane Scott, Franklin Elementary School, Baltimore County Public Schools, MD

[35] Elizabeth Shapiro, Perry Hall High School, Baltimore County Schools, MD

[36] Jennifer Hardison, Creative, Performingand Media Arts Middle School, San Diego City Schools, San Diego, CA

[37] Jennifer Hardison, Creative, Performing and Media Arts Middle School, San Diego City Schools, San Diego, CA

[38] Kathy Boguszewski, Wisconsin

[39] Kathy Boguszewski, Wisconsin

[40] Debra Balsam, Arlington Public Schools, VA

[41] Candice Irby, Highland High School, Bakersfield CA

[42] Debbie Abilock, San Francisco, CA

[43] Dorcas Hand, Houston Public Schools, TX

[44] Julia Critchfield, Beville Middle School, Prince William County Schools, VA

[45] Karen White, Durham Elementary School, Durham, ME and Kathy Pinasco, Liddell Elementary School, Durham, ME.

[46] Kathy Pinasco, Liddell Elementary School

- Plans were made to develop more background knowledge before learners launched forth into the research.[47]
- "No more tired old book reports! No more photocopied, cut and pasted web pages disguised as finished projects! Instead… high quality products."[48]
- Led to strategies where learners realized there was no longer only one way to find an answer.[49]
- Strategies were created where students could demonstrate their synthesis and ethical use of information found.[50]

3. When library media specialists get involved in measuring at the learner level, are teachers more accepting of what the LMC has to offer?

Librarians were loud in their answer to this question: Absolutely,[51] extremely accepting,[52] we're indispensable,[53] we're on the right track![54]

- Librarians finally become a true partner in teaching and learning rather than just a support person;[55] active, not passive participants.[56]
- By team teaching, each person uses their own strengths to improve the experience.[57]
- Learners were becoming information literate because they were being taught the minute they arrived in the school until they moved to another school or graduated.[58]
- It forced both teaching partners to recognize both strengths and weaknesses in the instructional delivery. We could no longer say: "We taught it, they just didn't learn it."[59]
- The likelihood of reaching a common goal increases.[60]
- When the teachers accept the librarian as partner, they in turn expect more of the students and the students learn more.[61]
- Frankly, I was not involved at the learner level previously, I knew what information I wanted to give students and I let the classroom teacher pick up the pieces while I charged ahead. Things are different now.[62]
- "We are in the process of doing a data analysis for this first year of our program, tracking the number of hours of integrated instruction, the ways we are integrating technology into instruction, the time spent in collaboration with the teachers at each grade level, and so

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[47] Lori Chubb, Library Media Specialist and Jacelyn Smallwood, Second Grade Teacher, Prince Georges County Public Schools, MD

[48] Dr. Kim Ports and Nancy Reed, Dogwood Elementary school, Baltimore County Public Schools, MD

[49] Patricia R. Simon, Johnnycake Elementary School, Baltimore County Public Schools, Baltimore, MD

[50] Becca Stith, Blue Valley West High School, Blue Valley School District, Overland Park, KS.

[51] Jennifer Hardison, Creative, Performingand Media Arts Middle School, San Diego City Schools, San Diego, CA

[52] Ann B. Oneill

[53] Sharon Grimes

[54] Dr. Kim Ports and Nancy Reed

[55] Ann B. Oneill

[56] Kathy Boguszewski, formerly Milton School District, Milton, WI, now Wisconsin Department of Public Instruction.

[57] Judy Barnett

[58] Kathy Boguszewski

[59] Judy Barnett

[60] Debbie Abilock

[61] Karen White

[62] Linda Whinnery

on. We hope to be able to make a correlation between those statistics and student achievement, and to track that correlation over time."[63]

- "I do not add to their work load. I share the work load and in some cases lessen it."[64]

Staffing of the library media program is a major determiner of just how much time a librarian can spend teaching and assessing. Those without clerical and technical assistance (people who can keep the library organization operating) find their impact spotty, whereas, those with support staff were spending the majority of their day teaching. It is not difficult to predict which programs are making the most difference. The false sense of economy that "we just can't afford support staff" actually renders the million-dollar investment in the library almost null. It's as if the hospital has been built, the equipment installed, and one person will be doing everything – admitting, operating, nursing, and cleaning. A few patients will be saved, the rest must fend for themselves.

Everyone in education looks for quick fixes to problems that plague low test scores – strategies that will produce instant success. Listening to the librarians and teachers reporting for this article, the authors were convinced that we have struck on a basic idea – as basic as any we have encountered.

What is that fix? Here are the steps:

- Build an information-rich and technology-rich environment (the library media center)
- Staff the library with a professional TEACHER-librarian, clerical and technical personnel (the latter to "run the operation" allowing that teacher librarian to teach).
- When a teacher and the librarian collaborate on a learning experience, they first begin with the state standard.
- Next, the team builds a rubric that assesses content, information literacy, the contribution of technology, and the amount of reading learners do during the learning experience.
- Learners become aware of exactly what they are expected to learn and be able to do in the information-rich and technology-rich environment.
- Both the teacher and the teaching librarian co-teach the learning activities.
- Both partners assess how well students meet the state standard through the rubrics.
- The partners realistically assess their own success and modify their strategies as needed.

All the librarians, no matter their staffing levels can do a few of these expanded experiences over the year. Those with larger staffs can devote the majority of their time to such activities. If, for example, support personnel were to cost a school $30,000 per year in salaries and benefits allowing the number of effective teaching experiences to increase exponentially, then it would seem that we have hit upon a very const-effective method of boosting achievement. Suddenly, the huge investment in print materials, technology, and space for the library begins to pay huge dividends. It is a "fix" worth considering.

Will it work at your school? The answer is quite simple. By adding up these high quality collaborative learning experiences one by one by one – at some point, the impact begins to show, particularly when such experiences extend across the faculty, across the departments, and across the grade levels. How many of these transformed experiences will it take? We think you will know as you begin to count them one by one and the learning climate of the school improves.

One respondent said it all: "Teachers who observe directly the power of good library programs never want to return to the days when librarians only wanted the books on the shelves."[65]

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[63] Dr. Kim Ports and Nancy Reed
[64] Patricia R. Simon

And… What got Published:

You Need the Library to Meet Standards

By David Loertscher & Blanche Woolls --
6/1/2003
Learning Quarterly (a supplement of School Library Journal), Spring issue, 2003

Librarians recently reported a baffling paradox: Some teachers are avoiding their school library to focus on state standards solely in the classroom.

School libraries are not baby-sitting services. They're not places to fill out worksheets. And they're not places for simple support. Today, when assessment and achievement matter, expensive school library programs can't afford to substantiate those myths. If anything, school libraries are a place where teachers and librarians can work together to meet and surpass those state standards. Students are invigorated, learn to think more critically, and expand their research skills.

"Teachers who observe directly the power of good library programs never want to return to the days when librarians only wanted the books on the shelves," said Dorcas Hand, a librarian from the Houston Public Schools.

When a teacher moves from the classroom into the library, the first benefit is the technology-rich environment. The librarian, especially one who is fully credentialed, is a professional partner who can navigate through some of the data smog emanating from the Internet and other information sources.

The librarian will assist the teacher in achieving state standards in three ways not possible in the classroom. The components include: adding information literacy, enhancing learning through technology, and increasing the amount read by students.

Focusing on the Learner

Rather than concentrating on the agendas of the librarian and the teacher, what happens when the focus turns to the learner?

One popular way to understand this concept is to create a set of rubrics—detailed expectations of what the learner is to know, understand, and demonstrate during a learning experience. Generally, these rubrics are created to measure content knowledge as described in a set of state standards.

We wondered what would happen if the teacher and the librarian enlarged the view of rubrics to include both teacher and librarian expectations. What would happen to the amount learned? Learner behavior? Teacher-librarian collaboration? To find out, 26 librarians from across the country, including some of their teacher partners, were

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[65] Dorcas Hand

surveyed and asked to comment on what happens when the focus of the school library media program turns to achievement at the learner level.

It became obvious as we read their comments that we had tapped seasoned professionals who have seen it all. They've had hundreds of requests to work in the library "just to get out of the classroom." They've also been asked to provide busy work for "quicky" research reports. More unsettling, librarians reported that teachers, feeling pressed to meet standards, are avoiding the library. It was clear from the respondents that if teachers brought their learning experiences to the library, scores would be higher.

"Library media programs with accountability and assessment as integral components support, promote, and even accelerate overall student achievement," said Ann Mausbach, assistant superintendent for curriculum and instruction for the Liberty (MO) Public Schools. "Library media specialists must identify instructional needs, measure progress, and monitor and adjust for improvement."

Dramatic Results

A number of things happen when teachers and librarians team up to create a rubric that measures content knowledge, information literacy skills, the contributions of technology, and the amount of reading that was done.

Going to the library no longer is seen as a blow-off class, but rather a place where students are more interested and motivated, librarians said. Students see themselves as successful researchers. They also discovered there is more to information literacy skills than instant messaging and e-mailing. Students were more confident and successful, with those students reading at or below level experiencing the most improvement. Students were surprised to learn library online databases were superior to general search engines, and were more critical of Web sites.

"When we measure what a student has or hasn't learned vis-à-vis an assessment tool, we have fairly objective data as the basis for why and how we do what we do," said librarian Candice Irby of Bakersfield, CA. "If students aren't learning, we need to change what we're doing either as individuals or teaching partners. Only if we get involved in the assessment process will we ever really know the real outcome of what we do as information specialists."

True Partners

Respondents reported that when the assessments of the teacher and librarian were combined, their agendas were more aligned. The teacher and the librarian developed lessons based on essential questions. The rubrics and the resources were added to the library Web page to allow students and parents access from their homes. Teachers realized that information literacy skills could be applied across various subjects, not just the lesson at hand.

Partners could then evaluate the success of the learning experience and plan for future improvements, librarians said. Librarians gave more time to each student to guide them through the experience. The assignments became more authentic, helping the learner understand that learning does not take place in isolation in school or in life. Students also began to see the value of print sources relative to Web resources. Tired book reports and printed Web pages gave way to higher quality products utilizing critical thinking skills. Students realized there was more than one way to find an answer.

Teachers were more open to librarians being true partners in the teaching and learning process, rather than just filling a support function. By team teaching, both librarians and teachers were able to utilize their strengths resulting in an improved learning experience for the student.

The Effects

Librarians without clerical and technical assistance find it nearly impossible to have an impact. Without adequate support staff, the million-dollar investment in the library is nullified. It's as if the hospital has been built, the equipment installed, and one person is doing everything—admitting, operating, nursing, and cleaning. A few patients may be saved; the rest are on their own.

All librarians, regardless of staffing levels, can do a few collaborative programs to enhance learning during the year. Those with larger staffs can devote the majority of their time to such activities. If, for example, support personnel costs a school $30,000 annually in salaries and benefits, allowing the number of effective teaching experiences to increase exponentially, then that school possesses a very cost-effective method of boosting achievement. Suddenly, the huge investment in print materials, technology, and space for the library begins to pay huge dividends.

Will it work at your school? By adding up the high-quality collaborative learning experiences one by one, the impact begins to show, particularly when such experiences extend across the faculty, departments, and grade levels.

Implementing library-based learning

- Here are some suggestions for implementing a successful teaching program using library-based learning.
- Build an information- and technology-rich environment in the library.
- Staff the library with a professional teacher-librarian and clerical and technical personnel (the latter to "run the operation," allowing the teacher-librarian to teach).
- When a teacher and librarian collaborate on a learning experience, they begin with a state standard.
- Next, the teacher and librarian build a rubric that assesses content, information

literacy, the contribution of technology, and the amount of reading students are required to do during the learning experience.

- Students become aware of exactly what they are expected to learn and do in an information- and technology-rich environment.
- The teacher and teacher-librarian co-teach.
- Both partners assess how well students meet state standards through the rubrics.
- The partners realistically assess their own success and modify their strategies.

8 PRESENTING THE EVIDENCE

Presenting the evidence to whom, when, where, and how needs to be planned far in advance. When the author and Keith Lance teamed up to write *Powering Achievement*,[1] we decided to create a number of PowerPoint presentations and several brochures that could be presented in one minute, five minutes, and 15 minutes plus a number of discussion questions that might engage conversation. For that book, we had a body of evidence that could be presented. The data were there, the results in.

For this book, the reader has to do the tough work of building a program and integrating measurement into that program before presentations can be made. Many library media professionals are not certain they have lots to present because they have not collected the kind of stats that link them to achievement. They are probably right. Making the statement that "I'm helpful to everyone that seeks or asks" – is insufficient to warrant mention. Yet, we have a long history of accreditation visits in most every school and have had to make efforts over the years at collecting some sort of data to meet accreditation guidelines. True, most of those data were at the organization level and were done in a big push effort every few years. So, some measurement is in our repertoire. Now times have changed and we must also.

A number of years ago, the author compiled a book entitled *Collection Mapping for School Library Media Specialists*.[2] In chapter four of that book, the author created the graphic shown on the next page. It's purpose was to show the copyright dates of materials on a common topic – in this case, the near East. Card catalogs were still popular then, so the author suggested going to the shelf list and tick marking the copyright dates of materials in appropriate Dewey numbers. Then a bar chart of the copyrights was superimposed on a map of the Near East. The result is a graphic that exposes the weaknesses of the collection.

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[1] Lance, Keith and David V. Loertscher. *Powering Achievement: School Library Media Programs Make a Difference: The Evidence*. 2nd ed. Hi Willow Research & Publishing, 2002.

[2] Loertscher, David V. *Collection Mapping the the LMC: Building Library Media Center Collections in the Age of Technology*. Hi Willow Research & Publishing, 1996.

NEAR EAST

1940s	1950s	1960s	1970s	1980s
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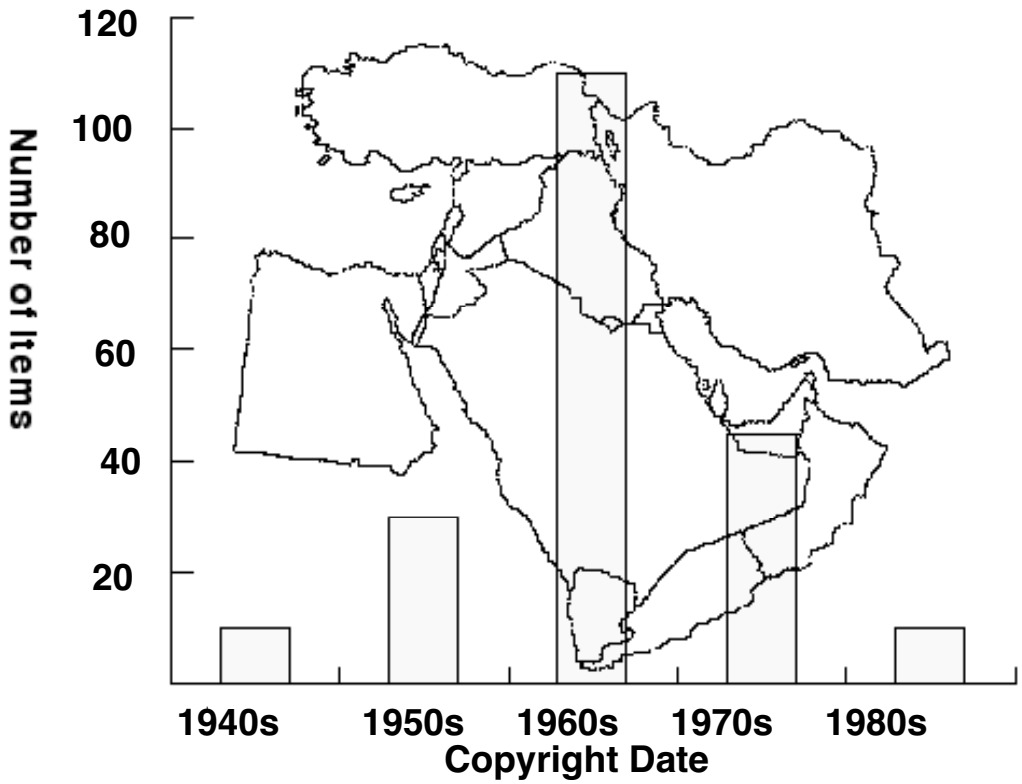


Today, even though that measure is at the organization level, it stands as an excellent example of an affective evidence-based practice measure. Not long after the publication of that book, the author would receive notes and thank you's at conferences for the idea. Professionals in the field had adapted the idea to their own collections, created presentations to their boards using it and had successfully come away with collection renewal monies. The largest amount ever reported to the author was $3 million dollars.

Why is such a simple graphic effective? I have always thought it so because it is so simple, can be interpreted by anyone outside our field, and takes about 15-30 seconds to understand. We simply put up the graphic and ask the audience, "If you were trying to write a report out of this collection, what topic would you choose so that you would have a lot of information?" Certainly nothing current. Perhaps a historical paper about the Near East from the perspective of the 1960's.

Making an effective presentation gets us into the fields of advocacy, advertising, public relations, propaganda, logic, creativity, and probably just a good gift of gab. We are bombarded by good and effective messages every day of our lives. We are also deluged with junk. It would stand to reason that we could produce a good clear message about our contribution merely by copying some of the ubiquitous ideas around us.

I think we are probably too timid – too sure that our contribution is appreciated and valued, when it really isn't. So we whine: "Nobody understands what we do." As Ross Todd often says to audiences, "Get over it!" Attention is the new currency of the 21st century. We have to yell at least as loud as any other educational program to be heard.

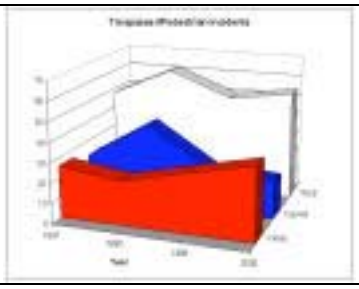
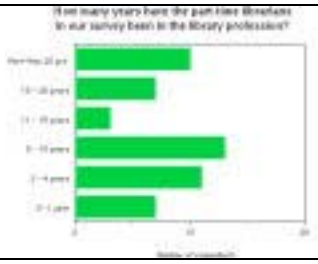
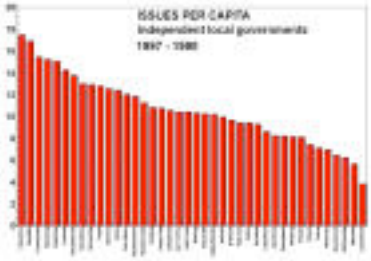
I have proposed banner signs at the door of the library media center something like: "Enter at your own risk! Your scores will go up!" Audiences get shivers when I tell them to announce to the faculty as a whole: "Any teacher who collaborates with me this year will have higher scores!" Is it because we don't believe it ourselves? Are we too timid? Or what?

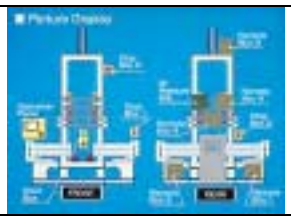
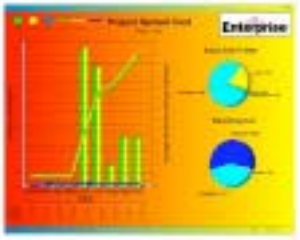
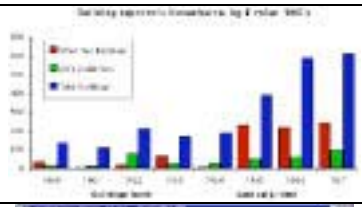
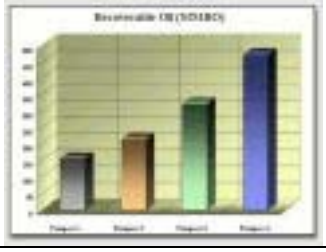
When you have something to show and tell, do it - to parents, administrators, teachers, legislators, business partners — about anyone who will listen. And tell them often. I often remember Grace Donoho in Arkansas who was a very creative library media specialist. Every month, she had an article in the local community newspaper about something good going on in her school – always mentioning the contribution of the library media center and the principal by name. Casting her bread on the waters paid BIG dividends.

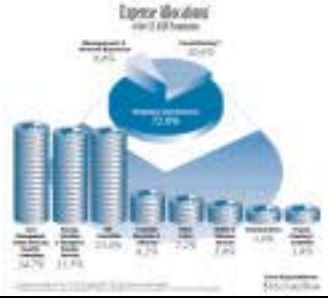
Building a Repertoire of Effective Messages

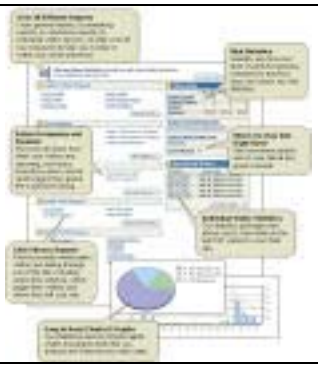
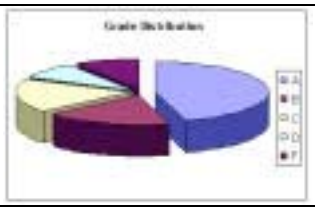
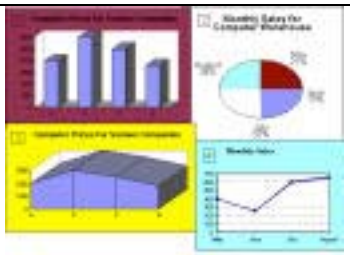
One could take a class in effective message building or attend an Excel spreadsheet class that would concentrate on creating graphs and charts from data. Those are both good ideas, but we all can pay attention to effective messages every day and copy the best ideas for our presentations. On the following pages are examples drawn at random from a Google search of "charts and graphs" with commentary for each. Remember that a good message will be:

- Simple
- Interpretable by a non-library audience in 15-20 seconds or less
- Striking
- Created with as few words as possible
- Significant (it will communicate something important about our impact)

	Use a graphing function connected to a spreadsheet such as Excel to show perspective of several trends in a single graphic.
Sometimes a simple bar chart is sufficient	
	To show a trend over time either up or down, lots of data elements give a dramatic picture of solid decrease or increase.
Simple bar graphs showing a trend is often sufficient.	

	This example is too busy to really understand, however, the use of pictogram elements is effective.
Snappy graphics associated with a simple message are often very effective.	
	You don't always have to use pictures to make a simple statement.
Colorful helps, but this one in bright oranges and yellows may distract and too many messages on a single graphic will confuse the audience.	
	Comparisons of three schools or techniques can be used to show superiority of one method.
	Graphing packages often have a variety of views of the same data. Check out the options to find one that presents the message the most effectively.
A simple trend is often the best.	

	The common pie chart is very understandable to most audiences.
	Effective graphical elements that match your topic increase the message's effectiveness.
	If you really want to get fancy, you'd look like a business executive who has in-depth expertise. Perhaps that is your message – you know what you are talking about.
Don't go overboard just because you have a computer that will do something like this.	
	Pictograms are effective.
Combining pictures with a bar chart can work, but this is too busy.	

	Too busy. Don't bother.
Color can be very effective. (bright orange pie; blue upper background; green background below)	
	How true!
A rotated pie can be quite effective.	
	A simple comparison bar chart can show an element of your program as compared to the other schools in the district over time. You started from behind (the dark bars, but left them in the dust!
Remember that the same data will produce different effects when graphed.	

	Good graphic. Too many words.
The ubiquitous line graph might just be your best choice.	

Certainly library media specialists who are in schools where "death by PowerPoint" is a virus, will develop a repertoire of what's good and what's not in that medium. When a student shows a creative product, perhaps we have that learner create a presentation for us.

Look for Good Examples in the Library World

The American Library Association always has some advocacy or public relations program going on. They often have ready-made messages that can be used free of charge or can be purchased from their graphics catalog. See them at http://ala.org

One high school librarian I know in Texas used the idea of the READ posters that ALA produces and created ones of their own featuring the popular kids in their high school. Every year they had an unveiling that drew huge crowds. I remember one of the basketball star of the school standing on his head reading his favorite book. It was life size and had been reproduced at Kinkos.

The author has also been building advocacy pieces for school librarians to use as idea starters. See "advocacy" at http://www.davidvl.org We were looking for some Spanish language materials and various graduate students at San Jose State were able to locate a number of them for posting.

Don't forget the web pages of your state library and your various professional organizations – even if these are not in the library field. They will often have presentations that could be modified to fit your message. "Harvest" ideas.

Nancy Miller's *Impact: Documenting the LMC Program for Accountability* (Hi Willow, 2003) draws some wonderful presentation graphics when you have entered in data regarding your collaborative projects in the LMC.

Who Will Hear Your Message? Who Will Listen?

For years, school library media specialists have tried to become active in lobbying efforts for state legislatures. My own graduate classes visit their legislators as part of the school library administration class. These are interesting experiences as people try to make appointments, prepare effective messages, and deliver them in person. We have often found that a "thank you" for funding often surprises the recipient since the usual pitch is for more money. When California school librarians successfully held their line in the state budget over opposition, I was convinced that when the legislative horse-trading in the "smoke-filled rooms" occurred, someone in the room said NO when the budget line came up for elimination – someone must have had a personal visit from one of our professionals and knew that our money went directly to kids and that it had a direct impact on literacy.

But there is another group that must hear our message – the policy makers. Who are they in your school; in your district; or in governments? They have power because they make the general rules and guidelines.

One popular funding technique is the trickle-down theory. Give money to the local units with no strings attached and they can spend it more wisely than can bureaucrats at the state or federal level. In such a climate, your message must be powerful at the local level to get any piece of the pie. California is a good example of why trickle down does not work. In the first place, in the poorest schools where literacy is so low, there s no one in the library to advocate for kids. Secondly, if folks believed so strongly in literacy, they would buy lots of books for kids to practice reading. The school libraries would not have been in such terrible straits over the last 20 years (average spending per child of $1.70 or so for the entire state of CA).

Sometimes, you just have to force folks to spend money on kids and forbid them to steal from those funds! Whatever works.

And so we return to the question above: Who will hear your message? Who will listen? You will have to answer that and hopefully, there won't be an administrator, a teacher, a child, a business person, or a parent who hasn't heard you at least ten times. Kids are worth it.

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