TWENTY-FIRST CENTURY LEARNERS require advanced information literacy skills to live, work, and engage in an ever-changing social and democratic environment (Vacca, Vacca, and Mraz 2010). Although some believe that such online resources as Google and Wikipedia have made school libraries an unnecessary luxury, nothing could be further from the truth. Helping all students, regardless of their backgrounds and present circumstances, acquire the ability to interact with an avalanche of information from a variety of sources is the cornerstone of today’s school library program.

TWENTY-FIRST CENTURY PEDAGOGY

School librarians, in the vital role of instructional partners, should move beyond familiarity with technology tools (which change at a rapid pace) and, instead, focus on developing instruction that helps students acquire 21st-century skills. One such teaching approach advocated by school library researchers, guided inquiry, is based on the development of essential knowledge and skills through student research and inquiry, guided and scaffolded by a team of educators (Kuhlthau, Maniotes, and Caspari 2007).

Guided inquiry instructional activities contain six characteristics:

- Students actively engage with and reflect on their learning experience
- Students build on prior knowledge
- Students are scaffolded throughout so that higher order thinking is encouraged
- Students develop in-depth knowledge of the content through a learning sequence
- Students are given opportunities to interact with the content in different ways
- Students collaborate with others to extend their own learning (Kuhlthau, Maniotes, and Caspari 2007).

These characteristics are present throughout the process of initiation, selection, exploration, formulation, collection, presentation, and assessment. Guided inquiry naturally aligns itself to 21st-century skills and the Common Core State Standards (CCSS), as illustrated in the P21 Framework (Magner, Soule, and Wesolowski 2011). See Figure 1, page 33. Of note is the CCSS emphasis on critical thinking, reasoning, communication and media, information, technology literacy as key learning outcomes in both English Language Arts and Math. Guided inquiry, as a pedagogical approach, is a natural fit for school librarians who are exploring 21st-century frameworks for the development of collaborative instructional projects that support CCSS.

DIGITAL VIDEO

When discussing the modernization of pedagogy and instructional design, it is easy to overlook the potential of tools that have been available for some time—this potential is unlocked when these tools are integrated in meaningful
ways. One such standard technology, digital video, deserves a second look as a tool for guided inquiry units. The characteristics, capabilities, and accessibility of digital video have dramatically expanded in the last five years. Today, access to a smartphone, an iPad or iPod, other tablet devices, even a basic webcam, is all that is needed to collect (and often edit) digital video recordings. Video-based storytelling, a popular project amongst school library programs, is commonly used for book trailers, reader’s theater, and reading promotion. Other student-created video project ideas include short presentations, interviews, sketches, mini-documentaries, news broadcasts, or dramatizations (Dal 2010). There is an extensive body of research that extols the benefits of student-created video projects for social learning opportunities, authentic and real-world endeavors and generators of high student-engagement, particularly in challenging student populations (Goulah 2007; Green 2013; Hafner and Miller 2011).

NECESSARY COMPONENTS

Since resources on technical aspects of digital video tools and software are widely available, time is best served by focusing on the components of a student-created video project and how these components can best be applied within the framework of guided inquiry.

ESTABLISHMENT OF EXPECTATIONS—HELPING STUDENTS BUILD ON PRIOR KNOWLEDGE

Students derive larger academic benefits when learning goals and the necessary steps to achieve these are clearly defined and understood (Windschitl 2002). Students can be guided through the process of establishing goals by using examples that can be analyzed for positive or negative elements. By identifying key elements and establishing clear expectations, students are more self-reflective and self-critical, building upon prior knowledge to develop stronger products (Cohen et al 2002).

AUTHENTIC JOB AIDS—ALLOWING FOR STUDENT DEVELOPMENT IN SEQUENCE

As much as possible, the design and inclusion of job aids should mimic the aids used by real-world experts. The American Film Institute’s storyboard glossary is an excellent example of this type of resource. Designing in this way also provides opportunities for librarians and teachers to include bridging activities that will help students overcome knowledge gaps between classroom and expert practices. Often the time spent on planning, storyboarding, scripting, and blocking are minimized in favor of filming or editing. This is a mistake. Planning guides, storyboards, and scripts represent multiple opportunity points for scaffolding, intervention, and student reflection. Kathy Hribar describes how developing a digital storytelling script led to her students recognizing the need for further inquiry and research in order to refine their products (2009).

CONTINUOUS FEEDBACK—GUIDANCE AT CRITICAL STAGES OF LEARNING

Students should be provided with on-time and continuous feedback throughout the entire video-making process. This social interaction is a basic tenet of constructionism, which calls for learners to wrestle with and incorporate the responses that their learning artifacts elicit (Harel and Papert 1991). Feedback formalizes the response students receive from others so that learners are able to collect ideas for improvement through instructional conversations and class discussion. Additionally, students should be able to use

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**Fig. 1.** P21 Framework (Magner, Soule, and Wesolowski 2011).

<table>
<thead>
<tr>
<th>P21 Framework Element</th>
<th>CCSS</th>
<th>Guided Inquiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core subjects</td>
<td>Build strong content knowledge</td>
<td>Students develop in-depth knowledge of the content through a learning sequence</td>
</tr>
<tr>
<td>Critical thinking and problem solving</td>
<td>Respond to the varying demands of audience, task, purpose and discipline</td>
<td>Students are scaffolded throughout so that higher order thinking is encouraged</td>
</tr>
<tr>
<td>Communication</td>
<td>Comprehend as well as critique</td>
<td>Students collaborate with others to extend their own learning</td>
</tr>
<tr>
<td>Information literacy</td>
<td>Value evidence</td>
<td>Students build on prior knowledge</td>
</tr>
<tr>
<td>Self-direction</td>
<td>Demonstrate independence</td>
<td>Students actively engage with and reflect on their learning experience</td>
</tr>
<tr>
<td>Global awareness</td>
<td>Come to understand other perspectives and cultures</td>
<td>Students collaborate with others to extend their own learning</td>
</tr>
<tr>
<td>Information, media and technology skills</td>
<td>Use technology and digital media strategi-cally and capably</td>
<td>Students are given opportunities to interact with the content in different ways</td>
</tr>
</tbody>
</table>
this loop of continuous feedback to revise projects for the duration of the digital video production process. Within the framework of guided inquiry, instructional intervention at critical points is considered essential for the development of higher-order thinking skills. By incorporating continuous feedback, students can be pushed toward deeper and more meaningful product development.

PUBLISHING— LEARNING THROUGH INTERACTION WITH OTHERS

There is another layer of feedback that should be considered: a global audience. The global audience is part of a learner’s social tapestry, a key component of guided inquiry. Students are strongly motivated to carefully prepare and revise work for external audiences, a process which further authenticates projects with feedback that clarifies different viewpoints and concerns (Grant and Branch 2005). An external audience invites attention to detail and is an excellent vehicle for discussion of issues ranging from copyright and fair use to the complexity of visual messages and cultural considerations. Although it may be tempting to hide student work behind a protective firewall, doing so prevents students from reflecting on the authenticity and effectiveness of their work. Librarians should consider requiring students to publish videos by embedding them in wikis or websites along with written reflections or a student-generated pathfinder to further enrich the video unit.

ASSESSMENT— ACKNOWLEDGING THAT STUDENTS LEARN IN DIFFERENT WAYS

Another important component is assessment. When producing learning artifacts, students develop metacognitive knowledge as well as the ability to consider how multiple literacies might best be used to communicate ideas to a specific audience. Such growth might be overlooked if librarians and teachers simply assess the final product rather than assessing materials (products of thinking) generated during the process. Windschitl also calls for the assessment of products of thinking in addition to final projects so that librarians and teachers can determine how student ideas and understanding evolve through phases of learning (2002). Continual assessments should not only hold groups accountable for progress, but individuals as well. Group productivity and quality increase when students are individually assessed for group progress (Barron 2003).

PROFESSIONAL INQUIRY

Ultimately, student-created video projects, developed within the framework of guided inquiry, help learners shift from a microscopic focus on abstract ideas to a broader and practical application so that learners work to employ new ideas, grappling to construct mental models and concrete representations that reflect their own unique interpretations, abilities, and understandings. School librarians who are interested in providing these types of learning opportunities for their students will find the following resources useful:


REFERENCES:


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