Learning that Sticks: Engaged Educators + Engaged Learners

Article

by Judi Moreillon and Michelle Luhtala, September 2011

In their daily 21st-century lives, people engage with the world through multiple literacies, including information literacy, media literacy, visual literacy, and technological literacy. Due to the ubiquitous access to information and the wide variety of formats available, information literacy—the ability to find, analyze, comprehend, use, produce, and share information—is more and more complex. In most states, however, these 21st-century skills are not tested, but as educators, parents, future employers, and governments know, these are essential learnings for today's students. In this context, interdisciplinary teaching and learning through technology-infused school library programs, headed by the expertise of professional school librarians are critical to 21st-century education.

SETTING THE BAR HIGH

At New Canaan High School in Connecticut (NCHS), educators are developing a pathway to innovation through their school library program. According to Deputy Superintendent Mary Kolek, the library sets the bar—high. NCHS librarians offer physical and virtual portals for faculty in terms of thinking and planning for the future, integrating critical thinking, teaching ethics, research, and literacy. The library offers 24/7 access to all. The librarians model interdisciplinary teaching and offer professional development at the site and in the district. Rob Miller, the Director of Information and Communication Technologies, notes that the library program serves as a vehicle for collaboration in developing 21st-century curriculum and supporting technology integration.

Milton Chen, in *Education Nation: Six Leading Edges of Innovation in Our Schools*, offers an environmental scan called "A Day in the Life of a Young Learner: A 2020 Vision" (2010, 249-253). What are the necessary features of this vision for a future learning environment? What skills will students need to be successful? What kinds of instructional partnerships must educators form and what district-level initiatives make this a likely future for 21st-century students? Perhaps this learning environment, the skills, teaching practices, and policies can be summed up in these terms: learning environment, focus, curiosity, risk-taking, and real-world relevance backed up by evidence-based practice. To implement this vision, educators co-plan, co-teach and guide students as they design, implement, and self-assess their learning journeys.

LEARNING ENVIRONMENT

A positive, safe, respectful, and responsive educational environment is a powerful component of the 21st-century learning landscape. It cultivates understanding and learning for all stakeholders—students, faculty, staff, and community. It is not a place or building, but a vision that supports the entire learning process. This new learning environment paradigm is multifaceted, global, fluid, and 24/7. Adaptability, innovation, creativity, and trust are crucial to achieve a coherent partnership in this new milieu. This learning culture creates a high-achieving and challenging learning experience for all students and a fertile space for educator development.

New Canaan Public School District (NCPS) fosters an educational environment where all shareholders contribute. Together, they articulate a clear K-12 curriculum with succinct and measurable competencies, benchmarks, and assured experiences that ensure a responsive learning environment. New Canaan teachers and students are empowered to take ownership.

In a "connected" educational environment, the ICT (Information Communication and Technology) team plays a major role in working with students, designing curriculum, instruction, and providing professional development. Librarians collaborate and partner with teachers and the community to engage students in authentic, real-world tasks, higher order thinking, problem solving, and information literacy. Instruction and information are integrated onto a web-based educational platform with a focus on cyber safety, plagiarism, reading, research (evaluation, analysis, synthesis, bibliography), and presentation using an interactive website with social capabilities. ICT leadership and

creativity transform learning from a stagnant environment to a dynamic one—ensuring each student is prepared to compete in a global economy.

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FOCUS

In a world filled with distracting devices, students must learn to focus. They must persist with a line of inquiry as they access and analyze information, achieve comprehension, synthesize, and use information creatively to produce new knowledge. Warnings abound from societal observers that one danger of ubiquitous technology is that it makes it easy to stay in the "shallows," skimming, scanning, and engaging in superficial thinking rather than making time for deep understanding (Carr 2010). Tools that help users easily decode information can give them a false sense of comprehension. If they hope to become innovators who have the potential to solve the world's relentless problems, youth must engage in depth to make connections, draw inferences, thoughtfully question, and synthesize information to arrive at their own interpretations.

Educational researchers suggest that 21st-century students engage with fewer topics and focus on learning how to learn rather than interacting with facts alone. Focused students learn to practice metacognition; they reflect on their own thinking processes and self-assess their knowledge and intellectual development. Many call for the implementation of project-based learning (PBL) as a way to frame interdisciplinary inquiry that requires sustained engagement on the part of learners and educators' expert guidance.

Traditional literacy skills are still required of 21st-century learners but now these skills are embedded in complexity. At NCHS, there are numerous assured interdisciplinary experiences in which all students participate. Each long-term inquiry project involves students in applying reading, writing, and thinking skills while interacting with a wide variety of resources in multiple formats and demonstrating new understandings using technology tools. For example, as part of their junior research project, students articulate their research action plan in an online questionnaire, post research suggestions to their fellow juniors' entries in a gradewide online threaded discussion, self-assess their own learning through pre- and post-assessments, and peer review their classmates' Works Cited documents. These participatory experiences, which involve more than three hundred students, help scaffold the work, engage and re-engage learners, and provide focus throughout the rigorous inquiry process.

CURIOSITY

The 21st century has crystallized the need for students to develop enthusiasm for lifelong learning. It is not possible to predict what students will need to know as they mature, but, without curiosity, they will have neither the interest nor motivation to learn how to learn. Curiosity is an intangible instructional objective. How is it learned? How is it measured? What high stakes, tested content will be sacrificed in order to teach curiosity? At NCPS, educators rely on what is called "planned messiness." By disrupting expectations, it is possible to pique student interest.

NCHS teachers embed unpredictability in instruction. This involves teaching units with clear enduring understandings and a set of engaging essential questions, but open-ended outcomes and a great deal of student choice. This may feel like organized chaos, but it breeds curiosity. Like any good mystery, class is more interesting when no one knows how it will turn out.

In *Disrupting Class*, Christensen, Horn, and Johnson support this assumption (2008). They stipulate that innovation is often a byproduct of need and autonomy. It is need that drives curiosity, and autonomy allows the curious the time and space to construct solutions. Allowing problems to unfold organically in class creates the real-life experiences that engender curiosity. Balancing disruptive instruction against the need for data collection and universal assessment is not as hard as it sounds. Curiosity is not easily taught in isolation. It requires a symbiotic relationship with content learning.

NCPS administrators support teachers in their quest to build students' curiosity by providing a broad, but clear framework for curriculum development and encouraging experimentation with instructional delivery. They support less typical methods of data collection in the classroom, accepting incremental progress against simple benchmarks, as opposed to relying solely on standardized tests. Finally, administrators supply teachers with technology tools and professional learning opportunities that support this kind of data collection and analysis.

RISK-TAKING

Many students today lead dual lives: their participatory 21st-century life where they take risks by contributing, collaborating, and putting themselves out "there" and their low-risk school life. Even at NCPS, a district recognized for integrating ICT into curricular programming, high-achieving students are cautious—in school. For example, in 2008, the library program launched an online book discussion forum using Web 2.0 tool VoiceThread that allows students to post comments using video, audio, or typed text. Hundreds of students posted typed book reviews, but not one student posted a video review.

In school, NCHS students rarely take risks where grades are concerned. For fun? Sure! For school? No way! Yet, these students face a future of constant, rapid-fire change. Very few will have the time to develop the kind of expertise that digital immigrants have had. In their fast-moving world, risk-taking is a fundamental survival skill.

Educators must provide students with opportunities to take risks—not scary risks, but the kind that asserts, "I have no idea what I'm doing, and I may look silly, but if I try it this way, I just might succeed." Teaching risk-taking is challenging. It involves giving students choice and independence. At NCPS, teachers model risk-taking as a productivity tool. They often learn alongside students. Students are contributors, instruction is constructivist, learning is participatory, and learning is democratized.

Teachers are often reluctant to teach what they have not yet mastered. It is incumbent upon district leadership to afford faculty the professional autonomy to embrace instructional risk-taking in the classroom. In doing so, administrators themselves model the very thing students should be practicing in school—risk-taking.

REAL-WORLD RELEVANCE

For 21st-century high school students, in particular, real-world relevance requires educators to design instruction in which connections between school-based/community-based literacy and students' future life choices are clear and compelling to learners. Framing content in terms of relevance to students' lives is one way to motivate learners (Tomlinson and McTighe 2006).

The Partnership for 21st Century Skills (P21), an organization concerned with students' preparation for the global economy, identifies skills that are essential to student success. These can be categorized as learning and innovations skills, digital literacy skills, and career and life skills (Trilling and Fadel 2009). These skills are also reflected in the *Standards for the 21st-Century Learner* by the American Association of School Librarians (2007). Collaboration between classroom teachers, specialists, and school librarians naturally flows from a need for real-world relevance.

P21, the George Lucas Foundation's Edutopia, and others believe that PBL is the most effective way for students to develop the requisite 21st-century skills. PBL involves students in posing real-world questions and pursuing inquiry based on their interests, as well as state-mandated curricula. These projects build on students' curiosity, provide them with opportunities to focus in depth on a concept or problem, use technology tools, and take risks to explore beyond the confines of a textbook and the walls of their school. PBL can involve students working in-person and online with real community challenges and with experts in various fields, and can address developing students' cultural knowledge and global perspectives as well.

EVIDENCE-BASED PRACTICE

In 2010, the Connecticut State Board of Education adopted the *Common Core State Standards* (CCSS) in English language arts and mathematics that define what students should know, understand, and be able to demonstrate. CCSS provides school librarians a mandate to fully integrate AASL's *Standards for the 21st-Century*

Learner, especially in the following areas from the Common Core: Research to Build and Present Knowledge, Production and Distribution of Writing, Range of Reading and Level of Text Complexity, Key Ideas and Details, Craft and Structure, Comprehension and Collaboration, and Interpretation of Linear Models. At NCHS, school librarians have fully implemented CCSS across the curriculum through the integration of AASL standards into project-based learning (PBL).

With current state and national assessment frameworks, few districts risk committing entire courses to PBL, but integrating PBL units within courses provides students with these much needed learning experiences. This is the model in place at NCHS, and educators are collecting evidence to show that these projects are making an impact on academic outcomes and students' engagement. Evidence-based practice refers to the application of the best available scholarly research, information, or data to inform instructional design. Data analysis is crucial to instructional design. Objective measurements and empirical evidence in learning outcomes provide librarians with essential documentation to advocate for program and collaborative practice.

The integration of authentic learning tasks with diagnostic assessment and progress monitoring is a powerful educational instrument for change and student achievement. An example of evidence-based practice at NCHS is "My Personal Wellness." This project is a comprehensive 21st-century approach to learning, preparing students to be independent and critical thinkers as well as lifelong learners who recognize the real-world value of literacy and health. The assignment began in 2005, as a static, Socratic collaboration between NCHS health teachers and librarians. It has evolved into a differentiated, rigorous, online, interactive partnership among ninth grade students, health teachers, librarians, technology integrators, special education teachers, administrators, and New Canaan Library.

Two key components of this project are reading nonfiction health article(s) for information and writing an annotated bibliography. Student achievement on research, comprehension, and annotated bibliographies improved 51% in five years because of ongoing assessment, feedback, online technologies, and data analysis. By 2009, 99% of students graded met the goal. Remarkably, 87% of the students surveyed thought this project would result in improved personal wellness. An analysis of the data from the Connecticut Achievement and Performance Test (CAPT) Reading for Information from 2006-2009 shows a correlation between the improvement in the information literacy skills from My Personal Wellness (research, reading, evaluation, and synthesis) scores and district improvement on the CAPT Reading for Information scores. A focus on learning outcomes, a coherent and rigorous curriculum, evidence-based practice, and an interdisciplinary approach result in student learning and academic achievement.

MAKING TEACHING AND LEARNING STICKY

With increased trust, training, and collaboration among classroom teachers, specialists, school librarians, technology integrators, students, administrators, parents, and experts in various disciplines, we can help students develop 21st-century skills whether or not they are formally tested on state and national assessments. Through evidence-based practice, educators can show the impact of these learning experiences on student motivation, engagement, and achievement. Together, they can prepare students for living and working in the 21st-century—and make it stick.

ADDITIONAL RESOURCES

Common Core State Standards Initiative. http://www.corestandards.org/the-standards (accessed June 22, 2011).; American Association of School Librarians. *Standards for the 21st-Century Learner*. American Library Association, 2007. (Downloadable for free at: http://www.ala.org/aasl/standards).; Carr, Nicholas. *The Shallows: What the Internet Is Doing to Our Brains*. Norton, 2010.; Chen, Milton. *Education Nation: Six Leading Edges of Innovation in Our Schools*. Jossey-Bass. 2010.; Christensen, Clayton, Curtis W. Johnson, and Michael B. Horn. *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns*. McGraw-Hill, 2008.; Tomlinson, Carol Ann, and Jay McTighe. *Integrating Differentiated Instruction and Understanding by Design*. Association for Supervision and Curriculum Development, 2006.; Trilling, Bernie, and Charles Fadel. *21st Century Skills: Learning for Life in Our Times*. Jossey-Bass, 2009.

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