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Knowledge and the 21st Century Learner:
Libraries and Instructional Technology Go Hand-in-Hand

"The illiterate of the 21st century will not be those who cannot read and write,
but those who cannot learn, unlearn, and relearn." ---Alvin Toffler

In teacher education we tell our undergraduate and graduate students that good educators reflect because it is important to understand why we do the things we do, why we teach the way we teach. I have a stack of philosophy statements I have written over the years, an outcome of many education classes and several advanced degrees, that includes a philosophy of education, a philosophy of teaching, a philosophy of gifted education, a philosophy of the use of media in the classroom, a philosophy of school library media, a philosophy of technology in the classroom, a philosophy of research, a philosophy of teacher education, and so on and on. In these essays I am able to trace my progress as an educator, where I learned, unlearned, and relearned my core knowledge base, continually developing new understandings of what I was as an educator in relation to whatever context I needed it to be in at the time.

While examination of beliefs in relation to specific experiences with a particular knowledge base is a good thing, it is the sum of all the parts that walks into the classroom or library media center or logs onto a learning management system to teach. It is only in developing a cohesive philosophy essay that we as educators develop a true awareness that although educator might be our job title, it is our role as learners that has benefited our past students and will continue to benefit our future students the most. It is only in developing a cohesive philosophy that we see that our life as learners is filled with common themes and guiding beliefs that are foundational to our personal ideologies.

The foundation of my personal ideology is built around my love for libraries and the firm belief that no one should be denied the opportunity to learn. Libraries and I go way back. I grew up surrounded by books. I was read to daily as a child, and books and reading became an integral part of my life. I remember my first library card and standing on tiptoe at the circulation desk to print my name on the book cards in my very best first grade handwriting. I remember those first three Beatrix Potter books I checked out, the pleasure I took in slowly turning the pages to examine the beautiful illustrations. My mother stills tell stories of finding me off in a corner at our home perusing encyclopedia entries or with my nose in a novel from what was then the fledging young adult publishing movement. When I was in middle school and high school I worked in the school library and, later, as a high school senior, I worked at the public library after school. I had access to shelves of books, so I read, and I learned, and I formed the belief that libraries are the center of the world as we know our world to be.

The cultural significance of libraries as the accumulators, conservators, and purveyors of human knowledge cannot be disputed. As astronomer Carl Sagan (1985, p. 249) so lyrically

noted, "the library connects us with the insight and knowledge, painfully extracted from Nature, of the greatest minds that ever were, with the best teachers, drawn from the entire planet and all our history, to instruct us without tiring, and to inspire us to make our own contribution to the collective knowledge of the human species." Even though libraries strive to fulfill our need to know, they also encourage the discoverer in our psyche to search out the answers to satisfy the existing gaps in the body of knowledge, to push beyond the boundaries of what is known into a realm of endless possibilities.

Yet, historically, despite the best efforts of librarians, scholarly access to knowledge—to learning—was limited. It was tied to the hallowed halls of individual institutions, constrained by issues such as small publisher print runs, inadequate library budgets, and lack of professionally trained staff, to those scholars with the resources that permitted them walk through the library doors. Interlibrary loan agreements, no matter how diligently pursued, could alleviate only a small fraction of the need for access for those without resources. At long last, however, with the advent of the personal computer in the 1970's and the development of the Internet in the 1980's and 1990's, the accumulated knowledge of libraries broke free of fixed walls. The personal computer became an academic scholar equalizer. Knowledge is now but an electron away, stored and transmitted digitally, to be absorbed by, debated on, and reflected upon by its consumers and their collaborators. Through the auspices of technological innovators, we now live in a world no longer hampered by distance nor limited by the physical accessibility of knowledge.

The personal computer as a knowledge source with a direct pipeline to libraries was adopted by educators and made its way into schools. Though the tireless efforts of educational researchers, librarians, and early adopters, the personal computer has been transformed into a powerful instructional tool that allows not only the transmittal of knowledge, but the manipulation and expansion of that knowledge, essentially transforming it into an electronic instrument of learning for the masses. Even though instructional technology is defined by the Association for Educational Communications and Technology (AECT) as "the theory *and practice of design, development, utilization, management and evaluation of processes and* resources for learning" (Seels and Richey, 1994, p. 9), it is always the image of a personal computer that immediately floods into my mind when I hear the words "instructional technology" and consider what instructional technology is and the impact it has had on my personal philosophy as an educator.

I have no doubt that the personal computer has been a guiding force in the way that I teach and learn. After completion of my first tertiary degree in the early 1980s, I worked for a time at a geological library whose clients were professional geologists, primarily involved in the petroleum industry. There I saw a library as it should be used, active and thriving, fed by the power of the early models of the personal computer that were harnessed to streamline the retrieval of knowledge and to provide access to information far beyond my physical reach. Even though I was only considering a career in education and not actually teaching at that time and the geologists were not students, I still knew learning when I saw it. Moreover, it was learning that

made a difference—with authentic tasks, communities of practice, constructivist learning, and collaboration—assisted with a technology used as an instructional tool.

Fast forwarding into the 21st century, well beyond that first personal computer I contemplated with such interest, I can see those same activities I observed in that library written about in the educational literature today—authentic tasks, communities of practice, constructivist learning, collaboration, instructional technology—but those watchwords go beyond a single library into a global community. Learners with the vast resources of libraries at their fingertips are tied together through computer networks and are engaged in the manipulation of, reflection upon, and the creation with, and—most importantly—the sharing of knowledge with a whole host of web-based tools designed for especially for that purpose. Instructional technology has come of age. Indeed, as demonstrated by the publication of the American Association of School Librarians' (AASL) *Standards for the 21st Century Learner* and the International Society of Technology in Education's (ISTE) *National Educational Technology Standards,* the inception of computer-based instructional technology has changed the very face of who we are as a global culture and what we expect from a 21st century education.

My personal belief is that a 21st century education should be a fluid, dynamic process with the ultimate purpose of producing socially-responsible individuals who seek to collaborate within their culturally-diverse communities to promote a life of justice based upon the critical analysis of practices and new ideas. The placement of instructional technology within that framework is as an educational tool, not only for information retrieval, but as a tool to be used by learners for the creation of community-driven, user-generated content. John Dewey said "however a man may impose upon himself or upon others, a man's real measure of value is exhibited in what he does, not in what he consciously thinks or says. For the doing is the actual choice. It is the completed reflection" (Hickman & Alexander, 1998, p. 250). Yes, in 21st century learning, the library and instructional technology goes hand-in-hand where the first priority in the shared mission of educators and learners must be personal commitment to the tenets of reflective practice, change agency, and lifelong learning.

Resources

American Association of School Librarians. (2007). *Standards for the 21st Century Learner.* Chicago: American Library Association.

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