

Learning to Research – Researching to Learn

I would like to thank my colleagues in the Library and the Centre for Teaching & Learning who nominated me for the OCUFA award. I am deeply honoured that they acknowledged my teaching and research contributions in this way.

My teaching experience began in a high school classroom and continued as the Instructional Services Librarian for 30 Queen's departments, as a Learning Technology Faculty Associate at the Centre for Teaching & Learning, as Head of the Education Library, and as Teaching & Learning Specialist for Queen's Library.

In reflecting on my years as an educator, I've come to understand that the principals underpinning good teaching and successful learning remain unchanged. The best learning environments are collaborative, engaging, inclusive, and supportive. Students have time to ask questions, to explore and share ideas, and to build the subject context they need as individual learners to understand course content. I was hoping that, as I studied teaching and tested new approaches and technologies in the classroom, that it might become easier. Now I can say that while teaching and learning tools have changed, the essentials for teaching success remain the same. Teaching is about designing learning experiences that make time for conversation, engagement, creation, and sharing. Assignments should open the door for creativity and personal expression and allow students to explore some aspect of a topic or problem that will develop their own investigation skills. This aspect, especially, has the potential to deepen learning and to arm students with the confidence, desire, and skills to be good learners.

In my own experience as a learner, I found investigation to be a powerful form of engagement. One memorable project began with my discovery of two books. If these had been e-books, I would never have found them because I didn't know to look for them. Their discovery was accidental. When we search online we are less likely to browse for the unknown. The first book belonged to my grandfather who was a Freemason. When I stumbled on his masonic box and the tiny book of secret

rituals it included, I was intrigued. He let me read it even though he swore me to secrecy. Book two belonged to my father and it was an oversized folio with the surreal and colourful paintings of the Russian artist Marc Chagall. I discovered that Chagall had painted the sets for Mozart's opera, "*The Magic Flute*", when it was staged in New York at the Metropolitan Opera and that it was known to be a masonic opera. I wondered: did Chagall reveal masonic themes in the stage sets and did other artists make similar connections? My pursuit of answers took me to libraries around the world and became an unforgettable journey of inquiry. Consequently, it is the engagement of inquiry that I've taken forward into my teaching as an academic librarian.

Teaching librarians specialize in the development of information literacy – the inquiry and academic research skills to find, evaluate, organize, apply, and share information broadly and ethically. In Ontario elementary and secondary schools these abilities are referred to as "digital literacy", acknowledging the need to access and use online resources including visual, multimedia, presentation and sharing tools. In the age of social media, we are compelled to share learning beyond our immediate classrooms. Learning to inquire thoughtfully - with purpose, strategy, tenacity, and with suspicion – is a useful skill. We are all teachers of information literacy because it is a tacitly-assumed parallel curriculum that supports learning across disciplines. There is always a need to seek information whether it is basic facts, discipline-rich literature, or diverse perspectives across subjects, people, and places.

How do librarians contribute to the academic learning enterprise at Queen's University? You already know that the books you read and the databases you consult at Queen's are selected by specialized subject librarians. The electronic infrastructure on your desktop to locate these resources is constructed and maintained by library staff. You might begin a search in Google Scholar. The thousands of resources that are returned are, for the most part, found in Queen's Library. They do not appear by accident. They are purposefully selected and made visible to academic readers. Without a library infrastructure extending your reach into the world's scholarly materials, searchers can be misled by a

serendipitous hodge-podge of Google hits drawn from the surface of an information ocean, with no inkling of its underlying depths or currents.

Each year librarians help students transform topics and web searches into sharpened, systematic inquiries in the research literature. One method I've used to explore thesis topics with graduate students is to cooperatively construct a concept map. The shared visualization helps to uncover ideas, identify themes, and record conversations about information paths and relationships. This is one way to explore a variety of resources with students and to help them consider the purpose for different information tools. I find that, for those who grew up with the Web, their concept of information is synonymous with the predominant method for searching. The search portal has superseded, and become, the database. The medium is still the message. Is the complexity, scope, and volume of information at our fingertips unintentionally driving a simplification of how it can be accessed? If so, does the access technology influence a searcher's perceptions of the relative importance of topics and their interconnections? Has the fast food concept extended to inquiry? I classify a "fast research" strategy as gathering information snippets gleaned from webpages and YouTube. One is not likely to discover a breadth and depth of ideas using this approach. One of my goals in library workshops is the comparison of search tools so that students can draw upon alternate methods when web searches fail to meet their needs.

In my own research, I have studied how teacher candidates in our B.Ed. program search for lesson plans during teaching placements and how they teach their own students to find information. The typical strategy for pre-service teachers is a two-word web search. They are also insecure as to how to teach their own students to find information. This is an important consideration as we design online courses. Instructors are tempted to provide all reading materials without requiring that students learn to actively explore course content. Information literacy can be developed systematically over time but it necessitates that students pursue questions and content beyond pre-selected readings.

My study and observation of search behaviour has prompted me to advocate a “slow research” paradigm where students have time to develop their critical investigation skills. This past year, librarians at the Education Library guided a group of teacher candidates in a 3-week alternative practicum where they investigated how technologies can help to solve specific teaching problems. Examples of research questions included:

- What are the best iPad apps to enable elementary-school children with cerebral palsy to communicate in the classroom?
- How can visual organizers be used in a high school history class to investigate and share a history of social activism?
- How can the video game Minecraft be used in a grade 5 social studies class to help students appreciate life in an early civilization?

These inquiry-based projects provided students with an opportunity to read about an area of interest and then isolate a specific question. They evaluated their findings and were given peer feedback. They tested software and then taught the class how to use it. In each case, every student benefited from others’ learning. I was a teacher and I was a learner. Experiences like these help us unravel ideas together. In learning to research, we are researching to learn.