

Nudging toward Inquiry:

Re-envisioning Existing Research Projects

by Kristin Fontichiaro

My preschool niece and nephew are driven by curiosity and discovery. “What if?” “Let’s try it,” and “See how it works” regularly pepper their conversations. Their daily questions fascinate the adults in their lives and fill many dinnertime conversations.

Similarly, there has been a significant spike among school librarians in talk about the process of learning since the 2007 release of the *Standards for the 21st-Century Learner* by the American Association of School Librarians. How do children really learn best? The AASL Standards make it clear that 21st-century school librarianship is not just about teaching a set of “skills;” it is about being a partner in powerful, inquiry-fueled learning (2007).

The AASL *Standards* use the term “information literacy” only once (in the Common Beliefs), but use the word “inquiry” seven times (AASL 2007). This vocabulary shift signals that school librarians are moving from merely teaching “skills” to partnering in deeper, more all-encompassing instructional design. “Information literacy” was rarely adopted by classroom colleagues, but

“inquiry” is a term they understand. By embracing inquiry, school librarians demonstrate their commitment to the entire arc of learning, an arc that surpasses skills mini-lessons.

Defining Inquiry

Inquiry in education has been discussed for over seventy years since the days of John Dewey. But what is it? Kuhlthau, Caspari, and Maniotes provide one definition:

Inquiry is an approach to learning whereby students find and use a variety of sources of information and ideas to increase their understanding of a problem, topic, or issue. It requires more of them than simply answering questions or getting a right answer. It espouses investigation, exploration, search, quest, research, pursuit, and study. Inquiry does not stand alone; it engages, interests, and challenges students to connect their world with the curriculum. Although it is often thought of as an individual pursuit, it is enhanced by involvement with a community of learners, each community learning from the other in social interaction. However, without some guidance it can be daunting (2007, 2).

The AASL *Standards* support this definition but add that it is built on the prior knowledge of students (AASL 1.1.2), exploration of misconceptions (AASL

1.1.7), and critical thinking (AASL 2.1.1). The *Standards* also emphasize the role of self-assessment and reflection.

Table 1, page 19, shows an inquiry process adapted from the Stripling Inquiry Model (2007) and the scientific method. The scientific method can be a powerful method for library researchers because scientists do not see their research as isolated “projects” but as a phase in a career-long continuum of exploration, much as school librarians seek to empower lifelong curiosity.

Knowing Inquiry versus Doing Inquiry

There is, unfortunately, a gap between knowing inquiry’s value and putting it into practice. Based on lesson plans shared, it appears inquiry rarely occurs systemically in America’s schools or school libraries. Potential culprits include an outdated library media curriculum that focuses more on isolated skills, a school culture that does not value curiosity, a too-large state or district curriculum, underpaid teachers who are too tired to embark on something new, other student learning needs that take priority, or building staff (including the school librarian) whose expertise lies elsewhere.

As a result, low-level projects persevere: projects where students simply

copy answers to low-level worksheet questions, then copy those answers again into a report or *PowerPoint* presentation. Loertscher, Koechlin, and Zwaan, in their book *Ban Those Bird Units! 15 Models for Teaching and Learning in Information-Rich and Technology-Rich Environments*, call these projects “bird units,” recalling projects where students were assigned a bird and asked to find and report answers to simple recall questions about egg quantity, feather coloration, or habitat (2005). Jamie McKenzie, in the article “Making WEB Meaning (Advantages of Virtual Museums, Curriculum Pages and the Research Cycle),” calls them “word-moving” (1996). When instructional design is reduced to word-moving or copying disconnected facts, students are learning to copy, not learning to learn.

Many teachers would plan intensively for deeper, inquiry-based learning but plead a lack of time. Rather than wringing hands and concluding that “true inquiry” may lie outside their grasp, it is better to be strategic and think differently. If a revolutionary overhaul of an existing project is not an option, a better course is to consider an evolutionary one: a gradual improvement and deepening over time of an existing project.

School Librarians as Change Agents Promoting Inquiry

When school librarians think about promoting change in instructional practice, it's easy to see only the ideal scenario and become frustrated or disappointed when reality does not match up. A shift from idealistic to pragmatic thinking can mean being realistic about the slow pace of instructional change and envisioning the journey ahead as one with many way stations. Just as Aesop showed with the tortoise and the hare, there are many ways to run the race toward inquiry. If school librarians are patient, like the tortoise, sustained change can occur.

Consider a typical “bird unit” biography report, such as the ones referred to in the book by Loertscher, Koechlin, and Zwaan. A teacher typically comes to the school librarian and requests time for students to find information and report it via a *PowerPoint*. If this were a graduate school exercise, school librarians could simply throw away the bad design and start fresh. What separates hypothetical coursework from real-world practice is the teacher and, more importantly, the teacher's professional pride. A school librarian cannot build a longterm, trusting relationship if she demolishes the teacher's past practice. But a “tweak” might be appreciated, not reviled. Table 1 (page 19), shows an adaptation of Stripling's model of inquiry to a proposed unit and offers ideas for possible tweaks that could be applied to nudge it toward inquiry (2007).

One or two suggestions will probably be received better than a bundle. Perhaps merely reframing the assignment, changing the product, adding self-reflection, or changing how questions are developed is enough to help the teacher break out of a rut that is no longer best practices. When teachers see the benefit of one small change and how it deepens student engagement, they are more trusting of the school librarian and more motivated to consider an additional change with the next project. In this way, “nudging toward inquiry” is like setting off a path of dominoes. One need only knock over one domino to set the entire batch in motion.

A Year of Nudging Practice

SLM is embarking on a yearlong series called “Nudging toward Inquiry.” The intent is to help those school librarians who think they would benefit from “tweaking” strategies that could gently prod their colleagues into creating deeper learning experiences for students. Each month, a different, typical “bird unit” scenario will be presented. Practitioners and others will suggest small changes with big impact. The first example, for the biography

scenario referenced earlier, can be found on page 5.

Students flourish when they are given time and space to explore ideas. Nudging toward inquiry can be the first step. School librarians can join in the effort to make the standard research units provide deeper learning for students by visiting the *SLM* blog and becoming part of the solution by joining in the discussion (<http://blog.schoollibrarymedia.com/>).

References:

- Loertscher, David, Carol Koechlin, and Sandi Zwann. *Ban Those Bird Units! 15 Models for Teaching and Learning in Information-Rich and Technology-Rich Environments*. Hi Willow Publishing and Research, 2005.
- McKenzie, Jamie. “Making WEB Meaning (Advantages of Virtual Museums, Curriculum Pages and the Research Cycle).” *Educational Leadership* 54, no. 3 (November 1996): 30-32.
- Stripling, Barbara. “Assessing Information Fluency: Gathering Evidence of Student Learning.” *School Library Media Activities Monthly* 23, No. 8 (April 2007), 25-29. ◀

Kristin Fontichiaro is a school librarian and staff development facilitator for the Birmingham (Michigan) Public Schools and an Adjunct Lecturer in the University of Michigan School of Information. Her most recent books are *Story Starters and Science Notebooking: Developing Student Thinking through Literacy and Inquiry*, co-authored by Sandy Buczynski (Teacher Ideas Press, 2009) and *Podcasting at School* (Libraries Unlimited, 2008). Her upcoming title is *21st-Century Learning in School Libraries* (LU, forthcoming). She blogs for *SLM* at <http://blog.schoollibrarymedia.com> and can be reached at font@umich.edu.

An open invitation to *SLM* readers to submit scenario tweaks...

Visit the *SLM* blog (<http://blog.schoollibrarymonthly.com/>) and view the upcoming topics posted in the righthand column. Ideas posted may be seen in an upcoming issue. Ideas for lesson plans that could use a tweak are also welcome. Please email the *SLM* blogger, Kristin Fontichiaro, and let her know (font@umich.edu).

Table 1: The Inquiry Process and Possible Nudging Strategies

Inquiry stages adapted from Barbara Stripling (*SLMAM*, April 2007).

Inquiry Stage	Teacher's Proposed Lesson	Nudging Strategies
Connect School librarian and teacher awaken students' prior knowledge.	None	Ask students to engage in a two-minute "think-pair-share" about what they already know about the topic. <i>OR</i> Build a classroom definition about the topic before coming to the school library. For example, if students will be discussing Revolutionary War heroes, create a class definition of what a hero is. <i>OR</i> Give each student an index card and ask them to rank their top preferences for whom to research. Ask them to explain their preferences, which will reveal their background knowledge.
Wonder Students generate possible questions for research.	Teacher identifies the questions.	Instead of teacher-selected questions, brainstorm questions as a class and create a graphic organizer based on the discussion. Older students might brainstorm questions alone or in small groups. <i>OR</i> Describe the objective of the project and ask students what kinds of questions they might ask and need answered in order to reach that objective.
Investigate Students seek and discover information that addresses their questions and adapt or rewrite their questions.	Students write down answers to teacher-selected questions. Students are not encouraged to hypothesize, ask new questions, or explore content not on the graphic organizer.	Save room on the graphic organizer for new aha moments, "interesting facts" discovered by students, and new questions. <i>OR</i> Save 5-10 minutes at the end of each class for students to share what they have acquired with other students to help them process their information. <i>OR</i> Suggest a quick exit slip or reflection activity as formative self-assessment. <i>OR</i> Set up a chair and a camcorder in a corner of the room, similar to a confessional booth on a reality show. Ask each student to videotape him or herself revealing something that he/she is discovering in the research. (Save and edit the tape for a future board meeting so students can see the kind of thinking that is happening in the school library!)
Construct Students discover patterns in information and draw conclusions from those patterns.	Students are asked to copy the information from the graphic organizer onto <i>PowerPoint</i> slides. Because they are simply moving answers from the graphic organizer to slides, they do not construct meaning, make connections, or draw conclusions.	Consider moving from individual to social work to allow students to hear more points of view as they construct understandings. <i>OR</i> Provide graphic organizers that help students move from the facts they have gathered to a new understanding. Perhaps a flow chart style would help students gather facts and then help them "move" to processing them. <i>OR</i> If individual information-gathering is important to the teacher, consider how students could pool their individual research using Google Docs or a wiki.
Express Students create a product that articulates and shares what was learned with others.	Everyone does <i>PowerPoint</i> .	Consider a different product. <i>OR</i> Consider adding a second product format (or more!) and letting students choose. Consider different learning modalities and learner preferences (e.g., video, podcast, written work, advertisement, brochure, etc.) <i>OR</i> Help students clearly define the audience for their work so that their work has an authentic voice.
Reflect Students reflect on their process (teamwork, time management, research strategies) and outcome (product). New questions may arise for future research.	Due to how long it takes to assemble the <i>PowerPoint</i> , there is no time allotted for reflection on the process or product. The new unit starts Monday, so there is no time for new questions.	Provide quick reflection opportunities via exit slips, one-minute essays on note cards about what students are learning about the content and/or the research process. Have a few pre-made exit slips on hand in baskets so teachers don't have to create one. <i>OR</i> Ask students to imagine what new questions they might explore if they were hired by _____ to do further research.