

# ENABLING INQUIRY LEARNING IN FIXED-SCHEDULE LIBRARIES

## An Evidence-Based Approach

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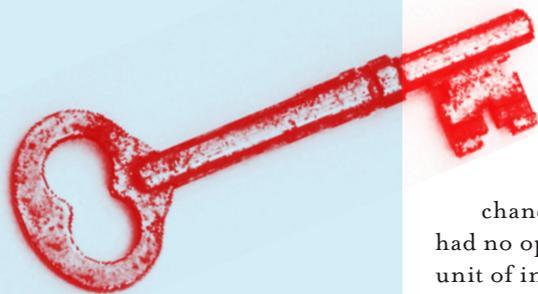
## What's the Problem?

When I accepted my first job as a school librarian I was eager to put into practice knowledge about the Guided Inquiry approach I had gained from my MLIS studies at Rutgers. In my second year on the job my former professor Dr. Carol Gordon visited my school and asked the question that started a journey of inquiry into my own professional practice: "What is the most difficult problem you face in your job as elementary school librarian?" Not surprisingly, my response was the fixed scheduling. As many elementary school librarians

know, the scheduling of library instructional time is typically a weekly "special." This fixed schedule model limited my contact with students to a thirty-minute period each week, resulting in information literacy instruction primarily through stand-alone lessons rather than inquiry or resource-based learning. The fixed schedule inhibited teaching to AASL's *Standards for the 21st-Century Learner* (2007) since the schedule is not conducive to time on task, a critical component to successful inquiry that promotes critical reading and critical thinking.

In several ways a fixed schedule inhibited meaningful and collaborative teaching. Classroom teachers and I had no common planning time, so the schedule did not support time for meetings with a classroom teacher to identify teaching goals, plan an inquiry unit, assemble resources to support the unit, teach information literacy in the context of a curriculum unit, or provide information and technology support. Teachers and I had no time to do summative assessment, collaboratively grading student work, or do formative assessment of student progress to get feedback on

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could lead to an action plan. She suggested that digital technology, when used to deliver each stage of the Information Search Process (ISP), might help overcome the problems presented by fixed scheduling in the school library.

teaching effectiveness while giving students the chance to revise their work. We had no opportunity to evaluate a unit of inquiry and revise it for the next year.

In my first year as a school librarian, aware of the obstacles inherent in my fixed schedule but determined to give my students an information-based inquiry experience, I developed an inquiry unit for fifth-grade students to be conducted solely during library class time. The authentic learning task of the unit required students to work in pairs as architects to design a monument memorializing an individual who played an important role in the American Revolution. Students were given time and resources to research a variety of people and battles and to choose those that interested them. Students presented their designs to the class at the end of the unit.

It was a great unit. Students seemed engaged and gained experience in note taking, citing sources, demonstrating creativity in their final designs, and sharing their ideas with classmates. Sounds ideal, right? Yes, except the unit took almost five months to complete! Clearly, this situation was far from ideal. Dr. Gordon's question prompted me to reflect on the problem, and I realized I had just begun my own inquiry to improve my teaching practice.

Dr. Gordon reminded me that an evidence-based approach could lead to an action plan. She suggested that digital technology, when used to deliver each stage of the Information Search Process (ISP), might help overcome the problems presented by fixed scheduling in the school library. I reached out to colleagues to see if I could interest them in collaborating with me and was thrilled to assemble a team

consisting of Carmela Valles, a fifth-grade classroom teacher, and Michelle Hawley, our district's instructional facilitator who has expertise in problem-based learning. We collaborated to develop an inquiry unit on the American Civil War. One of my goals for the unit was to use action research as a way of determining how successful a blended learning environment—incorporating both digital and face-to-face teaching—could be in supporting Guided Inquiry.

### How School Library Research Informed Our Action Research

Fixed scheduling is well-researched in the school library literature. We know from this research that information skills taught in isolation from curriculum content are not as relevant to students as skills taught in the context of what they already know (McGregor 2006). Constructivism is an approach to learning that posits individuals construct their own meaning as they link new knowledge to prior knowledge (Bruner 1960). In addition, school library research has produced a model for Guided Inquiry (Kuhlthau, Maniotes, and Caspari 2007), the Information Search Process (ISP), which is a staged, predictable model of how students will feel, think, and act as they go through Task Initiation, Exploration, Topic Selection, Focus Formulation, Information Collection, and Presentation (Kuhlthau 1983). Each of these stages presents opportunities for interventions that can be prescribed for an entire class or for individual learners to help students through each ISP stage. These stages informed our design of the inquiry unit as the school library and the classroom became equally important venues for helping students. A spiraling model of collaboration

emerged whereby the school librarian and the classroom teacher used the ISP as a collaboration tool. This collaboration provided continuity and sustainability to the inquiry unit since students did not have to wait a week to return to the school library to continue their progress through the ISP.

### What Did Our Action Research Look Like?

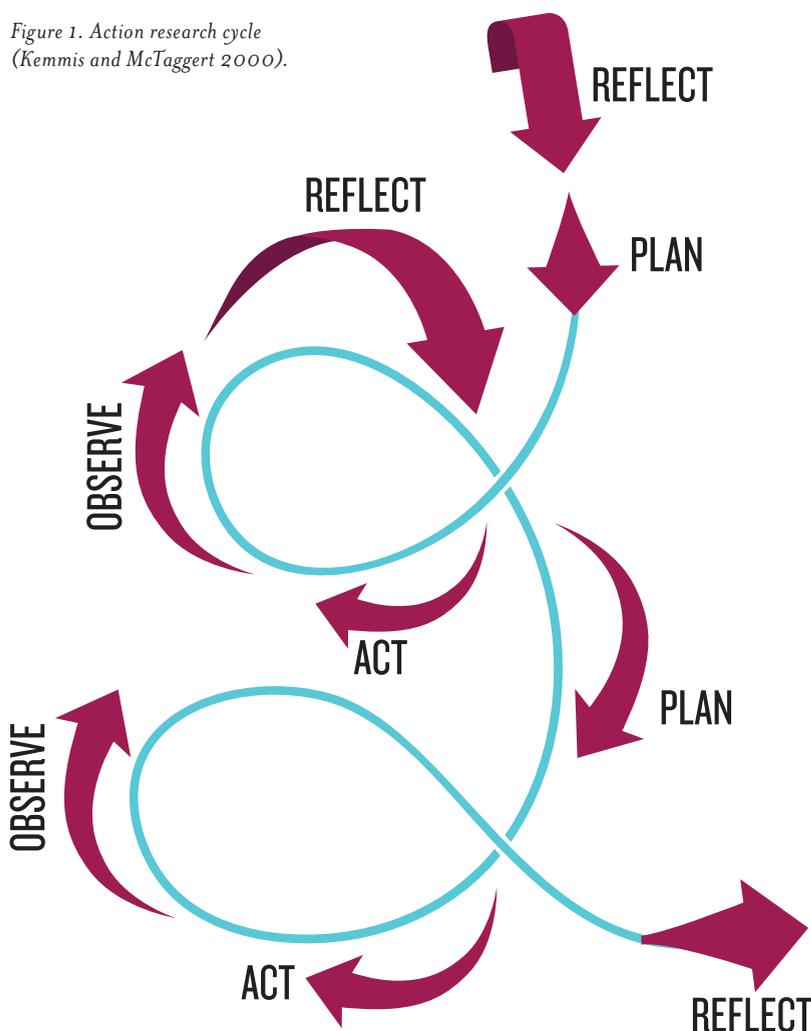
Action research is a continuous spiral of reflecting, planning, and acting (see figure 1). In year 1, as an action researcher, I *reflected*, identifying a problem in practice. I reflected on the problems associated with my first attempt at inquiry

under a fixed schedule as described above.

In collaboration with a fifth-grade teacher and the district's instructional facilitator, we created a *plan*, using Guided Inquiry, to identify stages of the ISP to structure students' inquiry in the classroom and the school library through physical and virtual contact with resources and help. *Action* was taken when our team taught the inquiry unit on the American Civil War. As we taught we *observed* and collected evidence of our teaching, and student progress. These activities led us to *reflect* as we analyzed the evidence and drew conclusions about our teaching and

our students' learning. Throughout the unit we carefully observed student behaviors and responses and collected evidence to assess the success of the unit. We hope to use this evidence to make positive changes in future inquiry units. In year 2 we will revisit the American Civil War unit to *reflect* again, this time identifying the teaching and learning problems we want to address through *planning* the revision of the project. In this second year we will follow the cycle, acting through teaching, observing by collecting evidence, and going through the action research spiral as we had done in the previous year. The process will continue in year 3 as the team continues to work together to do better each time.

Figure 1. Action research cycle (Kemmis and McTaggart 2000).



We began planning the unit several months prior to its kickoff to allow enough time to create a digital environment that would lend itself to delivering the unit and collecting evidence of student learning. During this planning period we designed the authentic task, determined learning objectives, and created a schedule for the unit along with appropriate learning interventions for the ISP stages. We worked on the virtual learning environment, which we named 3D Library Learning (see figure 2). "3D" refers to the three dimensions of our unit, in which learning was structured to take place in the classroom, school library, and through the website. The site can be accessed at <https://sites.google.com/a/summit.k12.nj.us/3dlibrarylearning>.

The photographs shown in figure 2 are "clickable" at the website so students could easily access the resources used during classroom learning. Similarly, clicking on the photo of the library provided access to online resources selected by me, the school librarian, along with

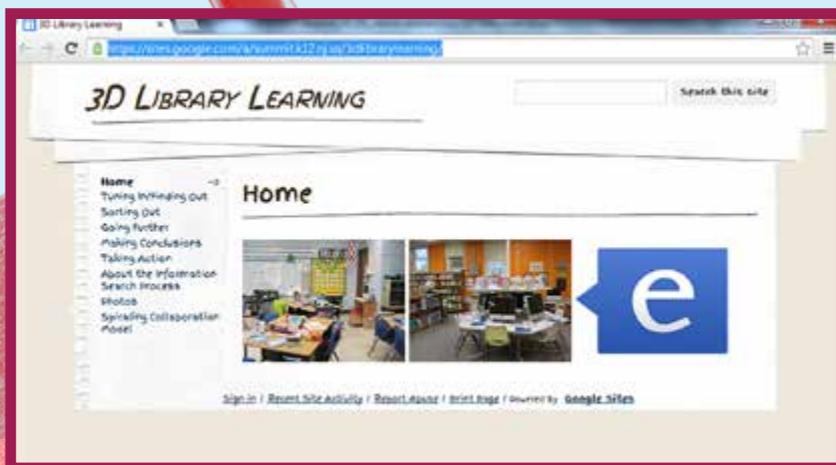


Figure 2. 3D Library Learning site.

a bibliography of print resources. Clicking on the “e” took students directly to their class group within Edmodo. We chose Edmodo as a virtual learning space because it is a free online tool that facilitates collaboration and communication between teachers and students. It looks similar to Facebook, a similarity that we thought would appeal to our students. The class group is not openly accessible from the Web, a feature that protects students’ privacy. Throughout the unit Michelle, Carmela, and I used Edmodo to share ideas, update one another on progress, and keep a record of meeting notes and next steps. Students used Edmodo to respond to discussion prompts, post questions, and submit assignments related to the unit.

We organized 3D Library Learning around the stages of the ISP with guiding questions for each stage. Among the guiding questions for the first stage of the ISP (“Tuning in /Finding out”) were: “What do I know about the topic? How do I know it? What experiences do I have with this topic? What

do I want to know?” Among the guiding questions for the second stage (“Sorting out”) were: “What information helps answer my questions? What key words help me make sense of the information I found? Do I need to find more information? What are my questions now?” (Gordon 2012).

Our first opportunity to *act* and *observe* took place during the “Museum Walk” we staged in the school library to kick off the delivery of the unit. Taking advantage of an opportune slot of “open” time in the library schedule, for almost two hours students examined, reflected, and wrote journal entries about primary source artifacts and images. These Civil War resources were borrowed from a local museum. We observed that student engagement was extremely high as interest in the subject matter intensified immediately. Students were placed in small groups to share their interests and generate questions about the Civil War based on their Museum Walk.

My team then took time to *reflect* on what we observed about the high level of student engagement. We *planned* ways to maintain the engagement level by making greater use of Edmodo, which students

thought was really “cool” when it was presented to them in class. We collected evidence in the form of student responses to assignments, reflection surveys, and blog posts on Edmodo.

We continued to *act* while teaching and to *observe* students learning throughout the course of the unit. We consistently observed sustained high levels of engagement in the unit. I was struck by how intently students focused on their topics and stayed on task in the library. During one school library session, as students pored over print and/or online materials, reading and taking notes, I overheard a boy comment to another student, “Dude, did you know the Civil War happened before World War I? I didn’t know that!” Observing students in the act of their own “ah-ha!” moments was priceless.

Many of our actions took the form of assignments posted in Edmodo so we could observe student understandings and learning via their responses. For example, early in the unit students were asked to define the word “civil” and list where they had heard this word used. Responses were used to provide the teaching team with information regarding students’



# OUR GREATEST SUCCESS

was proving we could collaborate on a unit using Guided Inquiry despite the limitations of fixed library scheduling.

prior knowledge. At three points in the unit (initiation, formulation, and assessment) students completed a “Research Reflection Survey” online via Edmodo. The survey asked students to write in free form what they knew about the Civil War. These posts served as formative assessments of student knowledge. A free-form response indicating what students found easy and/or difficult generated evidence about the level of interest and engagement as well as what students were learning. We asked students to create their own research questions about the war and post them on Edmodo during the formulation stage of the ISP. By observing the responses to these online assignments we were collecting formative assessment data on individual student progress. This helped us move students through the inquiry process while monitoring interest and engagement. For example, after the Museum Walk students posted responses by describing an artifact or image that captured their attention. One student wrote:

The artifact that captured my attention is the reward sign. The reward sign was a sign that explained that two slaves were lost and they needed to be found. They would be given a

reward to whoever [sic] found them. The reward sign looked like a lost cat or dog sign like the ones we see today. It didn’t feel very good having to see that this was a sign that was used to find a person not an animal.

Another student wrote:

The artifact that captured my attention was the picture of the slaves on the boat. The white men were punishing them badly. I learned many things [from this artifact]. An example of that is...how different the black [people] were treated from the white [people].

When students posted their research questions during formulation we could observe the direction each student wished to go; these observations helped us understand how to guide them toward narrowing their topics by refining their ideas into researchable questions. One student was intrigued by a woman’s fan she saw in the Museum Walk—especially after having read how an entire language was developed around fans. Her initial question was “How and why did they create an entire language around the fan?” By observing her interest in the female

perspective we were able to guide her toward relating this interest to the war itself. In a later post she articulated her interest this way: “I think my question will be about the women in the war and that time.” Ultimately, her question became “What different jobs did women do during the war?”

## What We Learned

At the end of the unit, Carmela, Michelle, and I met to debrief and *reflect* on the unit, identifying successes and opportunities for improvement. Our greatest success was proving we could collaborate on a unit using Guided Inquiry despite the limitations of fixed library scheduling. Taking advantage of technology, we seamlessly linked library and classroom learning in a spiraling collaboration model, alternating instruction between the school library and the classroom. Through continuous communication we were cognizant of where our students were in the research process and what was needed to push them forward. Another hallmark of our success was the high level of student engagement and interest throughout the unit. Making use of the evidence we gathered through our action research we were able to build on the

high engagement generated during the Museum Walk; we developed high-interest discussion prompts and assignments posted to Edmodo. Students enjoyed the virtual component of the unit and seemed happy to complete the required assignments and engage with teachers and classmates online. We concluded that students' exploring and creating their own research questions within the context of an authentic learning task were successful, contributing to the high level of engagement. Questions were wonderfully varied, representing students' interests. They included:

"How did the slaves cope with bad treatment?"

"How did the living conditions of the soldiers affect their health?"

"What role did photography play during the Civil War?"

We realized the framework of this unit could be replicated across the district with future collaborations building on this initial experience. The idea of using a virtual library site and incorporating Edmodo (or some other online tool) to collect student responses and data within a Guided Inquiry unit can be used by any team of teachers and librarians willing to give it a try. The 3D Library Learning website has potential for teaching sustained

inquiry units for any content area and can easily be modified to work with other grade levels.

One of the biggest challenges we faced was the timing of the unit. Between standardized testing and year-end activities May was not an ideal time to introduce an inquiry unit. Future collaborations will be planned for earlier in the year. We also realized we did not scaffold the creation of research questions well enough prior to the unit. Previous instruction and practice with this skill would be helpful before students begin the unit. Lastly, we found the discussion thread in Edmodo required more practice than we anticipated. Students began the unit with no prior experience using Edmodo so they needed time to work through a learning curve while engaged in the unit of study. Prior experience with blogging would expedite their learning.

## Conclusion

Reflecting on our practice is an important component of professional development. Action research provided an excellent framework for doing so. By taking the time to think about how to overcome the frustrating aspects of a fixed library schedule I was able to put into place an action research study of my own practice using evidence gathered from student work. Combining evidence-based practice within the Guided Inquiry framework helped me understand how this process can work and how successful a unit designed in this way can be as measured by student engagement and learning. Having the experience of a fully collaborative unit that made use of library resources and my expertise in teaching information literacy was rewarding and has given me the confidence to strive to develop future units based on this model.



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## Works Cited:

- American Association of School Librarians. 2007. "Standards for the 21st Century Learner." <[www.ala.org/aasl/standards](http://www.ala.org/aasl/standards)> (accessed October 1, 2014).
- Bruner, Jerome. 1960. *The Process of Education*. Cambridge, MA: Harvard University Press.
- Gordon, Carol A. 2012. "Thinking through the Inquiry Cycle for Young Learners." *Synergy* 10 (1). <[www.slav.vic.edu.au/synergy/volume-10-number-1-2012/research-into-practice/234-thinking-through-the-inquiry-cycle-for-young-learners-.html](http://www.slav.vic.edu.au/synergy/volume-10-number-1-2012/research-into-practice/234-thinking-through-the-inquiry-cycle-for-young-learners-.html)> (accessed August 31, 2014).
- Kemmis, Stephen, and Robin McTaggart. 2000. "Participatory Action Research." In *The Handbook of Qualitative Research*, 2nd ed., edited by Norman K. Denzin and Yvonna S. Lincoln, 567-605. Thousand Oaks, CA: Sage.
- Kuhlthau, Carol C. 1983. "The Library Research Process: Case Studies and Interventions with High School Seniors in Advanced Placement English Classes Using Kelly's Theory of Constructs." EdD diss., Rutgers University, New Brunswick, NJ.
- Kuhlthau, Carol C., Leslie K. Maniotes, and Ann K. Caspari. 2007. *Guided Inquiry: Learning in the 21st Century*. Westport, CT: Libraries Unlimited.
- McGregor, Joy H. 2006. "Flexible Scheduling: Implementing an Innovation." *School Library Media Research* 9. <[www.ala.org/aasl/sites/ala.org/aasl/files/content/aaslpubsandjournals/slr/vol9/SLMR\\_FlexibleScheduling\\_V9.pdf](http://www.ala.org/aasl/sites/ala.org/aasl/files/content/aaslpubsandjournals/slr/vol9/SLMR_FlexibleScheduling_V9.pdf)> (accessed October 1, 2014).

