Developing Online Master's Programs for Teacher-Librarians: A Brief History of School Library Education at a Distance

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Abstract

Over the past four decades, in Australia, Canada and the USA, school library education at a distance has been delivered though three primary modes: (1) correspondence study; (2) two-way or interactive television and videoconferencing; and (3) Web-based online learning management systems. The theoretical foundations of distance education emphasize that the particular technology or mode of distance education is not as important as the pedagogy employed. Major pedagogical approaches evident in school library education at a distance are: behaviourist/cognitivist; constructivist; and connectivist. This brief history of school library education at a distance focuses on efforts to free school library education from the bounds set by the traditional location and scheduling of library education--on-campus, in universities in cities, with regularly scheduled face-to-face meetings, most amenable to fulltime students. Today's school library education at a distance is primarily an anytime/anyplace endeavour that is attractive to part time students who are employed full time.

Keywords: school library education, distance education, online education, learning management systems, pedagogy

Distance Education Basics

Basic to a theoretical understanding of distance education is the concept of distance as separation between teacher and learner. Distance education involves teaching at a distance and learning at a distance. Distance education is best defined not by any particular medium but by four general elements or conditions: 1) the separation of teacher and learner during at least the majority of the instructional process; 2) the influence of an educational organization,

including the provision of student evaluation; 3) the use of an educational media to unite teacher and student and to carry course content; and 4) the provision of two-way communication between the learner and teacher, tutor, or educational agency (Verduin & Clarke, 1991).

This definition excludes many educational activities often discussed as distance education, such as courses taught face-to-face at off-campus locations by travelling faculty. Also outside the scope of this paper are distance education programs developed for para-professional library workers and continuing education programs offered to fully-qualified librarians already working in the field. My focus is on programs leading to a post-baccalaureate diploma or degree, that is, programs that are designed to prepare professional school librarians who will have dual qualifications in teaching and in librarianship. These specialist programs for entry into practice as school librarians are offered in universities, by library schools offering library and information programs and by faculties of education offering advanced teacher education in a variety of specializations.

When did distance education begin? Most writers discussing the history of distance education suggest that distance education, as we know it, had its roots in correspondence study courses in the early part of the 1800s, made possible by a reliable postal system (Rickman & Wiedmaier, 2011). Many of the earliest correspondence study courses in Europe, Canada and the United States were offered as private enterprise ventures to teach vocational skills or self-improvement skills (e.g., Pitman Shorthand courses, management courses for homemakers, or safety courses for factory workers). When some colleges and universities in the 1800s began to offer correspondence study courses, their focus was often on extension courses in practical areas such as agricultural techniques or writing improvement; a few universities also used independent self-study courses as a way to recruit students for their on-campus degree programs or, in Canada, to allow teachers to continue to study for their degrees during the winter months when travel to the campus became impossible because of weather (Haughey, 2012).

When did school library education begin? The School of Library Economy established in 1887 in New York City at Columbia College (now Columbia University) by the college librarian, Melvil Dewey, the “Father of Modern Librarianship.” Although the earliest library educators, including Dewey, saw the need for distance education, library education by distance came much later, as did library specializations such school librarianship. Some of the earliest school library education courses were organized, not by library schools, but by state and provincial departments of education and by teacher-training institutions.

Modes of School Library Education at a Distance

Dirr (1999) identified four generations of distance education in the United States: the first generation began with correspondence education in the 1800s; the second, with the introduction of television as an educational medium in the 1950s and continuing on into the 1980s and early 1990s; the third, with experimentation with online courses in the late 1980s and early 1990s; and the fourth generation, beginning in the late 1990s, with the introduction of complete virtual programs of study. In Canada and Australia, a similar pattern of development has been evident, but with less emphasis on the third generation; all kinds of television-based distance education are expensive to produce, and two-way or interactive television systems require that students be able to meet in a specific place at a specific time. The scattered populations of Canada and Australia meant that television-based education generally was not economically viable.

Correspondence Study

This first generation of distance education has had a very long history, but even by the 1980s, 90% of distance education programs worldwide were delivered using print materials, supplemented with audiovisual materials (Curran, 1989). In Australia, correspondence study programs were developed before World War I for K-12 education and for teacher education and, by the 1980s, for school library education. The early development of correspondence study was due, in large part, to Australia's scattered population and large geographic area. In Canada, with similar challenges of population and geography, correspondence study programs were developed for K-12 education, beginning in 1921, but unlike Australia, school library education was never offered by correspondence study.

Australia was an early leader in school library education by a distance: by the 1980s, of the ten school library education programs available across Australia, only two were delivered solely in face-to-face mode while five were solely distance and two were offered in dual mode (both distance and face-to-face options). The first solely distance program in school library education was established in 1982 at Charles Sturt University in Wagga Wagga, Australia, and its format was typical for the times: for each course or subject, an instructor worked with an instructional design team to produce a carefully designed print package, 300-500 pages in length, that included a course outline, a study guide and readings. The print packages, sometimes supplemented by commercial or locally produced audiovisual materials, were sent to the students by mail; students submitted their assignments by mail, and instructors sent feedback to the students by mail. By the early 1990s in Australia, computer technologies were

being used to streamline document production and to automate student registration and assignment tracking (Oberg & Freeman, 1996).

Correspondence study, though widely available in Canada and the United States for adult learning and for K-12 schooling, does not appear to have been used for school library education.

Two-Way or Interactive Television and Videoconferencing

In the United States, school library education at a distance benefited from investments in educational television, especially two-way or interactive television, made by both state governments and higher education institutions and systems, beginning in the 1960s. This mode of distance education requires large investments in equipment in more than one location, and it also requires having groups of students congregated near or within commuting distance of an off-campus location. However, two-way television is easy to use for teachers and students. Classes are synchronous or real time, so that teachers and students can interact easily, and many features of an on-campus classroom environment can be maintained (or "mimicked").

Some universities have maintained and enhanced their investments in two-way television or videoconferencing. For example, library education at the University of Hawai'i is delivered to four islands via HITS (the Hawaii Interactive Television System), funded by the state legislature. Unlike many television or video-based systems which now provide connections across ISDN lines, the HITS is a microwave system. Because it is a line-of-sight technology, the HITS implementation process involved getting land clearances, building towers, and mounting the antennas. The first classes started being delivered in two-way video format across the state in 1990. The initial investment for the system was approximately $4 million, but investment has to continue to maintain the equipment, to provide professional development to faculty members to ensure that faculty members can use features such as graphics effectively in their instruction, and to provide technical assistance to ensure that instructional sessions run smoothly.

Most two-way television and videoconferencing systems are capable of simultaneously connecting more than two sites. Multi-point conferencing can be effective although the scheduling, technical, and logistical dimensions of MCU (Multipoint Control Unit) conferences can be imposing as can the cost of phone line usage. Interactive television/video can be effective because it allows real-time visual contact between students and the instructor and among students at different sites, it supports the use of diverse media, and it enables connections with experts in other geographical locations. As with any technology, interactive television/video has its limitations: the initial cost of the equipment and leasing the lines to

transmit conferences; communication between different brand-name systems often compromises resolution and quality; and the technology requires instructor effort to provide high quality visuals and to engage students in the instruction.

Web-based Online Learning Management Systems

Although Australia had an early start in school library education at a distance, its move to Web-based technologies was slowed somewhat by limited Internet access in Australian schools. However, in the late 1990s, instructors started moving toward creating virtual interactive classroom environments (often referred to as "immersive environments"). One early development was the use of the World Wide Web to post the materials that had previously been sent by mail and providing bulletin boards/listservs and email buddy systems (Wilson, 1998). Another was the development of AussieMOO, an online classroom environment created using multi-object-oriented programming language to incorporate graphics, audio and text (Hay, 1998) into synchronous interactive classroom environments. Today, 3D modeling tools and simplified programming language, such as *Second Life*, are being used to create "immersive environments" which are simulations that students can use to discuss and to role-play activities related to real-life professional challenges (Hay & Pymm, 2010/2011).

In Canada and the United States, many school library education programs moved directly from face-to-face on-campus delivery to online delivery. This posed challenges to faculty members who had to re-invent themselves as distance educators, but they had the advantages of not needing to dismantle older technology and not having to unlearn previous approaches to distance education. In Canada, distance education still is rarely offered by library schools, and only one of eight Canadian library schools offers its master's program totally at a distance at this time, and in some cases library school students are allowed to take no more than one distance course per term. Only one institution in Canada, the University of Alberta, offers a school library education master's program at a distance, the Teacher-librarianship by Distance Learning; this program has been available fully online since 2000 (see, Oberg, 2011c, for a description of this program).

In the United States, school library education at a distance is offered by many institutions, through both library schools and faculties of education, although the literature on the latter is scanty. Some programs are offered totally at a distance while others are offered in blended education (some distance combined with some face-to-face). In the United States, as in Australia, some school library education programs are offered in dual mode, with distance courses and face-to-face courses being offered in a wide range of schedules. Often, this is the

result of special funding being made available for online programs. Another option for enriching and expanding school library education at a distance is WISE, Web-based Information Science Education (http://www.wiseeducation.org/), a consortium of library schools in the United States (and a few in Australia and Canada), which allows students in consortium member schools to access online distance education courses, normally courses in special topics and electives.

Different Routes to Online School Library Education

The online school library education master's programs in Australia, Canada and the United States are remarkably similar in content, in pedagogy, and in mode of delivery, but the routes by which they became fully online distance programs are somewhat different (Oberg, 2011b).

Route 1: Replacing a technology-enhanced distance education program with an online only program

Route 1 is a route typical of institutions that have a very long history of serving students through distance education, such as Charles Sturt University in Australia. The Charles Sturt program began in the 1980s with print and audiovisual materials being mailed to students; later, computer tracking was added for assignments and grading and for dealing with student queries. Through a systematic process of course-by-course revision and development, the program was transformed to a blended print-online approach in the 1990s and to an online approach in the early 2000s. The process of transformation was supported by a well-established infrastructure for distance education and by university-wide initiatives such as the provision of a web forum for all distance education courses in 1998. The move to online delivery was deliberate and gradual, a long term goal of the unit, sometimes lead by one or two pioneering faculty members and sometimes responding to opportunities or adopting new structures as the University made them available. The obstacles that seem to have slowed the move to online included: varied levels of interest and commitment to online technologies among the faculty; a highly structured system of course revision that lacked flexibility and restricted faculty autonomy to innovate; and the need to rationalize three streams of school library education into one master's degree program. The forces that supported the development of the online program included: a core of faculty with high expertise and commitment to online delivery; access to theory and research related to distance education; and experience with several different distance education delivery models.

Route 2: Replacing a face-to-face program with an online only program

Route 2 usually was taken in response to a challenge to survival—the need to keep a small and/or shrinking program viable, such as was the case at the University of Alberta in Canada. The motivation for beginning the online program there was the reduction in student enrolment, mainly due to an economic downturn in the mid 1990s that reduced the number of positions for teacher-librarians in the local K-12 school system. Reaching out to students "at a distance" was seen both as a way to increase student numbers and also to protect the program from the vagaries of local school funding. The obstacles that hindered the development of the program included: cutbacks to the post-secondary system; scarcity and inexperience of personnel for online course and program development; priorities within the university focussed on research instead of teaching; and lack of infrastructure and lack of interest in distance education within the institution. The forces that supported the development of the online program included: instructors who were willing re-invent themselves as online educators; access to theory and research related to distance education; one-time government incentive funding; and on-going program evaluation.

Route 3: Adding an online program option to a face-to-face program

Route 3, as was the case at Rutgers, The State University of New Jersey, involved providing a new and additional alternative for students in school library education; the university has retained its commitment to a large face-to-face school library education program. The challenges of the current program are those of school library education generally: ensuring that both the face-to-face and online programs meet the government's changing certification requirements and responding to the vagaries of educational funding in the local school districts (which has an impact on student applications for advanced study in school librarianship). At Rutgers, the motivation for beginning the online school library education program was meeting some of the high demand for school library education, especially for students living within the local community but beyond commuting distance to the university. The major obstacle to the development of an online program was the lack of infrastructure and lack of interest in distance education within the institution: the prevailing view within the unit offering library education, as well, was that there was "no need" to develop an online program. The forces that supported that development of the online program included: access to a professional studies unit that had a history and commitment to innovation in continuing education and professional development; a unit director who saw the potential of online learning for an emerging specialization in digital libraries and for meeting an ongoing excess demand for school library education; availability of two-year grants from a foundation to support online library education; instructors who were

willing re-invent themselves as online educators; and a university policy that provides additional funding to units who provide online courses. Obtaining a major external grant changed faculty perception of the need for online education and ensured that the supports would be there for developing a quality program. The online program was developed over a two-year period, supported by course release for instructors and access to an instructional designer. The professional studies unit expanded its role to include managing online learning courses and orienting and advising online students.

Changing Concerns in Online School Library Education

The concerns of school library educators and researchers related to distance education have shifted since the 1990s. Much of the research then, for library education generally, examined the questions of equivalencies between face-to-face and distance education. Overall, this research showed positive results for distance education in terms of student learning outcomes and of satisfaction with the learning experience (Oberg, 1996). Student success and student satisfaction were linked to carefully designed content and to high levels of contact between and among instructors and students, rather than by particular delivery technologies.

The first decade of the 21st century was a time of great change in distance education, when the available technologies finally had the power to meet the challenges of rapidly changing content and of expectations for high levels of communication and interaction. Distance education was moving from independent to interdependent learning (Garrison & Anderson, 2003) and from behaviorist/cognitivist/constructivist pedagogies to more connectivist pedagogies (Siemens, 2004; 2005).

The distance education research of the 21st century has turned to issues related to the planning and development of quality programs (see, for example, Huffman, Albritton, Rickman & Wilmes, 2011; Pribesh, Dickinson, & Bucher, 2006). Also, questions are emerging about the shifts that need to be made in curriculum content and pedagogy in order to meet the needs of digital age learners. Increasingly, school library educators are experimenting with online pedagogies in ways that show a shift in thinking about the learning theories that need to guide learning and teaching in a digital age—moving from constructivism to connectivism (Siemens, 2004; 2005; 2010). Connectivism challenges the foundational assumptions of constructivist pedagogies that underpinned early online programs in school library education.

The use of Web 2.0 supports students' creation of personal learning environments—environments where learning is about the creation of content and the interaction of students and teachers. Online programs in school library education are moving closer to the self-directed

learning experience ("networked social learning") that is becoming more the norm in students' lives outside of traditional face-to-face and distance education classes. The development of curriculum and pedagogy for teaching and learning about Web 2.0 (and the technologies that will follow Web 2.0) is likely to have an impact on the way school library educators conceptualize appropriate education for the teacher-librarians of the 21st century (see, for example, Branch & de Groot, 2009; 2011). The questions on the minds of future school library educators are likely to be, not which pedagogy or technology but which of many pedagogies and/or technologies is most appropriate for creating a learning environment for achieving this particular outcome, working in collaboration with this particular student or students. What will be left for "the sage on the stage" in this new learning environment?

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