AUTHENTIC LEARNING
in the Digital Age

Engaging Students Through Inquiry

Larissa Pahomov

Hawker Brownlow EDUCATION

ASCD®

AUTHENTIC LEARNING
in the Digital Age

Engaging Students Through Inquiry

1 Education for the Information Age

If you are reading this book, you are likely already committed to (or are at least interested in making the shift to) working in an inquiry-based classroom. You believe that students should be constructing knowledge instead of having teachers hand it to them. You avoid delivering lectures and like to give students some kind of choice in their assignments, favoring projects and papers over tests and quizzes. You create opportunities for students to teach and learn from each other. When you were preparing to be a teacher, you read the works of John Dewey, and you agreed with him: "'Knowledge,' in the sense of information, means the working capital, the indispensable resources, of further inquiry; of finding out, or learning, more things" (Dewey, 1916).

Almost 100 years after he published *Democracy and Education*, Dewey's words have never been truer. As the amount of information available to us explodes, as well as our access to it, what matters is not what students know but how they acquire that knowledge and what they can do with it. In terms of employment, mastering a single set of knowledge hardly helps a student. The Bureau of Labor Statistics reports that students who go to college have an average of 11.7 different jobs in a lifetime (see http://www.bls.gov/nls/nlsy79r24jobsbyedu.pdf)—and this data is based on baby boomers, who have benefited from more job security than their children. Cognitive skills such as conducting independent research, assessing information for

credibility, applying concepts to new situations, and self-critiquing one's own abilities are central to our success in today's working world—and, more important, to our lives as learners and human beings. In the words of education theorist Will Richardson (2012), we have begun "crafting a new narrative around learning"—one that he witnessed firsthand when his teenage son leveraged many different information sources in order to figure out how to play the video game *Minecraft*. Richardson describes the joys but also the implied perils of this narrative in his book *Why School?* (2012): "In this new story, real learning happens anywhere, anytime, with anyone we like—not just with a teacher and some same-age peers, in a classroom, from September to June. More important, it happens around things we learners choose to learn, not what someone else tells us to learn."

Unfortunately, contemporary education also harbors forces that run contrary to the tried-and-true practice of inquiry-based education. In the era of No Child Left Behind, standardized tests are the yardstick by which many schools must prove their worth, and student-generated projects are typically not accepted in place of the multiple-choice exams. The Common Core State Standards—rejected by some states for being too restrictive—also threaten to force teachers to deliver large chunks of standardized content, leaving little or no time for students to engage with what interests them personally. Administrators are often sympathetic to classroom teachers in terms of the havoc that standards can wreak on authentic learning but are rarely in a position to run interference. Teachers are left with a quandary: How can they create an authentic learning environment in today's standards-driven atmosphere?

The answer is that many of them already do—and this book will show you how. The following chapters present a detailed framework for implementing a personalized, inquiry-based education in a typical secondary classroom. The framework has five core principles, which are modeled after the scientific method and were pioneered at a real high school called the Science Leadership Academy (SLA) in Philadelphia, Pennsylvania. The word *framework* is intentional here—unlike a script or an instruction set, the examples presented in this book are designed to give educators a solid but open structure that can guide

115009 • 9781760015497 • © 2015 Hawker Brownlow Education

their own curriculum and classroom design. Moreover, you can use this framework to transition the content and skills you already cover, thereby providing students with a meaningful education while still meeting the educational requirements of your school, district, or state.

This book also provides detailed insight on how to effectively integrate technology into inquiry-based education. Currently, teachers and schools often fall into an embrace/reject dichotomy when it comes to using technology in the classroom. They either hop on the bandwagon with each new shiny tool, or they proclaim technology a "distraction" and ban it from their classrooms entirely. These splits often run across generational lines, and you can probably point to where the division happens in your own school building. You might even recognize such a split in yourself. Both sides of the argument have their point. But this "digital divide" often reflects a misguided focus on the *what* of technology, instead of the *why* and the *how.* The teachers who resist technology integration are, by extension, willfully ignoring ways it could change their classrooms for the better. The teachers who embrace technology sometimes miss this opportunity as well—they are excited to use a new tool, but they focus on the simple presence of that new device instead of thinking about how it could influence their curriculum or teaching. (Unfortunately this approach is reinforced by much of the education technology industry, which focuses on the latest devices and software in the interest of maximizing profit margins.)

In his book *Education Nation,* Milton Chen (2010) characterizes this kind of split as "resulting in a waste of precious time, resources, and policies, and, most of all, little impact on student learning" (p. 23). Instead of falling into an either/or debate, he urges educators to reconcile apparent opposites with a "smarter synthesis" that looks at the bigger picture of learning.

In this book, this adjustment means shifting away from looking at technology as an end in itself and toward using technology as a medium for all kinds of learning. To make that shift, schools and teachers need to be asking the following question: *How can technology transform education?*

Students can help answer this question for schools, because they are already exploring and benefiting from the transformative properties of technology as they use it outside of the classroom. As a result, students are often ahead of the game when it comes to personalizing their own learning. According to the Pew Research Center, teens have unprecedented access to tech tools. In 2012, 93 percent had a computer at home and 37 percent had their own smart phone (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). The next section describes several of the positive effects of technology on learning, along with examples of how teens (and many adults) are already making this shift on their own time.

The Transformative Effects of Technology

In many ways, access to—and effective use of—technology involves turning the traditional methods of education on their head. The transformation extends to many aspects of teaching and learning, including what is emphasized; how students interact with teachers, other students, and people outside the classroom; and classroom management.

Shifting the emphasis from content to skills

When an education is content-based, the primary skill being practiced is memorization: you learn it, you repeat it, and you've shown mastery of the information. This process is an essential part of human learning, and being able to do it well has certain benefits. However, it only works when the memorized content will be applied on a regular basis—the Pythagorean theorem in geometry, or the lyrics of your favorite pop song that you like to sing in the shower. When we ask students to memorize content that they are never going to apply to a task, they quickly forget it. Why base education on such a rudimentary skill?

Technology shines a light on this weakness in education because it makes that basic content incredibly easy to access. Information that resided in a heavy textbook or a distant corner of the school library can now be pulled up instantly, anywhere, which undercuts the argument

115009 • 9781760015497 • © 2015 Hawker Brownlow Education

that "you have to memorize this now so that you know it later." When students are liberated from the monotony of memorization, they have time to learn the deeper frameworks and contexts that give facts and figures meaning. Then they can apply these understandings to *any* content they encounter in the future. The skills that they learn become the enduring understandings of their education.

Allowing for constant engagement

Along with being easy to use, technology also provides constant access to both the information and the tools needed for authentic learning. Students often have round-the-clock access to a computer, sometimes provided by their school. Where this is not the case, cell phones are becoming increasingly powerful proxies for traditional machines.

Because students so readily embrace tech tools, they are already benefiting from the power of access—doing rapid-fire research via an Internet search, mastering the skills needed to do well at an online game, or creating unique multimedia content and sharing it with the world. Consider the difficulty that teens once had in procuring the knowledge that would help them grow as learners. In the documentary *The Beatles Anthology*, Paul McCartney tells a story about the early days of playing guitar, when he and his friends were still learning basic chords. When they hear about a "bloke across town" who knows how to play a B7, they spend the day taking several buses across Liverpool just so they can learn it. The story is charming, but completely antiquated by today's standards. Musicians now can pick up all of the basic instruction they need online; a search for "B7 chord" on YouTube results in approximately 19,100 videos, the most popular of which has been viewed over 278,000 times. Constant access to resources and communities means more time to actually practice and create instead of slowly tracking down basic information.

Educators sometimes look down on these independent activities as something that distracts students from their academic pursuits. But this kind of access can also enhance education when the curriculum capitalizes on it. The research, problem-solving, and content-creation

skills that students are developing on their own time can reap big rewards in the classroom, provided that time and space are allotted for such activities.

One specific aspect of this engagement is the level of connection that is suddenly possible for teachers and their students. Everyone is a part of the same online world, whether watching the same videos or being members of the same social media network. This is something of a brave new world for educators, figuring out how to navigate an online realm where they can constantly be in touch with their students and have access to each other's lives in ways that never happened when contact ended with the school day. Unfortunately, many school administrations respond to this new dynamic by attempting to restrict or ban online contact between teachers and students, when it would be more useful and instructive to model appropriate behavior and etiquette before students become adults (more on this topic in Chapter 7, "Embracing the Culture").

Democratizing learning

Technology can bring increased democracy in a variety of ways. The first, and perhaps more obvious, is curriculum-based. Because technology—and, in particular, access to the Internet—allows learning to become personalized, it allows for infinite possibilities for learning inside a single classroom. In a traditional "gatekeeper" classroom model, the teacher must impart all relevant knowledge to students personally because the teacher is the "expert" in that subject. In a classroom with integrated technology, however, access to the Internet gives students the flexibility to pursue their own personal interests. The teacher no longer has to serve as the sole source of knowledge.

Of course, this doesn't mean that the teacher has no purpose. Instead of primarily lecturing students on content, the teacher must now aid and assist students in their own quest for knowledge. This shift in focus does not happen automatically; there are plenty of classrooms where students could be exploring their own interests within a given topic but instead are still subjected to a one-size-fits-all curriculum. The shift must be intentional.

115009 • 9781760015497 • © 2015 Hawker Brownlow Education