FEATURE

Evolving

LEVERAGING

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with Evidence

NEW TOOLS FOR EBP

A Little Background on Evidence

For as long as I can remember, I've counted: books checked out, bodies through the door, reference questions answered, classes taught, teachers with whom I collaborated, and website visitors. Counting generated data that could be embedded in colorful charts and professional-looking reports. These efforts captured a little of what happened in my school libraries.

Back in the day we called these data "output measures" and used them to justify budgets, maintain staffing, rethink scheduling, and advocate for our programs. Those metrics troubled me. They inspired systemic competitive cheating, and they didn't tell the stories that needed telling. These "measures" had little to do with asking good questions, selecting quality sources, synthesizing information, and ethically and creatively constructing and communicating new knowledge. They didn't address administrators' achievement concerns or faculty's engagement issues. They did little to capture real impacts our school library program made or my accountability to the instructional team. Better data were all around me. I wasn't capturing it. I missed the connection between data and results and lost sight of essential questions. How does my work make a difference in improving teaching and learning? What is my value to the learning culture? How might I use evidence to improve my practice and enhance learning?

Evidence-Based Practice as Evidence of Leadership

Focusing on evidence-based practice (EBP) aligns with the school librarian's leadership role acknowledged by AASL in *Empowering Learners: Guidelines for School Library Programs* (2009) and in AASL's newly adopted mission statement. "The American Association of School Librarians empowers leaders to transform teaching and learning" (AASL 2014). Leadership through EBP is also a focus in the National Board for Professional Teaching Standards (NBPTS):

> Accomplished library media specialists provide consistent and visionary instructional leadership. Specialists are catalysts for purposeful change that engages and challenges students in uniquely meaningful ways and that places them at the center of the learning process....Specialists use informed, evidence-based practices to identify strengths and weaknesses in library media programs and build knowledge to make informed decisions and modifications which result in stronger library media programs. Library media specialists use current technologies to gather, analyze, and share the results of evidence. (NBPTS 2012, 41–42)

Ross J. Todd explained that EBP "is fundamentally about professional practice being informed and guided by the best available evidence of what works" (2008, 17). Facilitating the availability of evidence are new technology tools and platforms that make student work more transparent and the collection, organization, and analysis of evidence richer and easier. One measure is the story of a library's impact on its school's learning culture. Let's examine a variety of strategies for rethinking available local data and new tools that facilitate gathering, analysis, triangulation, and application in improving teaching and enhancing learning.

Exit Interviews and Focus Groups

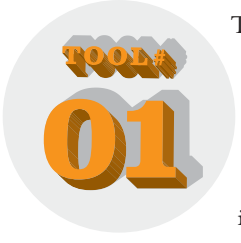
Nearly every year, as a high school librarian, I asked focus groups of seniors what they learned. Focus groups of six to ten students offer the researcher/practitioner a lens into respondents' experiences, feelings, and attitudes. Interactions within the group help participants build on each other's ideas and allow the researcher to evaluate levels of consensus and disagreement. In a school setting students may find small groups less threatening than one-on-one student-librarian conversations. The questions we asked included:

- What have you learned during our years together?
- What have you learned about finding information?
- What are your favorite databases? Which ones have been the most useful?
- How do you know when you've found a quality source?
- What have you learned about communicating what you learned during your research?
- What have you learned about technology applications from our library program?
- Have you learned anything that friends from other schools did not?
- What did you use on our library website?
- What did you like about our library website?
- What would you improve about our library website?
- What parts of the research process are you comfortable with?
- What parts of the research process do you feel are the most challenging?
- Which was your favorite research project and why?
- Which was your least favorite research project and why?
- Do you feel ready for university research?

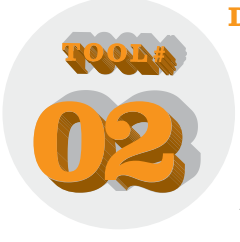
- What is the one thing you most wish you could have changed about our library?
- What will you miss most about our library?

I transcribed and coded these conversations and shared major patterns in my reports with teachers. Together we examined what student voices revealed about their learning. The issues and deficiencies we identified guided our future instruction. Feedback about our website guided my hybrid practice, allowing me to continually improve our virtual resources and instruction. Over the years, as school and library issues emerged, my focus group questions were, well, more focused. I solicited student feedback about rubrics, academic honesty, research assignments, changes in reading habits, and essentials for a makerspace.

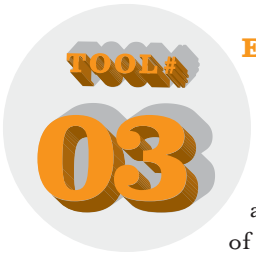
Video evidence can stand on its own, but it is possible to approach its transcription and analysis systematically and scientifically, especially if you need to present the data efficiently. New free and inexpensive software is available for qualitative analysis.



The app **oTranscribe** <http://otranscribe.com> is a free open-source tool for importing video and audio files into a player and easily pausing, rewinding, editing, and exporting.



Dedoose <www.dedoose.com> allows us to collaboratively code, sort, and visualize transcribed data.



ELAN <https://tla.mpi.nl/tools/tla-tools/elan> allows for textual analysis and annotation of audio and video evidence.

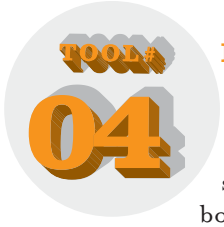
Exit Tickets/Slips, Response, Reflection

When we seek immediate, formative evidence of understanding, an exit ticket or slip provides feedback about what was learned and asks learners to reflect and synthesize. Traditionally, responses have been shared on index cards or sticky notes. Prompts might include the following.

- Share three takeaways from today's class.
- Share one lingering question.
- What did you/your group accomplish this period?
- What were the best sources you discovered today?
- Which criteria did you use to evaluate the resources you selected today?
- How might you apply what you learned today to a situation outside school?
- I didn't understand . . .
- I would like to learn more about . . .

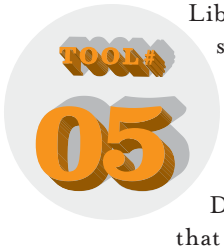
When sorted, exit tickets reveal patterns of understanding as well as issues, allowing us to identify and address challenges faced by an entire class or by specific learners for whom we might offer extension activities.

Several paper-free exit ticket strategies allow us to more easily archive, analyze, and track learning. Exit ticket graffiti can be powerful and sticky. Individual students or groups can leave evidence of their learning or lingering questions on flip chart paper or white boards. One strategy is to create a Likert scale-like chart, or one with rubric-style columns, and invite learners to use markers to "dot" their level of understanding. Take photos of this graffiti for later comparison and analysis.

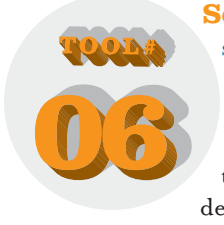


IdeaPaint <www.ideapaint.com> can turn almost any nonporous surface into a white board and allows individual students or work groups to draw or write responses or leave evidence of their learning on tables and walls. Your phone camera can capture, organize, and store this evidence and gather it into digital galleries on your platform of choice: **Flickr**, **Instagram**, or **Google+**.

"Clickers," or physical student response systems, helped us take the pulse of a class or capture specific evidence of learning for groups or individuals. Several digital tools are less expensive, perhaps more flexible, can function as exit ticket options across platforms, and are easily embedded in your Moodles, wikis, LibGuides, and sites. For example,



Google Forms <https://docs.google.com/forms/create> is a Google Drive application that allows easy creation of sophisticated polls and surveys, generating immediate charts and supporting easy data dumps into spreadsheets.



Socrative* <http://socrative.com> is more than a student response system. This free tool works across devices, supporting

** App/website named an AASL Best App/Website for Teaching and Learning.*

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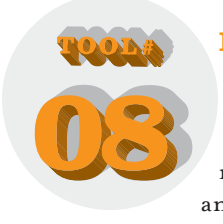
use of quizzes, quick questions, a competitive game, or a predesigned exit ticket to assess learning and understanding. It generates spreadsheet-based reports.[1]

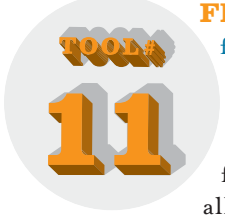
Padlet* <http://padlet.com> is a flexible, free tool for gathering sticky-note responses. Notes may include links (to projects) and media.



Exitticket <http://exitticket.org>, a student response system, offers real-time feedback and performance metrics. Assessments may be shared with multiple teachers and tracked longitudinally.

TodaysMeet* <http://todaysmeet.com> is a back-channel favorite that allows users to create a room and add responses to any prompt.

Poll Everywhere* <www.polleverywhere.com>, a cross-platform polling tool, includes multiple-choice and open-ended questions, clickable-images, and discourse options.



Flipgrid <http://flipgrid.com> is a reasonably priced, flexible video-response tool built for education. It allows students to record ninety-second video responses in a grid—no sign-up necessary. Multiple questions in a grid offer opportunities to show growth from a baseline or can serve as formative assessment.

In-Depth Surveys

One year, classroom teachers came through my office in despair about plagiarism. Together with the chair of the English department I developed an anonymous online survey. The evidence of a cheating culture was so compelling it launched a school-wide initiative to improve assessments and strategies to inspire academic honesty. Using the survey as a baseline, we implemented follow-up climate-check surveys to monitor progress. Free survey tools include:

Google Forms <https://docs.google.com/forms>

Survey Monkey <www.surveymonkey.com>

Examining Student Work

Student work talks. It may talk louder, more eloquently, and more authentically than test results, and it could be our most important and most overlooked data. It gives us information about how individual students perform on an assessment, but when examined collaboratively, over time and with protocols, student work presents opportunities for reflective dialog about the effectiveness of our instruction and assessments. We can connect the work of individual learners to issues identified by high-stakes assessments.

1 For more about Socrative, see the Technology Quest column in the November/December 2014 issue of *Knowledge Quest*.

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We can have honest conversations about pertinent questions. To what degree have certain groups of students met our learning objectives and growth goals? Were our instructions on rubrics clear enough?

When we look at student work in a focused way over time, we can make claims. "After three instructional interventions in the form of interactive library lessons, 80 percent of Mrs. Brown's students were able to support their arguments with solid evidence." We can plan instruction for the remaining 20 percent and report on our individualized remediation efforts.

A traditional issue of library practice is our limited access to formative and summative assessments. Teachers and school librarians can now share, guide, celebrate, and reflect together on student work. Sharing features on cloud-based tools make it possible to take a retrospective and focused look at samples of work. We can look for student success or deficiencies in: discerning point of view, identifying compelling evidence, finding relevant high-quality sources, constructing an argument, introducing and embedding quotes, synthesizing resources, and organizing information.

Transparent access helps guide learners in creating reflective portfolios. Using a variety of media, learners may now share and reflect on their work in stages on collaborative writing and journaling platforms. We can visit their efforts on their blogs, wikis, Google sites, and Google Classroom. We can also join them in their books as they read, while we gather evidence of progress.

Among our strategies for looking at student work are new portfolio tools.

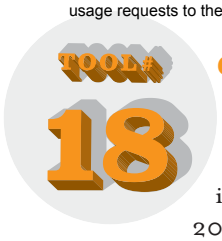
Easy Portfolio* <http://thepegeekapps.com/portfolio> makes it easy to create classes and gather visual evidence of student work within a portfolio, regardless of the medium in which the work was created. Records might include photos, videos, audio, music, Web links, text entries, or digital files from Dropbox or e-mail.

Educlipper <https://educlipper.net> is a Pinterest-like, Web-based tool or app that allows teachers to create assignment boards on which students clip or add their content. Educators can offer video, audio, or text feedback.

Bibliographic and writing tools facilitate transparent sharing for study and analysis.

NoodleTools <http://noodletools.com> is an integrated suite for note taking, outlining, citation, document archiving, annotation, and collaborative research and writing. NoodleTools allows students to easily share their work with teachers for comments and guidance.

EasyBib School Edition <http://info.easybib.com/easybib-school-edition>, a premium version of the free tool, allows students to share their notes, outlines, and sources in an environment that integrates with their Google Docs.



Google Classroom <www.google.com/edu/classroom>, introduced in the 2014–2015 school year and available to schools with Google Apps for Education accounts, simplifies creating, collecting, and sharing student work with easy-to-create Google Drive folders and real-time feedback and assessment.

Kaizena* <https://kaizena.com>, a feedback application integrated with Google Docs and Google Slides, offers opportunities for both voice and text conversations around student work. Artifacts are organized into boxes by course, grade, or team. Powerful, newly launched features allow teachers to tag, track, and rate skills, and save feedback for future use. Tags can connect to rubric criteria and Common Core or local standards.

Reading More Transparently

It is possible to open the reading experience so teachers can join in and examine the experience.

Subtext* <www.renaissance.com/products/subtext> allows teachers and students to interact within digital books—to ask questions, share notes, and embed polls, videos, and Web links in digital text. Teachers can create student groups within the text and then track and guide progress. **Curriculet** <www.curriculet.com> allows you to embed a layer of questions, quizzes, and media annotations into any reading assignment.

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Biblionasium* <www.biblionasium.com> is an engaging reading community for kids, teachers, and parents. It offers opportunities to set up classrooms; to transparently observe student reading preferences, abilities, and habits through their reading logs and shelves; to set challenges; to make suggestions; and to examine reports with real-time and historical data for individual readers or groups.

More Transparent Instruction and Planning, and Generous Sharing

Curriculum maps and learning targets are easily shared and offer evidence of the school librarian's role in instructional planning and design. Google Docs and Google Sheets facilitate classroom teacher-school librarian partnerships and feedback. Immediately after instruction, teachers and librarians do not need to make time for a face-to-face debriefing when it is so easy to reflect on a unit's or lesson's effectiveness and then revise or comment via Web-based documents. In addition to the edits we did on our LibGuides, wikis, and Docs, I frequently shared brief Google Forms with my partner teachers to capture an assessment of our work together. I would ask two questions: What worked? What can we do better next time? A growing number of school librarians use their blogs to share their experiences, instruction, students' projects, and honest reflections of their practice. These blogs present school librarians as thoughtful educators and archive their experiences for year-end reports. These leaders affect practice well beyond their buildings, providing inspiration for the profession. This Pinterest board links to several prominent school library bloggers <www.pinterest.com/joycevalenza/teacher-librarian-bloggers-and-other-blogging-frie>.

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Analytics

Web analytics can tell stories, too. We have the capacity to count in more meaningful ways. Our wikis, sites, and catalogs offer insight into our impact on reading culture and how we support learning through our virtual, hybrid, flipped, or embedded instructional presence. Subscription databases offer rich usage reports on number of sessions, searches, retrievals and full-text retrievals, and total time spent. Some track types of sources students use. These data can be connected to specific teachers and lessons.

For many librarians who create **LibGuides** <http://help.springshare.com/lgstats> to support instructional units, granular usage statistics allow examinations of popular pages and links, downloaded documents, and opened books. (LibGuides plays nicely with Google Analytics.) These data can help you determine whether the money you spend on resources supports student learning. You may discover you need to promote a valuable resource more heavily or you need to rethink a purchase if a product is legitimately underused. You may need new ways to market these products on your LibGuide or site, incorporating Web-design strategies. LibGuides allows librarians to embed forms and surveys to help assess the usefulness of these promotion efforts. Overall, these data allow you to assess the reach and the scale of your hybrid practice. Our catalogs can tell stories well beyond how many books were checked out. Keeping issues of privacy in mind, you can examine usage data to explore how targeted student populations behave, e.g., reading habits of ESL classes. You can get granular and use individual students as representative *personae* to examine which books struggling readers check out and, based on specific interventions, how reading patterns might change.

Leveraging Your Camera

Whether on your phone or separate devices, cameras—both still and video—are powerful ways to capture evidence. The activity in your space—your programs, displays, author visits, and other events, and the way your space is continually used by students, teachers, and parents—is often lost evidence of your contribution to the learning culture. What's on the tables at the end of a period or the end of the day, or on a returns cart, or on your hold shelf? Your phone/camera can capture a record of this ephemeral evidence of student activity or learning. Don't do this alone. Assign a student photographer and archivist.

Take pictures of students working and learning. Use your camera's *send* feature to create automatic galleries. If your school allows it, leverage platforms such as Instagram and Flickr, Pinterest, or YouTube or Vimeo channels for their abilities to sort, tag, and create albums. You might also store your evidence on a private platform such as Dropbox.

If you wonder what your physical space looks like from a student perspective, give students video cameras and ask them to walk around the library and reflect on the space. What I learned was eye-opening. Students used and owned the space in many different ways. Some saw various spots in the library as their personal offices or special

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places of escape. One young woman saw the library's entry space as her own fashion runway. An AP student gushed about her love for the books on a few special shelves.

Hyperlapse <http://hyperlapse.instagram.com>), a new app by Instagram, allows time-lapse filming of library activity. Imagine shooting the action around your makerspace, capturing library-hosted debates, wax museum exhibits, or book clubs. Australian librarian Tania Sheko considers this strategy a "succinct way of sharing invaluable data as evidence of the number of students using the library (in this case 30 minutes of recess), its energy, and the wonderful range of collaborative and social activities that take place as recess activity at Melbourne High School Library" (2014).

Displaying and Sharing Evidence of Practice

Synthesized evidence of a school librarian's effectiveness can be presented by means of digital storytelling, an interactive poster, or an infographic.

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My favorite platforms are: **Thinglink*** <www.thinglink.com>, **Infogr.am** <http://infogr.am>, **Piktochart** <http://piktochart.com>, **Visual.ly** <http://visual.ly>, **Smore*** <http://smore.com>, and **Tackk** <https://tackk.com>.

Bad News Is Not Bad

Let's be honest about honesty. Not all evidence is going to be pretty. Exit interviews, for me, were sometimes profoundly disappointing. My reading statistics declined for several consecutive years. As with any research project you learn from what the evidence tells you. Bad news presents a baseline, a realistic situation upon which you build a plan of action and grow as a professional.

Evidence informs our practice, helps us plan for program growth, and ensures that, indeed, learners *are* learning. It's also about leadership. Careful use of selected emerging tools presents new models for teachers and students to leverage technology for their own collaboration and analysis. Innovative approaches to the gathering and analysis of evidence demonstrate the school librarian's vision, accountability, and his or her professional leadership within the educational program.

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