Project Achievement

(A National Initiative to Collect and Present Evidence that Links Library Media Programs to Student Achievement, 2003-05)

Brief Guide & Handouts
(Sept. 23, 2003 version)

by
David V. Loertscher

Salt Lake City UT
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Library media specialists are invited to participate in Project Achievement sponsored by David V. Loertscher and supported by his web site at http://www.davidvl.org

Any credentialed library media specialist recognized as a professional and receiving a professional salary in a school or school district is invited to participate (sorry, no paraprofessionals or support personnel, please).

To participate, send an email message to: David Loertscher at davidlmc@qwest.net (Postal address: 312 South 1000 East, Salt Lake City UT 84102)

There is no charge to participate, but those who do are asked to commit to collect evidence of their program during the current school year and present that evidence to administrators, faculties groups, school boards, and try to get press coverage in the school, district, and community where the library media program is present. In addition, a brief report of your activities to David Loertscher would be appreciated for sharing beyond the local level. An online support group is also available as a link at http://www.davidvl.org under Project Achievement.

The measurements recommended in this handout cover four program areas: reading, collaboration, information literacy and technology. They are extracted from the following book where much more extensive instruction is available (however, you need not purchase the book to participate): Loertscher, David V. with Ross Todd. We Boost Achievement! Evidence-Based Practice for School Library Media Specialists. Salt Lake City UT: Hi Willow Research & publishing, 2003. Available from http://www.lmcsourcom for $30)

Evidence is divided into a number of perspectives, all covered in these handouts:

<table>
<thead>
<tr>
<th>Program Emphasis Areas</th>
<th>Triangulation of Evidence:</th>
<th>Types of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>o Reading</td>
<td>o Learner Level</td>
<td>o Direct</td>
</tr>
<tr>
<td>o Collaboration</td>
<td>o Teaching Unit Level</td>
<td>o Indirect</td>
</tr>
<tr>
<td>o Information Literacy</td>
<td>o Organization Level</td>
<td></td>
</tr>
<tr>
<td>o Technology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The author is available as a consultant for states, districts or regions wishing to initiate more formal evidence collection initiatives. Both California and Massachusetts are already involved in state-wide initiatives.
The Library Media Center Reading Program
Ripple Effect Measures.¹

Goals

<table>
<thead>
<tr>
<th>LMC Agenda</th>
<th>Reading Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Capable and Avid Readers.</td>
<td>• Skilled readers.</td>
</tr>
<tr>
<td>• Learners who read a lot (amount counts).</td>
<td>• Learners reading at grade level or above.</td>
</tr>
<tr>
<td>• Learners who like to read.</td>
<td>• Taught using scientifically-based methods.</td>
</tr>
</tbody>
</table>

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. Whether a learner likes to read.

Justification:

The Krashen/McQuillan research review of 100 years strongly supports the notion that amount counts and that those who read a great deal score high in comprehension, grammar, spelling, writing style, and are just plain smart.

Demonstrate through research and practice that:

- Access is increasing and maxing out and that new materials are commonplace.
- The amount read is increasing and becoming a personal habit.
- The number of individuals who report they like to read is increasing.

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.

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.
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 in the home.
- Encouragement to read across the genres and for curricular pursuits.
- Encouragement to build a life-long reading habit.
- Involvement in conversation about reading.
- Personal readers 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 the language arts including appropriate information literacy skills and technology.
- Support of whatever skill-based reading program is in place; compensation for whatever weaknesses built into reading programs.
- Collaborative reading motivation both for free reading and for content reading.
- Reading aloud and storytelling both for fun and connected to teaching units.
- SSR (sustained silent reading program) for both fun and connected to teaching units.
- Endless booklists and booktalks for fun and connected to teaching units.

**Organization Level**
- Easy access to reading materials kids 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).
  - At the elbow for whatever device 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, and local initiatives, reading challenges, projects.
- Link to reading and literacy efforts in other libraries and from the community.
- Keep students and teachers apprised of what’s new in publishing and in the collection.
- Connect with authors and illustrators.
- Create endless booklists and do booktalks.
- Sustain a SSR (sustained silent reading) program.

**Materials**
- A large and evolving collection of materials young people want to read.
- Materials to read in all formats: print, multimedia, and digital.
My Reading Log for ________________ (topic of research/assignment/personal exploration)

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

What types of reading helped introduce me to the topic?

Time I spent: ____________________________

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

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

Rate each Item:
* Not worth the time I spent
** Somewhat helpful
*** Quite helpful
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.

<table>
<thead>
<tr>
<th>Learner Level</th>
<th>Teaching Unit Level</th>
<th>Organization Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Measures</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Through questionnaire or interview, the student should agree that access is at is maximum.</td>
<td><strong>Student would agree that when they need to read for school work topics, there is almost always a wide choice of something to read.</strong></td>
<td>• The behavior of almost all the faculty toward access issues pushed by the LMC program is apparent.</td>
</tr>
<tr>
<td>• Evidence that students actually take advantage of maximum access.</td>
<td><strong>Assessment of an individual student’s reading log required as part of a unit of instruction to see that access was maximized.</strong></td>
<td>• There is documentary support by administrators for the access issues of the LMC reading program.</td>
</tr>
<tr>
<td>• The student’s parents, teacher, and the library media specialist, along with the student, agrees that responsible behavior is equal to the maximum access I am allowed.</td>
<td><strong>The behavior of a teacher toward access issues pushed by the LMC program is apparent.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Indirect Measures</strong></td>
<td><strong>Student would agree that when they need to read for school work topics, there is almost always a wide choice of something to read.</strong></td>
<td></td>
</tr>
<tr>
<td>• Policies relating to access by individuals are in place to allow maximum access.</td>
<td><strong>A classroom audit has resulted in changes in access for students in a particular classroom.</strong></td>
<td>• There is an ample budget for the reading collection to support the needs of expanded access.</td>
</tr>
<tr>
<td>• Abuses in the use of electronic reading program (or any other initiative) are solved for the individual reader.</td>
<td><strong>A particular classroom has a rotating classroom collection and it is working.</strong></td>
<td>• Access policies for the entire school are in place and make provision for both groups and individuals.</td>
</tr>
<tr>
<td>**</td>
<td>**</td>
<td>• Digital access to reading materials is ubiquitous.</td>
</tr>
<tr>
<td></td>
<td>**</td>
<td>• The physical environment of the LMC is conducive to access.</td>
</tr>
</tbody>
</table>

*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).
2. Implement the initiative, measuring during and after it is completed.
3. Judging the impact of the initiative.

<table>
<thead>
<tr>
<th>Direct Measures*</th>
<th>Learner Level</th>
<th>Teaching Unit Level</th>
<th>Organization Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Build a questionnaire to ask students how much they read and whether they like to read (before, during, and after the initiative).</td>
<td>• Looking at any of the measures done for individuals at the classroom level before, during, and after the initiative. See Read10, 11, 12, 13, 14, 15, 16).</td>
<td>• Looking at any of the measures done for individuals at the building level before, during, and after the initiative.</td>
</tr>
<tr>
<td></td>
<td>• Measure the amount of reading on reading logs connected to a topical unit before, during, and after the initiative.</td>
<td>• Document amount read by a class for a specific initiative feature via logs, special counts, reader logs, circulation of physical items, hits on certain websites)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• On checktests, measure reading competence before, during, and after the initiative.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Number of points earned on electronic reading programs (influenced by the LMC).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Monitor standardized reading scores for an individual student over time (before and after the reading initiative). This is assuming that the initiative was planned as a long-term program.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Measures**</td>
<td>• Defend counting systems set up to measure the amount read during a special initiative for an individual</td>
<td>• Defend counting systems set up to measure the amount read during a special initiative for a classroom.</td>
<td>• Defend counting systems set up to measure the amount read during a special initiative for the school as a whole.</td>
</tr>
<tr>
<td></td>
<td>• Defend counting systems set up to measure the amount read during a special initiative for a classroom.</td>
<td></td>
<td>• Document efforts to spread the word about good books to read during whole school initiatives.</td>
</tr>
<tr>
<td></td>
<td>• The number and percent of learners participating successfully in the initiative.</td>
<td></td>
<td>• The number and percent of learners participating successfully in the initiative.</td>
</tr>
</tbody>
</table>

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**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.
The Library Media Center Collaboration Program
Ripple Effect Measures

Goals

<table>
<thead>
<tr>
<th>LMC Agenda</th>
<th>Curriculum Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support state standards.</td>
<td>• State standards met.</td>
</tr>
<tr>
<td>• Build truly collaborative experiences.</td>
<td>• Achievement test scores high.</td>
</tr>
<tr>
<td>• Build high quality learning experiences.</td>
<td>• Learners at or above grade level.</td>
</tr>
</tbody>
</table>

Pebbles to Measure

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.

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.

---

2 Rippling-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 rippling effect occurs, like throwing a pebble in a pool, triggering many other organizational practices and policies.

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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).
- 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 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.

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3 Loertscher describes “bird units” as the copying facts or downloading information to complete worksheets or fact-based assignments resulting in minimal learning.
Gauge the Dispersion of Collaboration
 Across the Faculty

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.

<table>
<thead>
<tr>
<th>Idea: Create a Collaboration Log.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who: The library media and technology specialists and classroom teacher working as a team.</td>
</tr>
<tr>
<td>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:</td>
</tr>
<tr>
<td>➢ 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.</td>
</tr>
<tr>
<td>➢ As the first page in the notebook, create a collaboration log summary page listing the collaborative activities as shown on the next page.</td>
</tr>
<tr>
<td>➢ Principal’s Activity: Using the summary sheet, assess the collaboration log notebook as a whole looking for patterns.</td>
</tr>
<tr>
<td>• Who is being served?</td>
</tr>
<tr>
<td>• Which grade levels?</td>
</tr>
<tr>
<td>• Which departments?</td>
</tr>
<tr>
<td>• Which curricular subjects?</td>
</tr>
<tr>
<td>• Who is not being served?</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Social Studies</th>
<th>LMS/TS Time</th>
<th>#Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Local Elections - grade 6 (Smith)</td>
<td>2.6 hours</td>
<td>24</td>
</tr>
<tr>
<td>Family Trees - grades 3 and 4 (Albright and Faire)</td>
<td>3.6 hours</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newbery Novel Unit - grades 5 &amp; 6 (Crane &amp; Finch)</td>
<td>1.5 hours</td>
<td>47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment of the School Grounds - entire school (Principal, LMS and Dwight, leaders)</td>
<td>15 hours</td>
<td>465</td>
</tr>
<tr>
<td>Simple Machines - grade 3 (Truett)</td>
<td>1.4 hours</td>
<td>27</td>
</tr>
<tr>
<td>Nutrition - grades 5 and 6 (Handford and Zigler)</td>
<td>2.8 hours</td>
<td>48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Integrated Units</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Environmental Hazards – Social Studies and Science, gr. 4 (Todd and Lark)</td>
<td>4.5 hours</td>
<td>43</td>
</tr>
<tr>
<td>Labor Movements - SS and Art, grade 6 (Jones and Gregg)</td>
<td>3.7 hours</td>
<td>49</td>
</tr>
</tbody>
</table>

**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?
Other Assessments of Collaborative Planning

Because the Lance studies⁴ made a very strong link between collaboration in the LMC to academic achievement, the measures taken documenting this activity are vital. Collecting, reviewing, and reporting data at the organizational level, the teaching unit level and the learner level will help assess the impact collaboration is ready to make and is making in the school.

<table>
<thead>
<tr>
<th>Level of Measure</th>
<th>Factor</th>
<th>Sources of Data</th>
</tr>
</thead>
</table>
| Collaboration at the Organization Level | The state of collaboration in the school and district.                  | □ Evidence that district and school level administrators support collaborative planning by actions as well as word.  
□ Evidence that time for collaborative planning is built into the school day.  
□ Evidence that clerical and technical help are available to allow professionals to collaboratively plan. |
| Collaboration at the Learning Unit Level (class interaction and use) | The success that the class and the teacher experience during a unit of instruction both in the classroom and the LMC when collaborative planning is the norm. | □ Evidence that collaborative logs are kept showing both planning and assessment of learning experiences.  
□ An analysis of collaboration logs showing spread of collaboration through the grade levels, the various disciplines, and through the faculty.  
□ An analysis of rubrics of classes as a whole for units of instruction done collaboratively. How they rate against instructional units done only in the classroom.  
□ “Teacher” to pupil ratio for this learning unit as compared with normal classroom-based instruction. |
| Collaboration at the Learner Level (as individuals) | Individual progress by each learner as collaborative planning enhances learning experiences. | □ Rubric score that content knowledge, technology, and information literacy was enhanced through collaboration.  
□ Evidence that an individual learner was more engaged, interested, and motivated than “normal” as the collaboratively-taught unit progressed. |

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The Library Media Center Information Literacy Program
Ripple Effect Measures.\(^5\)

**Goals**

<table>
<thead>
<tr>
<th>LMC Agenda</th>
<th>Curriculum Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Integrated teaching of info. lit.</td>
<td>• State standards met.</td>
</tr>
<tr>
<td>• Each learner information literate.</td>
<td>• Achievement test scores high.</td>
</tr>
<tr>
<td>• Process learning a part of the school’s curriculum.</td>
<td>• Learners at or above grade level.</td>
</tr>
<tr>
<td></td>
<td>• All the above inclusive of process learning.</td>
</tr>
</tbody>
</table>

**Pebbles to Measure**

1. Information literacy is being integrated into joint classroom/LMC learning experiences.
2. Learners realize that information literacy is an integral part of LMC learning experiences.
3. Assessment of information literacy happens as it is taught.
4. Information literacy is a part of teacher assessment of student learning.
5. The school culture values both content and process learning.

**Justification:**

Content learning without process learning (information learning) gives learners only fish – not fishing poles. Learning how to learn is a life-long gift. The Lance studies all report the connection between collaboration 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:**

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

---

\(^5\) 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.
Value-Added Components of the LMC Information Literacy Program: Candidates for Measurement

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

Learner Level

- Questioning
  - 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.

- Finding and Sorting
  - 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.

- Consumes and Absorbs (reading, viewing, and listening)
  - 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.

- Thinks and Creates (analysis)
  - 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.

- Summarizes and Concludes (synthesis and decisionmaking)
  - 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.
Communicates
- 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.

Reflects on Process and Product
- 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.

Throughout:
- 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.

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.
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:

- Content items based on state standards (teacher created)
- Information literacy items (library media specialists created)
- Other items created by the library media specialist: Reading and/or technology.

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.
Research Logs: Writing and Learning about Research and About Me

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.

<table>
<thead>
<tr>
<th>My Research Log</th>
</tr>
</thead>
</table>
| My name: _______________________  Assignment title: ____________________________  
(Make a list/log of what you did first, next, next, etc. Include comments about problems you had.) |

<table>
<thead>
<tr>
<th>Self-Assessment Rubric</th>
<th>Comments</th>
<th>Teacher/LMS Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Am I an organized investigator? And, am I making improvement?)</td>
<td></td>
<td>Your work will be judged on the following rubric criteria:</td>
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</tr>
</tbody>
</table>

____ My Score |

____ Your Score

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The Library Media Center Technology Program
Ripple Effect Measures.6

Goals

<table>
<thead>
<tr>
<th><strong>LMC Agenda</strong></th>
<th><strong>Technology Plan</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Enhance teaching and learning through technology.</td>
<td>• Connect every teacher and learner.</td>
</tr>
<tr>
<td>• Build and information-rich environment available 24/7.</td>
<td>• Integrate technology into teaching and learning.</td>
</tr>
<tr>
<td>• Build efficient learners.</td>
<td>• Affect teaching and learning positively.</td>
</tr>
</tbody>
</table>

Pebbles to Measure

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.

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.

---

6 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.

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Assessment of Technology’s Impact

Both learners and teachers are often quite willing to invest time and effort to integrate technology when it is accessible and it works. Collecting, reviewing, and reporting data at the organizational level, the teaching unit level and the learner level will help assess the impact technology is ready to make and is making in the school.

<table>
<thead>
<tr>
<th>Level of Measure</th>
<th>Factor</th>
<th>Sources of Data</th>
</tr>
</thead>
</table>
| Technology at the Organization Level (District vision for effective technology use) | The state of the technology infrastructure in the district and at the building/ LMC/ classrooms | • Percent of learners who could find an Internet ready computer when needed.  
• Number and percent of operational computer connections in the LMC.  
• The annual budget to upgrade networks to meet technology plan needs.  
• The size and competence of the technology staff for the school.  
• Percent of staff who know the technology vision. |
| Technology at the Learning Unit Level (class interaction and use) | Technology’s contribution to the teaching and learning.                | • The percent of students who would rate the technology as helpful in completing their assignments during a unit of instruction.  
• 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. |
| Technology at the Learner Level (as individuals)       | Individual progress by each learner as technology becomes a trusted tool. | • Rubric score for use of technology in a project.  
• Rubric score that content knowledge was enhanced through technology.  
• Rubric score that information literacy standards were met. |

Helpful publications for more measures to consider:

- *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/](http://www.edweek.org/sreports/tc02/)

For more resources on assessment, see the web page for this book at [http://www.indianalearns.org](http://www.indianalearns.org) and [http://ideanet.doe.state.in.us/technology](http://ideanet.doe.state.in.us/technology)

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Evidence-Based Practice Plan

Detail in the appropriate box possible measures to be used in measuring a program element and its impact on achievement.

Goal:

<table>
<thead>
<tr>
<th>Learner Level</th>
<th>Teaching Unit Level</th>
<th>Organization Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Measures*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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.