Critical Information Literacy: A Model for Transdisciplinary Research in Behavioral Sciences

Claudia J. Dold *

Louis de la Parte Florida Mental Health Institute Research Library, University of South Florida-Tampa, 13303 Bruce B. Downs Blvd., MHC 1744, Tampa, FL 33612, USA

A B S T R A C T

Librarians are instrumental in advancing the education of students and orienting tomorrow's professions toward the world in which they will practice: rich in information, diverse in perspective, and latent with the opportunities for transdisciplinary research. Critical information literacy offers a model for orienting theory and practice to create an integrated learning experience for students in the behavioral health sciences. This paper examines how different disciplines may be included in a shared problem, using psychopathy as an example. The role of the librarian is discussed in terms of critical information literacy, as a means to conducting transdisciplinary research.

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INTRODUCTION

The trend in health services is moving toward the integration of primary care and behavioral health, which comprises mental illness, developmental disabilities, dementias, and substance use. By coordinating assessment and treatment services in one setting, often called the "medical home", the patient's symptoms are evaluated from the primary care and the behavioral health viewpoints, with the goal of providing comprehensive care (Glasgow et al., 2011). Integrated care extends access to behavioral health care across all populations, reduces stigma, and offers hope of early diagnosis and treatment.

Just as primary care and behavioral health care practitioners are reorienting their theory and practice to deliver integrated patient care, librarians may want to examine their own orientation to understanding the integration of information across disciplines (Brown, 2011; Glasgow et al., 2011). Future health practitioners are learning concepts and knowledge structures of their chosen disciplines in today's academic settings. Integrated health care brings together medicine and the behavioral disciplines, including psychology, psychiatry, rehabilitation and mental health counseling, and social work counseling (Peek & Council, 2013). Each of these disciplines has its own preferred databases, vocabulary, and models; all of them contribute to the mental health and substance use fields. Just as educators are learning to think and work in

interdisciplinary realms, so too must librarians working in the clinical sciences keep pace with knowledge integration in order to support faculty and students. This paper examines information literacy models and the usefulness of critical information literacy in bringing diverse fields of knowledge into focus in order to address, understand, and solve broad societal problems.

Transdisciplinarity is the process of borrowing models and theories from outside the discipline and using them collaboratively in order to create something that transcends the originating disciplines. Transdisciplinary collaboration is increasingly common as fields of knowledge expand and intersect as they do in behavioral health. Behavioral health includes the disorders addressed in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V). Behavior health as a field has been constructed to parallel somatic health. Whereas somatic health addresses physical disorders such as diabetes, cancer, and hypertension within disciplines including medicine, nursing, and public health, behavioral health addresses mental illnesses, developmental disabilities, dementias, and substance use disorders by bringing together disciplines including psychology, psychiatry, counseling, and psychiatric nursing.

Effective library research in the behavioral health fields requires a model that crosses disciplines to bring disparate viewpoints and research methodologies into focus on a shared problem. Consider the DSM-V entry for psychopathy, located within the entry for "antisocial personality disorder" (American Psychiatric Association, 1994). Psychopathy is distinguished by "a pervasive pattern of disregard for, and violation of, the rights of others that begins in childhood

* Tel.: +1 813 974 7040; fax: +1 813 974 7242.
E-mail address: cdold@usf.edu.

or early adolescence and continues into adulthood…deceitful and manipulative…pattern of impulsivity… irritable…aggressive…Lack of empathy… inflated self-appraisal…superficial charm…" (pp. 645–647). Research into psychopathy may draw from a number of disciplines, including criminology, neurology, psychology, psychiatry, and sociology, all of which may have theories about the cause, treatment, and/or prognosis of the disorder. While the disorder is a lifetime condition, behavior can change and not all tendencies develop into full expression. Fostering an awareness of empathy can overcome relationship problems for many disorders and allows persons who have a disorder to become productive members of society. A transdisciplinary approach to psychopathy allows the researcher to pose a research question and then examine the contributions from a variety of disciplines in order to seek a resolution. An effective model for the integration of those same contributions from a variety of disciplines enables the librarian to organize the information so that it works toward a resolution. To use an analogy, if disciplines use different languages, then the key player is the one who structures the information exchanges so that the research and results of either language group will be comprehensible to all interested parties, and will lead to the resolution of the mutual problem. The following sections discuss attributes of models that are helpful in transdisciplinary research.

THE INFORMATION LITERACY MODEL

Librarianship has always focused on bringing together users and information in an efficient and effective manner (Gregory, 2009). Many academic librarians teach process, as opposed to content (Mounce, 2010). They work with students and learning objectives but without the normal academic structure of courses and grades. Academic librarians are concerned with how to measure the contribution and effectiveness of their role on two entities: the education of the university's students, and the attainment of the university's strategic goals. One such measure is information literacy, the term used to describe a person's ability to find, evaluate, and use information competently.

To address the volume of information available to today's students, librarians have shifted the emphasis of their role from gatekeepers of information to teachers about information through an emphasis on information literacy. The Association of College and Research Libraries (ACRL) considered the problems of teaching information literacy and issued guidelines in 2000; those guidelines are currently under revision. The Information Literacy Competency Standards for Higher Education (2013) defines "information literacy" as proficiency with a set of skills that enables a person to navigate the universe of information, to make sense of "unfiltered formats, raising questions about its authenticity, validity, and reliability… [because] the sheer abundance of information will not in itself create a more informed citizenry without a complementary cluster of abilities necessary to use information effectively" (Libraries, 2000).

Doherty (2007) and Giles (2002) argue that librarians must teach students to look for bias and gaps in information, and to examine the context in which information is presented. The need is urgent among students new to academia, as they naively venture into the language and thought patterns of disciplines that are unknown to them. Simmons (2005) points out that undergraduate students must learn not only the factual material of their chosen discipline, but also the associated assumptions, epistemologies, and forms of writing, speaking, and researching that are endemic to their field. The refinement of literacy skills is an ongoing process in higher education: doctoral students need well-developed skills to perform comprehensive literature reviews and to produce quality research (Grant & Berg, 2003), and faculty are expected to be scholars in their field, researching, publishing, and creating new knowledge.

A common assumption in evaluating information literacy classes is this: if the student can perform the tasks, then the instruction in the skill set has been effective. Unfortunately, performance is not a good measure of judgment, and the "economic, legal and social issues surrounding the use of information" can be a matter of judgment (Libraries, 2000).

CRITICISM OF THE INFORMATION LITERACY MODEL

Critics of this model of information literacy argue that its focus on behavioral outcomes is misplaced; the real emphasis should be on the information need as posed in the research question (Doherty, 2007; Doherty & Ketchner, 2005; Giles, 2002). They contend that the ACRL's standards are structured to measure proficiency in a world of information in which educational resources had been selected and categorized by librarians. That world was changed forever by the internet and personal computers, which enabled people to create their own content individually and collectively. Information was made accessible without restriction to a worldwide audience and beyond the control of the library (Dold, 2013). Furthermore, advances in technology created new devices with ever-greater data storage capacity at ever-lower cost. Increasingly more people are using information, and that has led to the creation of more information (Cukier, 2010).

Let us consider some statistics. Between July 2000 and June 2010, the number of internet users jumped from 359 million, or 5.9% of the world population, to 1966 million, or 28.7% of the world population (Group, 2013). By the first quarter of 2013, 39% of the world's population was using the internet, that is, some 2.7 billion people (ICT Facts and Figures, 2013). The number of domain name registrations rose between December 2000 and 2010 from just under 50 million to over 200 million. The number of websites grew from under 20 million in 2000 to over 200 million by 2010; by December 2012, those numbers were almost 600 million (Zakon, 2011). These trends illustrate the accelerating rate of creation and access to information.

All this information has opened up new data sites, new questions, and new fields for research in mental health. As Hanson and Levin (2013) explain,

Health services research as a field has grown dramatically over the past half century. Unlike biomedical research, health services research addresses observational and quasi-experimental studies, comparative effectiveness studies, economic evaluations, financing and organizational decision making across a variety of settings using mixed methodologies. Knowledge and technology transfer is critical, as is the dissemination of applied research and knowledge translation (p. 159).

In addition to greater volumes of information, the variety of information is expanding. The librarian who serves a transdisciplinary research population needs a perspective and skills that will complement the broad, new vision of integrated systems and disciplines.

THE CRITICAL INFORMATION LITERACY MODEL

Critical information literacy (CIL) offers an integrated approach to the understanding of information, driven by the patron's query. CIL examines the context of information, the way information works in a discipline and how it differs between disciplines. In the critical information framework, literacy is constantly being defined by its cultural context. CIL recognizes that the professional language, customs and practices of a discipline help create a cultural identity and a shared understanding among those individuals who belong to that cultural community. Elmborg (2006) defines critical information literacy as "more than a set of acquired skills. It involves the comprehension of an entire system of thought and the ways that information flows in the system. Ultimately, it also involves the capacity to critically evaluate the system itself" (p. 196). Individuals, however, start with their own linguistic, cultural, ethnic, and social perspective (Bartesaghi & Hanson, 2011). By critically examining the very meaning of information, users of information