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### **School Library Candidates and Digital Learning Space Design: A National Survey of School Library Candidate Preparation**

The AASL Standards for the 21<sup>st</sup> Century Learner (2007) call on school library educators to prepare candidates who are able to provide all K-12 students, regardless of cultural background and socio-economic status, with the opportunity to develop essential learning skills for the twenty-first century. In his or her role as an instructional partner, the school librarian collaborates with teachers to plan, develop, deliver, and assess instruction that infuses technology, inquiry, and information literacy skills into the subject curriculum. For the most part, school library preparation programs graduate candidates who have a clear understanding of how to implement this role in the physical library. However, many practicing school librarians still do not fully understand how to serve as an instructional partner in digital library spaces – spaces commonly identified as virtual libraries, flipped libraries and fully online course offerings (Green & Jones, 2014).

Stephens (2011) claimed that “our traditional concerns for social justice and open access to information, position librarians for school leadership roles in this digital age” making us responsible for providing “access to a full range of educational resources so that no learner will be disenfranchised in the digital transition” (pg 20). This digital transition reflects a move from face-to-face classrooms to fully online courses, representing the current learning setting for over 35% of undergraduate and graduate students in the United States (Allen & Seaman, 2014). K-12 is also moving in a similar direction with several states requiring students to take at least one online course before high school graduation, and all fifty states providing fully online K-12 courses (Kennedy & Archembault, 2012).

Considering the explosive and steady growth of online learning in both K-12 and higher education, much of a learner's ability to navigate educational resources and settings will be tied to his or her experience and comfort level with fully online coursework. From a social justice perspective, school library candidates who are prepared to provide access to a 'full range of educational resources,' are school library candidates who advocate and support student access to digital learning spaces for all children, including those "who have been marginalized, that is, excluded, ignored, or relegated to the outer edge of academic success" (Marbley, Malott, Flaherty & Frederick, 2011, p. 61). The ability to do so involves knowledge of instructional design principles, universal design for learning and an understanding of online pedagogy. In other words, "the school librarian is a curriculum developer who identifies 'access' as an 'understanding goal' – an essential learning goal for [his or] her students" (Abilock, 2006, p. 12).

### **Theoretical Framework**

Much of the effort behind pre and inservice teacher training on technology use and technology integration has been analyzed through the lense of TPACK: technological, pedagogical, content knowledge (Koehler & Mishra, 2009). TPACK is a framework based on the premise that teaching expertise reflects a mental flexibility and recall of different knowledge systems which allow teachers to retrieve techniques to apply to new technology integration situations. This framework, an extension of Shulman's (1986) pedagogical content knowledge (PCK) framework, proposes three separate knowledge systems: a) technological knowledge (TK), b) pedagogical knowledge (PK) and c) content knowledge. It has been suggested that TCK, the knowledge of how technology can enhance and support student mastery of academic content, is particularly important for teachers because this construct "supports the decision-making processes and skills necessary to choose appropriate technologies to support content learning" (Young, Young & Shaker, 2012, p. 26). Therefore, the TPACK framework informed the development of both the research question and data collection instrument for this study.

### **Methodology**

The purpose of this study was to develop a national picture of the ways that school library preparation programs enable candidates to design digital learning spaces which include fully online courses for K-12 students of varying backgrounds and abilities. Since this study focuses on a specific population while targeting a large data set, a survey methodology (Czaja and Blair, 2005) was used to answer the following research question:

*"What coursework and learning experiences exist to help prepare school library candidates design digital learning spaces for all K-12 students?"*

The researchers developed a web-based questionnaire which consisted of both closed and open-ended questions intended to elicit information regarding school library candidate preparation program characteristics from faculty and program directors. In order to establish content validity, the instrument was reviewed by two field experts and suggested revisions were applied.

## Results

The survey was emailed to 134 program contacts compiled from crosschecking programs identified by ALA, NCATE and the Educational Media and Technology Yearbook. A total of 85 responses were collected representing a 63% response rate. So as to maximize the response rate, the researchers concluded data collection at the end of the Spring 2014 semester. The data collected will be analyzed using a mixed-method approach during the Fall 2014 semester. Quantitative data will be analyzed using descriptive statistical measures so as to present general findings and provide a broad, national picture of school library preparation programs and school library candidate preparation for designing K-12 digital learning spaces. Qualitative data will be analyzed using the constant comparative method for grounded theory (Glaser, 1965). In order to validate qualitative findings, themes generated through analysis will be shared with survey participants who expressed a willingness to be contacted for member-checking researcher interpretations.

## Conclusion

The prominence of online learning in K-12 and higher education, as well as job-training scenarios, privileges K-12 students who have access to online learning experiences earlier in life. School librarians, professionals rooted in the belief of “access for all,” are perfectly placed for designing and delivering these digital instructional experiences for K12 student populations. Consequently, it is imperative that school library preparation programs invest in developing a true understanding of TPACK: a) technological knowledge of resources and tools; b) pedagogical knowledge of instructional design, universal design and online learning principles; and c) content knowledge of school librarianship. Continued research in this area is needed to inform both the practice of school librarianship and the preparation of its professionals.

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