Preparing Library Professionals for Data Literacy Leadership: Administrator Perspectives

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ABSTRACT

Schools, public libraries, and other civic institutions are being called upon to improve efficiency and effectiveness with decision-making processes driven by data. The Preparing Librarians for Data Literacy Leadership Project was launched to prepare school and public library professionals for facilitating data-informed decision-making through the systematic development of competencies in the master's-level pre-service professional preparation programs at the University of North Texas and Texas Woman's University. This paper reports on a survey developed to investigate the use of data in decision-making processes and administered to school and public library administrators across the State of Texas.

TOPICS

public libraries; school libraries; administration; education programs/schools

INTRODUCTION

To meet standards for accreditation by the American Library Association (ALA), library professional training programs must provide curriculum that "is concerned with information resources and the services and technologies to facilitate their management and use" so that professionals "assume a leadership role in providing services and collections appropriate for the communities that are served"(American Library Association, 2015, p. 5) However, with no specific mention of competencies related to data as information resources, these may or may not be included in professional preparation programs.

Schools, public libraries, and other civic institutions are being called upon to improve efficiency and effectiveness with decision-making processes driven by data (Chant & Enis, 2014; Chiranov, 2014; Mandinach & Gummer, 2016; Means, Padilla, & Gallagher, 2010). Yet,

administrators in these institutions may not be adequately prepared to meet the demands of DDDM (Mandinach, Friedman, & Gummer, 2015). It is the role of the library professional in school and public library settings to connect people with information and tools; they are the logical leaders in providing services that support DDDM, empowering individuals and communities to make decisions, solve problems, and improve situations.

The project was launched to prepare school and public library professionals to facilitate DDDM. In the exploratory stage of the project, a survey was administered to administrators in schools and public libraries to assess their need for support in the use of data in decision-making within these settings. The survey was designed to answer the following research questions and to serve as a needs assessment in the development of a data literacy leadership curriculum:

- What are the data use and service needs in school and public library communities?
- How are data used to inform community-based decision-making?
- How do administrators feel about their own data literacy?
- How do administrators feel about their preparation for data-driven decision-making?
- What resources are available to administrators for data-driven decision-making?

DATA-INFORMED DECISION-MAKING IN SCHOOLS AND PUBLIC LIBRARIES

Data literacy requires the access, analysis, and application of data to the decision-making process (Mandinach, 2012) and suggests a set of competencies necessary for DDDM. Librarians are the logical leaders through provision of services that support DDDM. Efforts to connect available data to decision-making in community public library systems, such as Project Outcome (Public Library Association, 2018) and Measures that Matter (Institute of Museum and Library Services & Chief Officers of State Library Agencies, 2018), and in schools (Means, Chen, DeBarger, & Padilla, 2011; Means, Padilla, DeBarger, & Bakia, 2009) expose the need for library professionals to develop data literacy competencies. Notable efforts are underway to address data literacy at the individual level in schools with students (Fontichiaro & Oehrli, 2018) and in public library programs with users (Bowler & Acker, 2018). However, it is critical to recognize that these competencies are applied differently at the individual, staff, and organizational levels.

The data literacy leader initiates collaborative partnerships, serves as a consultant on DDDM, offers clear instructions on applying the principles of DDDM, and highlights the link between student data and instructional practice, all described by Dunlap & Piro (2016) as "pathways to data literacy." Equally important in realizing the full potential of data literacy leadership: a positive self-perception of one's own data literacy (Piro, Dunlap, & Shutt, 2014).

The Preparing Librarians for Data Literacy Leadership Project puts the focus on service at the staff and organizational levels, with focus on the coaching and collaborating role of the librarian in the facilitation of data-informed decision-making. Effectively, library professionals serve as coaches to teachers in schools using data to make instructional decisions or to colleagues using data to design programs/service in public libraries; also, as coaches to administrators in both settings using data to set and evaluate organizational improvement goals.

METHOD

A survey was developed to investigate the research questions and administered in the Fall of 2018 to school and public library administrators across the State of Texas. The survey required approximately ten minutes to complete. From a list of 7,954 school administrators from across Texas provided by the Texas Education Agency, 189 completed the survey (2.38% participation rate). From a list of 775 public library administrators across Texas provided by the Texas State Library and Archives Commission, 130 completed the survey (16.77% participation rate).

FINDINGS

Results suggest that administrators in both settings recognized the imperative to access, analyze, and apply data to inform decision-making within their organizations. Moreover, these administrators accessed routine and limited sources of data in the decision-making process, felt more confident in understanding the meaning of data sources than they did in applying these to decision-making processes, and attributed their data literacy skills to experience gained in-service versus their professional preparation programs. Public library administrators, in contrast with school administrators, felt they had few to no resources to support their DDDM efforts. A complete report on survey findings is forthcoming.

IMPLICATIONS

The implementation of the pre-service professional preparation pilot program to develop data literacy competencies in either school or public library settings in a systematic way at UNT and TWU is in process. It is expected to have a profound impact on practice, as graduates will be prepared to provide essential services in data use to their communities upon entry into practice. The training curriculum will then become a required component of the master's-level preparation program and serve as a model for broader implementation.

REFERENCES

American Library Association. (2015). *Standards for accreditation of master's programs in library and information studies.* Retrieved from http://www.ala.org/educationcareers/sites/ala.org.educationcareers/files/content/standards/Standards_2015_adopted_02-02-15.pdf.

Bowler, L., & Acker, A. (2018). Youth data literacy: Exploring data worlds at the public library. Retrieved from http://www.youthdataliteracy.info/

Chant, I., & Enis, M. (2014). The numbers game. *Library Journal, 139*(8), 28-28.

Chiranov, M. (2014). Creating measurement addiction – a tool for better advocacy and improved management. *Performance Measurement and Metrics, 15*(3), 99-111. doi:10.1108/PMM-05-2014-0016

Dunlap, K., & Piro, J. S. (2016). Diving into data: Developing the capacity for data literacy in teacher education. *Cogent Education, 3*(1). doi:10.1080/2331186x.2015.1132526

Fontichiaro, K., & Oehrli, J. A. (2018). Supporting librarians in adding data literacy skills to information literacy instruction. Retrieved from http://datalit.sites.uofmhosting.net/

Institute of Museum and Library Services & Chief Officers of State Library Agencies. (2018). Measures that matter. Retrieved from http://measuresthatmatter.net/

Mandinach, E., Friedman, J. M., & Gummer, E. (2015). How can schools of education help to build educators' capacity to use data? A systemic view of the issue. *Teachers College Record, 117*(4).

Mandinach, E. B. (2012). A perfect time for data use: using data-driven decision making to inform practice. *Educational Psychologist, 47*(2), 71-85. doi:10.1080/00461520.2012.667064

Mandinach, E. B., & Gummer, E. (2016). *Data literacy for educators: Making it count in teacher preparation and practice*. New York, NY: New York, NY : Teachers College Press.

Means, B., Chen, E., DeBarger, A., & Padilla, C. (2011). Teachers' ability to use data to inform instruction: Challenges and supports. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.

Means, B., Padilla, C., DeBarger, A., & Bakia, M. (2009). Implementing data-informed decision making in schools: Teacher access, supports and use. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.

Means, B., Padilla, C., & Gallagher, L. (2010). Use of education data at the local level: From accountability to instructional improvement. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development.

Piro, J. S., Dunlap, K., & Shutt, T. (2014). A collaborative Data Chat: Teaching summative assessment data use in pre-service teacher education. *Cogent Education, 1*(1). doi:10.1080/2331186X.2014.968409

Public Library Association. (2018). Project outcome. Retrieved from http://www.ala.org/pla/initiatives/performancemeasurement